

Chapter 2

Written Comments and DOE Responses

**Commentor No. 1: Hyun Lee
Heart of America Northwest**

08/07/00 MON 09:12 FAX
07/27/2000 12:38 2853821149

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HEART OF AMERICA NW

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Heart of America Northwest

"Advancing the Quality of Life."

Honorable Bill Richardson,
Secretary of Energy
U.S. Department of Energy
1000 Independence Ave. SW
Washington, D.C. 20585

Andrew Athy, Jr., Chair,
Secretary of Energy's Advisory Board
U.S. Department of Energy
1000 Independence Ave. SW
Washington, D.C. 20585

Dear Secretary Richardson and Mr. Athy:

We are dismayed that during the long awaited for conference call held last Thursday, Department staff were not prepared or willing to discuss issues related to the Secretary's first two commitments regarding the FFTF reactor EIS and the public comment process.

Initial review of the Draft EIS confirms our fears, expressed during our meeting with you of June 10, that analyses of impacts, and even definition of the scope, has been manipulated by reactor restart advocates. Furthermore, the unwillingness to address the concerns of the Hanford Public Interest Network citizen groups regarding the public notice and comment plans for the Draft EIS, stated in our prior letter to you, would appear to lock the Department into legally inadequate public notice and comment plans and a confrontational course. Plans and procedures for notice and the conduct of hearings require 30 to 45 days of notice and appear locked in from the publication in the Federal Register.

The first commitment of the Secretary was to ascertain if the EIS included independent analysis of:

- a) the need for medical isotopes and economic analyses of whether demand will be met by non-DOE investments and market forces; and,
- b) whether safety of the reactor and ancillary facilities was addressed. This was to be followed by serious discussion between ourselves and the Department, through the offices of Mr. Athy.

1305 Fourth Avenue - Suite 208
Seattle WA 98101

206/382-1014 • fax 206/382-1148 • e-mail: office@heartofamericannorthwest.org
www.heartofamericannorthwest.org
Cynthia M. Hoffer, J.D. Executive Director

Response to Commentor No. 1

1-1: The Draft NI PEIS was prepared in compliance with the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S.C. 4321 et seq.), Council on Environmental Quality Implementing Regulations (40 CFR 1500 et seq.), and DOE's Implementation Regulations (10 CFR Part 1021). Other applicable laws, regulations, and requirements are discussed in Chapter 5 of Volume 1. Environmental impacts were analyzed for all of the alternatives and options (See Chapter 4 of Volume 1). None of the analysis was manipulated to obtain results favorable to any alternative. Details of the analysis are given in Appendixes H through J of Volume 2. The scope of the NI PEIS was determined in accordance with the laws and regulations cited above after public scoping meetings (See Section 1.4 of Volume 1 and Appendix N of Volume 2).

Public notice was given and public hearings on the Draft NI PEIS were conducted in accordance with federal law and regulations cited above. Chapter 1 of Volume 3 describes the public comment process used for the NI PEIS.

Dialogue between supporters and opponents of Alternative 1, Restart FFTF, was held in Seattle, Washington on September 5 and 6, 2000. According to the facilitator (Letter to the Secretary of Energy from Hallmark Pacific Group, LLC, dated September 22, 2000), no unanimous agreement was reached by the five participants in each of two panels. DOE observed, but did not participate in, the discussions. DOE is required to comply with statutory and regulatory requirements regardless of the outcome of dialogue among advocates and opposition for any particular alternative.

1-2: As described in Section 1.2 of Volume 1, forecasts of medical isotope needs were provided by the Expert Panel (Wagner et al. 1998) and the Nuclear Energy Research Advisory Committee (NERAC 2000a). DOE agrees with these projections. Mission effectiveness of Alternatives is discussed in Sections 2.7.3 and 2.8 of Volume 1.

Members of the expert advisory groups were selected for their medical credentials and knowledge of medical isotopes. The expert groups were directed to provide their best technical assessment of the need for medical isotopes over the next two decades (Wagner et al. 1998). Projections of market growth were given by the Expert Panel in terms of dollars, not percentage of the population. The Panel did not project

Commentor No. 1: Hyun Lee (Cont'd) Heart of America Northwest

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Review of the EIS (and we must urge you to take notice of the fact that the table of contents of the EIS was faxed to us less than 24 hours before our conference call and just two days before the entire EIS was handed to some reactor proponents) confirms that the EIS does not meet these basic expectations (and legal requirements)

[Note regarding medical isotopes: We have repeatedly objected to the EIS adopting a presumed need for isotopes based on the non-credible studies done on behalf of program advocates. The EIS adopts a forecast for need that has no economic basis or credibility. The convening of a panel composed of individuals with direct financial conflicts of interest vis a vis reactor and other Department contracts, to compare the two studies commissioned by advocates for production as part of their lobbying efforts, is NOT an independent economic assessment of demand and forecast capacity. We will demonstrate in further discussions the lack of credibility of this claimed forecast and reliance on advocates' documents to claim there is a need justifying the restart of the FFTF reactor. Suffice to say, one of those "studies" uses a ruler to project an incredible line of growth in use of medical isotopes, without differentiation, that would take their use from 1% of the population today to over half the population annually in 30 years of reactor use. The advocates' assumptions have already failed to live up to reality. A proper analysis will utilize econometrics, differentiate between types of isotopes and facilities to meet demand for each isotope, examine the market forces relative to investment in production facilities by other nations, universities or hospitals, and private investors.]

[As regards safety issues, the recent admissions of Hanford management's misleading and false statements regarding potential radiation/Plutonium releases during and after the Hanford fire, and their multiple failures to comply with emergency planning and reporting of potential hazardous materials pursuant to EPCRA, SARA, RCRA, and Washington Dangerous Waste Law reveal the hollowness of assurances that the department has considered safety previously, and the legal inadequacy of the EIS for failure to address evacuation planning, ability to meet external regulations and licensing standards, etc...]

While progress was made on last week's conference call defining the time frame and format for use of independently facilitated, principled negotiations between reactor restart proponents and opponents, the Department's staff appears to have failed to recognize that the value of such negotiations includes the opportunity to have reactor opponents formally agree not

Response to Commentor No. 1

percentages of the population that would benefit from medical isotopes. While the identification of specific isotopes as a focus for research or clinical application is sometimes uncertain, the Expert Panel's projection of expanding needs for medical isotopes is reasonable (Section 1.2.1 of Volume 1). DOE agrees with the Expert Panel's projections. The Expert Panel's projections were made in 1998. While recent increases in the market for medical isotopes suggest that the Panel's projections are correct, the accuracy of the Panel's projections will not be evident for several years. The purpose of this NI PEIS is to describe DOE's alternatives (Section 2.5 of Volume 1) for meeting its mission objectives and to evaluate the environmental impacts that would result from implementation (Chapter 4 of Volume 1) of the alternatives. As discussed in Section 2.6 of Volume 1, alternatives that would not meet DOE's mission requirements were dismissed.

1-1

1-2

1-3:

Safety and health were foremost considerations during preparation of the NI PEIS. No radiation or hazardous materials were released from facilities at the Hanford Site as a result of the wild fires of that occurred in June 2000. The fires did result in re-suspension of radioactive materials that were already in the environment. The amount of radioactive material that was re-suspended was only slightly above natural background levels and required several days of analysis to quantify. Information on this event has been made available to the public and can be accessed at <http://www.Hanford.gov/envmon/index.html>. This site also provides a link to information on the independent offsite air monitoring that was conducted by the U.S. Environmental Protection Agency. Estimates of the impacts of a spectrum of accidents that could occur under Alternative 1, Restart FFTF, at candidate facilities at the Hanford Site are given in Section 4.3 of Volume 1 and Appendix I of Volume 2. Applicable laws and regulations are described in Chapter 5 of Volume 1. DOE complies with all applicable laws and regulations.

1-3

1-1

Commentor No. 1: Hyun Lee (Cont'd)
Heart of America Northwest

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to challenge the adequacy of the EIS and take other available legal actions if an agreement is reached. Such a result is only achievable if the Department meets the commitments of the Secretary regarding EIS content and provides for an adequate public notice and comment through a participatory planning effort. Time is running out for legally adequate notice and comment preparations. We are not willing to wait for a written response from the Office of Nuclear Energy to our letter of last week. The involvement of senior staff apart from the programmatic advocates for the EIS and reactor restart will be necessary in discussions following up on the Secretary's first two commitments on EIS scope and regarding the legal adequacy of the EIS.

As of today, despite your efforts, there is a lack of credibility in the process and substantive product. It is clear from our conference call that there will not be adequate public notice, and the conduct of the hearings will not meet basic requirements, amongst other alarming developments. We urge that there be an immediate discussion next week of our previously outlined proposals to resolve these concerns.

Sincerely yours,


Hyun Lee, JD, LL.M.
Heart of America Northwest

Thomas Carpenter, JD
Government Accountability Project

Gerald Pollet, JD
Heart of America Northwest

CC: Mays Seiden,
Senator Ron Wyden
Rep. Adam Smith
Rep. Jay Inslee
Rep. Brian Baird
Rep. Jim McDermott
Rep. David Wu
Rep. Earl Blumenauer
Rep. Peter DeFazio

1-1

**Commentor No. 2: Stanley Hobson, INEEL
Citizens Advisory Board**



Citizens Advisory Board

Idaho National Engineering and Environmental Laboratory

00-CAB-057

August 16, 2000

Colette E. Brown
Document Manager
Office of Space and Defense Power Systems (NE-50)
Office of Nuclear Energy, Science, and Technology
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

Dear Ms. Brown:

Chair:
Stanley Hobson

Vice Chair:
Jan M. Edelstein

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James Bondurant
Wynona Boyer
Karen Corrigan
Annemarie Goldstein
Andy Guerra
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Kathy Grebstad
Wendy Green Lowe
Teri Tyler

Note: The Site-Specific Advisory Board for the Idaho National Engineering and Environmental Laboratory (INEEL), also known as the INEEL Citizens Advisory Board (CAB), is a local advisory committee chartered under the Department of Energy's (DOE) Environmental Management SSAB Federal Advisory Committee Act Charter.

The INEEL CAB recently received copies of the Draft Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility (DOE/EIS-0316D). We also received the orange postcard inviting our comment and announcing the public comment period. We look forward to reviewing the draft document and submitting our comments as a consensus recommendation.

The INEEL CAB develops its recommendations through consensus-building processes and they are finalized at meetings of the full board. Our next meeting will be held on September 19 and 20, 2000, in Jackson, Wyoming. The orange post card indicates that the public comment period for the Draft PEIS will end on September 18, 2000, one day before our meeting. **We therefore respectfully request an extension in the public comment period to allow our full Board to participate in the process of developing a recommendation in accordance with our normal procedures.** We should be able to complete our finalization processes by no later than close of business September 22, 2000.

We appreciate your consideration of this request. Thank you for your prompt response to this request.

Sincerely,

Stan Hobson
Chair, INEEL CAB

cc: Carol Borgstrom, DOE-HQ, Office of NEPA Policy and Assistance
Beverly Cook, DOE-ID
Carolyn Huntoon, DOE-HQ
Martha Crosland, DOE-HQ
Fred Butterfield, DOE-HQ
Gerald Bowman, DOE-ID
Kathleen Trever, State of Idaho INEEL Oversight
Wayne Pierre, U.S. Environmental Protection Agency Region X

Jason Associates Corporation • 477 Shoup Avenue, Suite 201 • Idaho Falls, Idaho 83402
Phone • (208) 522-1662 Fax • (208) 522-2531
<http://www.ida.net/users/cab>

Response to Commentor No. 2

2-1

2-1: As stated in the Notice of Availability (65 FR 46443 et seq.), the comment period for the NI PEIS began on July 28, 2000 and extended through September 18, 2000. Council on Environmental Quality implementing regulations (40 CFR 1506.10(c)) require that at least 45 days be allowed for public comment on a draft environmental impact statement. DOE notified the INEEL CAB that although the public comment period would not be extended beyond the September 18, 2000 deadline, late comments would be considered to the extent practicable. Responses to the subsequent INEEL CAB comments are shown under Comment Number 2050 of this comment response document (Volume 3 of the NI PEIS).

Commentor No. 3: Lee A. Fisher

Response to Commentor No. 3

01/25/2000 09:41 4255498892 LEE A FISHER PAGE 01

Draft PEIS Comment Form

I strongly urge you to Restart
FFTF, Alternative #1.
Many of my friends have been
cured by implantation of
'seeds' particularly those with
prostate problems.
Keep the skills alive for production.
Sorry to hear you've had to buy
isotopes from Russia. How many
years does it take to learn that
you can't - and shouldn't trust them!!

3-1
3-2

3-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.
3-2: The United States has purchased nine kilograms of plutonium-238 from the Russians since 1992. DOE is now considering re-establishing a domestic production capability of plutonium-238 at a United States facility because it is in our national interest to assure that the United States does not rely on any foreign government to support the NASA space program. A more detailed explanation of the need for a domestic source of plutonium-238 is found in Section 1.2.2 of Volume 1.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Lee A Fisher July 25, 00

Organization: Retired

Home Organization Address (circle one): 4215 135th Ave SE

City: Bellevue State: WA Zip Code: 98006

Telephone (optional): 425 746-4215

E-mail (optional): Fisherlee@msn.com

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-63
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-662-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 4: J. E. Kurtz

Draft PEIS Comment Form

From this draft, it is obvious that the FFTF option is prime candidate. IT CAN PERFORM ALL MISSIONS AND DOES NOT CAUSE THE GENERATION OF ANOTHER SITE TO CLEAN UP. EVEN THOUGH COST WAS NOT PART OF THE EVALUATION, IT APPEARS THAT IT WOULD BE OVERALL COST EFFECTIVE. YOUR DISCUSSION OF OPEN SESSION COMMENTS GIVEN AT PUBLIC MEETINGS DOES NOT REALLY DISCUSS ALL THE POSITIVE COMMENTS ON A FFTF RESTART. IT APPEARS TO HAVE BEEN "POLITICALLY" CORRECT TO ADDRESS THE MINORITY OPPOSITION. IT APPEARS THAT ANY ALTERNATIVE BEYOND FFTF WOULD BE WAY PROHIBITIVE AND NOT MEET ALL MISSION GOALS. IF FFTF IS NOT SELECTED AS DRAFT AND ALTERNATIVE, IT WOULD BE A MISTAKE AND WOULD ONLY DEEPEN PEOPLES BELIEF THAT POLITICS RUNS THE GOVERNMENT NOT GOOD COMMON SENSE. AS A TAXPAYER, I WOULD FEEL "RIPPED" OFF AGAIN.

Select FFTF AS THE OPTION -- IT IS GOOD, COMMON, TECHNICAL, AND COST EFFECTIVE SENSE!

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): J. E. Kurtz

Organization: _____

Home Organization Address (circle one): 2817 W. Klamaith Ave

City: Kennewick State: WA Zip Code: 99336

Telephone (optional): 509-735-9390

E-mail (optional): JEKurtz@worldnet.att.net

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Corinne E. Brown, NE-50
U.S. Department of Energy • 1990 I. Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Response to Commentor No. 4

4-1

4-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

4-2

4-2: DOE's presentation and comment session at the draft NI PEIS hearings provided information about the NEPA process, alternatives described in the PEIS, and specific facilities, including FFTF.

4-1

Commentor No. 5: Fred Maienschein

Response to Commentor No. 5

Draft PEIS Comment Form 7-25-00

(refer to p S-18)

The Oak Ridge Electron Linear Accelerator at the Oak Ridge National Laboratory is NOT permanently shut down. It is, in fact, operating today and it operates regularly as needed for a variety of research programs.

The appropriate contact is Dr. Duane Larson at 1-865-574-6119.

5-1

5-1: Tables S-2 and 2-4 have been changed in the Final NI PEIS to reflect the correct operational status of the facility.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



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- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Dr. Fred Maienschein
Organization: Oak Ridge National Laboratory (retired)
 Home Organization Address (circle one): 838 West Outer Dr

City: Oak Ridge State: TN Zip Code: 37830
Telephone (optional): (865) 483-3005
E-mail (optional): fmaien@ispchannel.com

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Commentor No. 6: Stephen S. Hart

Draft PEIS Comment Form

After reviewing the Draft PEIS, I am strongly opposed to restarting the FFTE. Having worked at both Hanford and INEEL, the lower potential exposure to the population and much lower overall population in the vicinity of INEEL should be the determining factors. Therefore, I support Alternative 5, with Alternative 2, Option 8, held in reserve for the future if plutonium-238 supplies from Russia should be interrupted for either political or supply reasons. However, economic climate should not be a reason for interrupting the purchase of Russian plutonium-238 as keeping those supplies out of the hands of third parties should be of overriding priority. I would, in fact, support an increase in the rate of annual purchase of plutonium-238 from Russia under the DOE contract discussed on page S-5 of the PEIS, even if it meant that some current DOE remediation programs had to be cut to pay for it. I do not favor restarting any currently shut-down reactors at any DOE facility for this or any other program.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Stephen S. Hart

Organization: _____

Home/Organization Address (circle one): 2284 S. Hoyt St.,

Lakewood, CO

City: Lakewood State: CO Zip Code: 80127

Telephone (optional): _____

E-mail (optional): stephen.hart@juno.com

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Response to Commentor No. 6

6-1

6-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTE. DOE further notes the commentor's support for Alternative 5, Permanently Deactivate FFTE, with Alternative 2, Use Only Exiting Operational Facilities, Option 8, Irradiate at ATR and HFIR and Process at FDPF, held in reserve for future production of plutonium-238 should supplies from Russia be interrupted.

6-2

6-2: See response to comment 6-1.

6-3: The purpose of the existing DOE contract to purchase plutonium-238 from Russia is not to keep this material out of the hands of third parties but rather to ensure a supply for NASA space mission radioisotope power sources. Unlike plutonium-239, the radioisotope plutonium-238 is not a proliferation risk because its nuclear properties preclude it from use in a nuclear weapon. The International Atomic Energy Agency (IAEA) exempts plutonium that is more than 80 percent plutonium-238 from consideration as special fissionable material subject to safeguards. All plutonium-238 production alternatives in this EIS will produce this isotope in greater than 80 percent purity. Therefore, the purchase of plutonium-238 from Russia has no effect on nonproliferation of nuclear weapons since plutonium-238 is not a nuclear weapon material. Along with budget constraints, DOE has not purchased larger quantities of plutonium-238 from Russia because extended storage of this radioisotope results in the buildup of other radioisotopes which require their removal and pose a significant radiological health hazard to workers.

6-3

6-4

6-4: DOE notes the commentor's concerns regarding the restart of any DOE reactor facility.

Commentor No. 7: Edie Bradley

Response to Commentor No. 7

Draft PEIS Comment Form

I still believe that Solar energy is a better choice!

7-1

7-1: DOE notes the commentor's interest in solar energy. The DOE missions to be addressed in this EIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
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- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Edie Bradley

Organization: Edith's Tears

Home/Organization Address (circle one): _____

City: Harver Is State: WA Zip Code: 98070

Telephone (optional): 206-232-9728

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 8: John Ritter & Family

Draft PEIS Comment Form

July 25/2000

Have accept our family's
concerns regarding...

There is only 1 Alternative
#5 Phase permanently deactivate
FFTF just NO West
Missouri (1) Clean-up

what has already been done at
Hanford. Please,

John Ritter and Family

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- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): _____
 Organization: _____
 Home/Organization Address (circle one): _____
 City: _____ State: _____ Zip Code: _____
 Telephone (optional): _____
 E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 toll-free telephone: 1-877-562-4593 • toll-free fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Response to Commentor No. 8

- 8-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 8-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Commentor No. 9: Charles Greer

Response to Commentor No. 9

Draft PEIS Comment Form

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Continues deactivation of FFTF.
Continues clean-up at Hanford & INEL.
Continues removal of waste at INEL.

9-1
9-2
9-3

Preferred alternative is no. 2.
- Use only existing operational facilities.

9-4

Preferred option is no. 1 -
- Limits operations to 2 sites - Idaho's Tri-Party
- Lessens risk due to transport or accident

9-5

Without cost factors this is just an exercise.

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- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): _____

Organization: ******* USA ******* _____

Home/Organization:  **Mr. Charles Greer
2546 Crestway St
Boone, ID 83705-4226** _____

City: _____ Zip Code: _____

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

- 9-1:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF and support for Alternative 2, Use Only Existing Operational Facilities, Option 1, Irradiate at ATR and Process at REDC. It should be noted that deactivation of FFTF is a component of all options under Alternative 2 (as well as under Alternatives 3, and 4).
- 9-2:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 9-3:** Implementation of the nuclear infrastructure alternatives described in Section 2.5 of Volume 1 would not impact schedules or funding for cleanup activities at Idaho National Engineering and Environmental Laboratory (INEEL). As discussed in Volume 1, Section 3.3.11.1 of the NI PEIS, cleanup activities at INEEL are coordinated with the Environmental Protection Agency and the State of Idaho under a consent order. DOE's objective is to achieve delisting from the National Priorities List by the Year 2019.
- Waste management at INEEL is described in Section 3.3.11 of the NI PEIS, and waste generation that would result from implementation of Alternatives 1 or 2 is described in Sections 4.3.2.1.13 and 4.4.2.1.13, respectively. Waste that would be generated at INEEL under Alternatives 1 or 2 would be small in comparison to onsite treatment, storage and disposal capacities.
- 9-4:** See response to comment 9-1.
- 9-5:** The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the

Commentor No. 9: Charles Greer (Cont'd)

Response to Commentor No. 9

alternatives presented in the NI PEIS. Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. The associated cost report was made available to the public on August 24, 2000. DOE mailed this document to about 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P in the Final NI PEIS. The Record of Decision concerning enhancement of DOE's nuclear infrastructure is scheduled for January 2001.

Commentor No. 10: John M. Ryskamp

Response to Commentor No. 10

AUG 14 '00 01:40PM LMITCO/REDL

P. 1

Draft PEIS Comment Form

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



I HAVE READ THE DRAFT PEIS DOE/EIS - 0310D.
I BELIEVE THAT ALTERNATIVE 1 - RESTART FFTF
OR ALTERNATIVE 2 - USE ONLY EXISTING OPERATIONAL
FACILITIES - ARE THE BEST COURSES OF ACTION
AT THE PRESENT.

HOWEVER, IN THE LONG TERM, I BELIEVE THAT
ALTERNATIVE 4 - CONSTRUCT A NEW RESEARCH
REACTOR - SHOULD BE PURSUED. THE DOE
NERAC HAS STATED IN SEVERAL PLACES THAT
A NEW RESEARCH REACTOR IS NEEDED, AND
I AGREE.

SO, START WITH ALTERNATIVE 1 OR 2, BUT GET
DOE TO BEGIN LONG-TERM DESIGN OF A NEW
DOE RESEARCH REACTOR.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): JOHN M. RYSKAMP

Organization: _____

Home Organization Address (circle one): 189 COMMONS RD.

City: IDAHO FALLS State: ID Zip Code: 83401

Telephone (optional): 208-528-6906

E-mail (optional): ryskamp@ida.net

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Collette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

10-1

10-1: DOE notes the commentor's support for either Alternative 1, Restart FFTF, or Alternative 2, Use Only Existing Operational Facilities, while Alternative 4, Construct New Research Reactor, is being pursued.

10-2

10-2: See response to comment 10-1.

10-3

10-3: See response to comment 10-1.

Commentor No. 11: Laurie Gerber

Please restart FFTF for
medical isotopes. This is the
most cost effective solution
for isotope production.

Sincerely,
Laurie Gerber

11-1**Response to Commentor No. 11**

11-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 12: James Breed

Response to Commentor No. 12

Draft PEIS Comment Form

Since the FFTF is a research facility that will be useful when the U.S. returns to nuclear power and can be used now for making medical isotopes (admittedly at a loss), I feel it should be kept in operation. Shutting down destroys the facility and would require all new construction!

12-1

12-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

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- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): James Breed

Organization: retired

Home/Organization Address (circle one): 2184 Clearview Ave

City: Richland State: WA Zip Code: 99352

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Cateille E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PDS@hq.doe.gov



7/12/00

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 13: Kalle H. Hyrkas

Draft PEIS Comment Form

I fully support the alternative of restarting the Fast Flux Test Facility.

13-1

13-1: DOE notes the commentor's support for Alternative 1, Restart FFTE.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



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- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Kalle H Hyrkas

Organization: Training

Home Organization Address (circle one): 500 Cottonwood Dr.

City: Richland State: WA Zip Code: 99352

Telephone (optional): (509) 372-0207

E-mail (optional): Kalle-H-Hyrkas@rl.gov

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



Commentor No. 15: Richard E. Brandt

Response to Commentor No. 15

Draft PEIS Comment Form

I would like to see the FFTF restarted, especially for isotope production.

15-1

15-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Richard E. Brandt

Organization: Westinghouse Hanford Co - Retired

Home/Organization Address (circle one): 4212 Meadowsweet St.

City: Pasco, State: WA zip Code: 99301

Telephone (optional): 509-545-1417

E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 16: Doug Arbogast

Response to Commentor No. 16

Draft PEIS Comment Form

ENVIRONMENTAL IMPACT STATEMENT

FFTF is a test reactor. It needs more missions to like manufacturing of medical isotopes. Test log of new kinds of fuel for other reactors.

It is a low pressure type of reactor compared to water types. It produces a lot of heat that could be captured in turbines to generate power for parts of the Hanford area. It is to be noted that the portion of a mission was changed some years back.

Why waste more money on keeping it in constant-buy. Give it a project and get her to work. That can build more jobs as well.

I, ^(Print Name) Doug Arbogast, am in favor of restarting the Fast Flux Test Facility (FFTF) for the production of medical isotopes.

(Your signature here) Doug Arbogast

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- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): Doug Arbogast

Organization: Hanford Calibration Lab

Home/Organization Address (circle one): NE-80

City: Rehoboth Beach State: VA Zip Code: 99352

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Collette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

16-1

16-1: DOE notes the commentor's support for Alternative 1, Restart FFTF. It should be noted that power production is not one of the missions for which FFTF would be restarted.

Chapter 2—Written Comments and DOE Responses

Commentor No. 17: William E. Callaway

Draft PEIS Comment Form

FFTF needs a mission, its time to give it one.

17-1

I, Bill Callaway, am in favor of restarting the Fast Flux Test Facility (FFTF) for the production of medical isotopes.

W. Callaway
(your signature here)

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- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): William E. Callaway

Organization: (Tax Payer)

Home/Organization Address (circle one): 1524 Naches CT.

City: Richland State: Wa. Zip Code: 99352

Telephone (optional): (509) 627-4863

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Collette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Response to Commentor No. 17

17-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.



Commentor No. 18: Barbara & Vern Mobley

Response to Commentor No. 18

Aug. 5, 00
Ms. Colette E. Brown:
We want F.F.T.F. running, we need
the medical isotopes it can produce
for cancer cure. Our family has lived
in the Tri Cities for thirty six years
and our son is employed at F.F.T.F.
Keep it running!
Barbara + Vern Mobley
1731 W. Hopkins
Pasco, wa. 99301

18-1

18-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 19: Don C. Brunell
Association of Washington Business



Washington state's
 chamber of commerce

Association of Washington Business

Don C. Brunell
 President

August 10, 2000

Colette E. Brown, NE-50
 U.S. Department of Energy
 19901 Germantown Road
 Germantown, MD 20874

Dear Ms. Brown:

As Washington's oldest and largest statewide business organization whose 3,700 members employ more than 600,000 people, we are writing this letter to express our continued support for the on-going environmental review process initiated by the Department of Energy for the Fast Flux Test Facility (FFTF) on the Hanford Nuclear Reservation. We believe that the Department must continue the process leading to the bringing on line of the FFTF for medical isotope research and treatment.

It is obvious that there is a need for additional sources of medical isotopes for research and treatment. The benefits of these isotopes to the patients are numerous. They include improved efficacy, reduced cost, and a significantly improved quality of life while undergoing treatment. The citizens of the Pacific Northwest are blessed with one of the best health care provider and research networks in the world. Having isotopes readily available for our health care industry stands to improve the quality of care for our residents and those in other parts of the world.

We have additional concerns which we believe should be surfaced in the on-going environmental review process. With the very recent national electrical energy shortages coupled with concerns about global warming, there is a need for additional nuclear energy-based research. Given the concerns about carbon monoxide emissions from fossil-fuel generating facilities and the fact that existing non-fossil fuel, non-nuclear technologies, and conservation are not able to fill the gap; research to find acceptable solutions to the issues facing nuclear power production is necessary. If we are to have sufficient electricity to power our computers, heat and cool our homes and operate our facilities, nuclear power must be explored as an option for the future. At the very least,

We keep Washington working

P.O. Box 658 ■ 1414 Cherry Street Southeast ■ Olympia, Washington ■ 98507-0658 ■ www.awb.org
 360.943.1600 ■ Toll-free: 1.800.521.9325 ■ fax 360.943.5811 ■ E-mail: DonB@awb.org

Response to Commentor No. 19

19-1

19-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 19: Don C. Brunell (Cont'd)
Association of Washington Business

Page 2
Collette E. Brown Letter
August 10, 2000

this proven source of energy production should be re-examined.

As one who represents a diversity of businesses from our state's major corporations to very small shop owners, decisions must be made based on a sound cost-benefit analysis, ability to meet anticipated market needs and overall risk. Clearly, the Fast Flux Test Facility (FFTF) represents the lowest risk, since it is an existing facility where the medical isotope activities have already been performed. It also appears that the FFTF provides greater flexibility to meet the multiple missions identified in the EIS, whereas the other alternatives appear to be dedicated to a single purpose with limited growth potential.

We hope the Department will proceed expeditiously with the environment review and we would certainly hope it would lead to the safe and efficient restart and operation of the FFTF.

Thank you and if you need additional information, please let us know.

Sincerely,

Don C. Brunell
President

Cc: Governor Gary Locke
Senator Slade Gorton
Senator Patty Murray
Congressman Richard Hastings

19-1
(Cont'd)

Response to Commentor No. 19

Commentor No. 20: Clyde Nash, Jr.

Draft PEIS Comment Form

IMPORTANT CONCERNS TO PUBLIC HEALTH AND SAFETY CODE MINIMIZING THE POTENTIAL RELEASE HAZARDOUS SUBSTANCES FROM THE K-BASIN by REMOVING THE SPENT NUCLEAR FUEL, SLUDGE, DEBRIS, AND WATER. THE MATERIAL WILL BE TAKEN TO HANFORDS CENTRAL PLANT FOR TREATMENT, STORAGE, AND/OR DISPOSAL.

20-1

20-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although disposition of K-Basin spent nuclear fuel is beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

HANFORD'S CLEANUP MISSION, AND FURTHER STATED THAT OPERATION OF FETE COULD HELP SAVE THE LIVES OF MANY PEOPLE BY PRODUCING ISOTOPES TO BE USED IN NEW WAYS TO TREAT CANCER, HEART DISEASE, AND OTHER ILLNESSES.

20-2

COMMENTORS WERE ALSO CONCERNED ABOUT THE POTENTIAL GENERATION OF RADIOACTIVE AND HAZARDOUS WASTE AS A RESULT OF THE PROPOSED MISSIONS, AS WELL AS DOE'S COMMITMENT TO ONGOING CLEANUP PROGRAMS, PARTICULARLY AT HANFORD.

20-3

20-2: DOE notes the commentor's support for Alternative 1, Restart FFTF and for the Hanford cleanup mission.

20-1

20-3: DOE notes the commentor's concern about waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

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- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): CLYDE NASH JR

Organization: _____

Home/Organization Address (circle one): _____

719 SOUTH THORSON AVENUE

City: COMPTON, State: CA Zip Code: 90221

Telephone (optional): 1-310-637-1216

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



Response to Commentor No. 20

Commentor No. 21: Bernice C. Mitchell

August 2, 2000

Mr. John Geehofer, Professional Programming
Washington State Medical Association
20336th Avenue, Suite 1100
Seattle, Washington 98121

DOE Secretary Richardson
Attn(s): NNSA Administrator
7B048 - NA-1, --- Director:
Carol M. Borgstrom (EH-12)
Office of NEPA Policy & Assist.
and Mr. William D. Magwood, IV, ✓
Director, Office of Nuclear Energy,
Science and Technology, all at
1000 Independence Ave. SW
Washington, DC 20585

Mr. Ron Rabun, Richland City Manager
P. O. Box 190
Richland, WA 99352

DOE/RL Director Kline
Attn: Mike Talbert, A7-75
Richland, WA 99352

Governor Gary Locke
P. O. Box 40002
Olympia, WA 98504

Mr. William Martin, TRIDEC
901 North Colorado Street
Kennewick, WA 99336

Colette F. Brown, Document Manager ✓
Office of Space and Defense Power Systems (NE-50),
Office of Nuclear Energy, Science and Technology,
U. S. Department of Energy,
19901 Germantown Road
Germantown, MD 20874
Attention: NI PEIS
Telephone: (877) 562-4593
E-mail: Nuclear Infrastructure-PEIS @hq.doc.gov

Greetings to Mr. Geehofer, et al. This is a Memo of Understanding to each of you, a follow-up, promised to the Washington State Medical Association—about the DOE/EIS-0319D, JULY 2000 “DRAFT Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States,” and my asking their Washington State Medical Association to be the Civilian benefactor and Partner in/of FFTF’s RESTART AND OPERATION. Mr. Mike Talbert of DOE/RL made available to me “posthaste,” at my 8/2/00, request, to send to you and yours, DOE’S related Volumes 1 and 2 and DOE’s Summary Copy of both Volumes, that you may be informed concerning my request, and that you may inform others of the Washington State Medical Association’s Program Office to allow them to get a better understanding of DOE’s Role in/of the Fast Flux Test Facility (FFTF), and any DOE Mission Statements and responsibilities to our Medical World, concerning DOE Secretary Richardson, the U. S. Department of Energy’s Energy and Natural Resources’ Zaar, DOE’S RESPONSIBILITY FOR ENSURING THE AVAILABILITY OF ISOTOPIES FOR MEDICAL APPLICATION, ETC., as a follow-up to my informing your Office of my April 2000 letter to DOE’S Mr. William D. Magwood, IV, Director of DOE’s Office of Nuclear Energy, Science and Technology, requesting that DOE give FFTF to Washington State Doctors, namely, one and the same, who will be/are prime users of medical isotopes, in the same fashion DOE gave the Port of Benton to Benton County, to allow the doctors, NASA and/or DOE, or other Federal, or private entities to partner with the doctors to use whatever “fall-out” that will be generated in the production of isotopes... such as Pu-238 used by NASA, etc., keeping DOE’s presence AND Federal Dollars at Hanford. I thought was the most important “fall-out” until I received a copy of the PEIS DRAFT. The first paragraph of its Summary stating that ensuring the availability of isotopes for medical, industrial, and ensuring

21-1

Response to Commentor No. 21

- 21-1:** Although other private manufacturers produce medical radioisotopes, DOE remains the key provider for a large number of radioisotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially experimental, these isotopes are not generally purchased in large-enough quantities to make their production financially attractive to private industry. Under the NI PEIS proposed action and consistent with its mandates under the Atomic Energy Act, DOE would enhance its existing nuclear facility infrastructure to, among other things, more effectively support production of radioisotopes for medical applications and research. DOE’s intent is to complement commercial sector capabilities to ensure that a reliable supply of isotopes is available in the United States to meet future demands, and encourage the commercial sector to privatize the production of isotopes that have established applications to a level that would support commercial ventures.

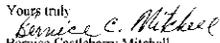
The United States government believes that reasonable business relationships with Russia are important. If the purchase of plutonium-238 from the Russians becomes unnecessary, then no new contracts will be negotiated.

Commentor No. 21: Bernice C. Mitchell (Cont'd)

RESEARCH APPLICATIONS, AND UNDERTAKING RESEARCH AND DEVELOPMENT ACTIVITIES RELATED TO DEVELOPMENT OF NUCLEAR POWER FOR CIVILIAN USE; INDICATES THAT DOE NEEDS FFTF RESTARTED ASAP. DOE ALREADY APPEARS CRIMINALLY NEGLIGENT PER THE Atomic Energy Act of 1954, as amended. DOE should be begging the Washington Medical Association to partner with them, instead of my begging either, and they both should be seeking out each other, asking the above local, State and Federal people to help them, to help this materialize. Mr. Richardson signed a Congressional Contract and the members of the Medical Associations took the Hippocratic Oath. DOE and the Medical Associations are positioning the Local, State and National Economy and National Well-Being toward demise, while they force the Medical Associations and Federal Agencies to import medical and industrial isotopes, thereby building foreign economies - letting us ingest their "nuclear fall-out," while we keep FFTF in "deactivated status" at the cost of millions of dollars, in fear that we will ingest some of our own "nuclear fall-out," by having delayed and are still refusing to bring FFTF "ON LINE." (Nuclear fall-out is of no respecter of persons or place, somewhat different than people. Those foreign (Russian, et al) millionaires we are creating by importing their ISOTOPES will some day own the U.S.A. when our Economy sinks to "third world" status.... There was a recent World War II Update that stated the babies, fathered by American Soldiers, left overseas when the War Ended, were placed in insane asylums and not orphanages). FFTF COULD HAVE BEEN AND COULD BE PRODUCING THE ISOTOPES AND BUILDING THE COMMUNITY'S AND U.S.A.'s ECONOMY THROUGH THE NUMBER OF JOBS/EMPLOYEES WILL BE NEEDED TO OPERATE FFTF.

Mr. Rabun, thank you for considering to assemble Mr. Martin of TRIDEC, DOE/Mr. Talbert and Governor Locke to meet with the Medical Association concerning a DOE/WMA EXPLORATION OF THE REACTIVATION OF FFTF WITHIN THE ABOVE PREFERENTIALS. POSTHASTE--ATLEAST A MEETING OF THESE MINDS!!

ATTENTION MS. COLETTE E. BROWN, DOCUMENT MANAGER OF THE OFFICE OF SPACE AND DEFENSE POWER SYSTEMS (NE-50), OFFICE OF NUCLEAR ENERGY, SCIENCE AND TECHNOLOGY, U.S. DEPARTMENT OF ENERGY, ATTENTION: N/PEIS; AND MR. WILLIAM D. MAGWOOD, IV, DIRECTOR OF THE OFFICE OF NUCLEAR ENERGY, SCIENCE AND TECHNOLOGY; PLEASE ACCEPT YOUR COPIES OF THIS MEMO AS MY AUGUST 31, 6:00PM RICHLAND, WA, BEST WESTERN TOWER INN'S "PUBLIC MEETING REGISTRATION AND THE MEETING'S WRITTEN, PUBLIC COMMENT, AND A PART OF THE PERMANENT PUBLIC COMMENT FILE, WITH THE FOLLOWING ADDITION: "I WANT THE RESTARTING OF THE FAST FLUX TEST FACILITY THAT IS CURRENTLY IN STANDBY STATUS, INCLUDING, ELEVATING IT TO THE CAPABILITY OF PRODUCING BOTH MEDICAL AND INDUSTRIAL ISOTOPES, AND Pu-238 SUFFICIENT FOR ALL U. S. NEEDS, WITH MY ABOVE SUGGESTED PARTNERSHIPS, AND THE EARLY CANCELLATION OF ALL Pu-238 AND ISOTOPE PURCHASING CONTRACTS WITH RUSSIA; AND OTHERS; INCLUDING THE YEARLY \$155 MILLION DOLLARS MENTIONED IN THE TRI-CITY HERALD, THAT DOE IS FUNNELING THROUGH PNNL, TO RUSSIA AS SECURITY'S FUNDS; AND USE THESE FUNDS AND THE Pu-238 RUSSIAN CONTRACTURAL FUNDS; AND SUFFICIENT--NEW CONGRESSIONAL FUNDING, TO DEFRAY THE COST OF REACTIVATING AND UPGRADING FFTF "POST HASTE" " Thanks to all of you in advance!!

Yours truly,

 Bernice Castleberry Mitchell
 115 Spring Street
 Richland, WA 99352
 Phone: (509) 375-0373

- Enclosures: 1) July 21, 2000 DOE Coverletter showing Draft PEIS Hearing Schedule (August 22, 2000 through September 6, 2000), (J. Gechofer)
 2) Draft PEIS Comment form.

21-1
(Cont'd)

21-2

21-1

Response to Commentor No. 21

21-2: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 21: Bernice C. Mitchell (Cont'd)

Response to Commentor No. 21

- 3) Draft (Summary) Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States. Including the Role of the Fast Flux Test Facility, and Volumes 1 and 2.

CC: Gary King, Ph.D., J.D.
Director, Office of Worker
And Community Transition
Department of Energy
Washington, DC 20585

DOE Office of Inspector General
Department of Energy
Washington, DC 20585

Mr. Frank C. Morales
Consultant/Investigator
Morales & Associates
Specialists in Federal Government
Third Party Investigations
1211 Maricopa Hwy, Suite 202
Ojai, CA 93023
f.morales@worldnet.att.net

*Note: I received my PEIS draft direct from
returning my comment direct !!!
Bernice C. Mitchell*

Page 3 of 3

Commentor No. 22: Richard E. Schreiber

Response to Commentor No. 22

Draft PEIS Comment Form

Please see enclosed.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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• calling toll-free and leaving your comments: 1-877-562-4593
• faxing your comments toll-free to: 1-877-562-4592
• commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Richard E. Schreiber
Organization: retired from Oak Ridge National Lab.
Organization Address (circle one): 951 West Outer Drive
City: Oak Ridge State: TN Zip Code: 37830-8606
Telephone (optional): 505-482-2379
E-mail (optional): DickSchreiber@worldnet.att.net

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Collette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 22: Richard E. Schreiber (Cont'd)

951 West Outer Drive
Oak Ridge, TN 37830-8606
August 8, 2000

Colette E. Brown, NE-50
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

Dear Ms. Brown:

Please consider my comments on the proposed EIS for expansion of the Nuclear Energy R/D and Isotope Missions of the USDOE. I am now retired, but for several years I was in charge of the Iridium Project at the Oak Ridge National Laboratory. The radioactive iridium was produced in the High Flux Isotope Reactor (HFIR), packaged and shipped to commercial suppliers of gamma ray sources for radiographing welds in industry.

I am supportive of the production of Pu-238 as a heat source for NASA deep space missions and favor the restart of FFTF and the construction of a new research reactor. I am opposed to the use of the HFIR for Pu-238 production because it would involve cannibalizing facilities now used for iridium irradiation, as well as the manufacture of other radioisotopes.

The biggest problem with the production of any radioisotope is reliability of source. If there is any threat to that source, customers go elsewhere. This will be true for Pu-238, just as it is for iridium now. There are just two sources of radioactive iridium in the United States and both are dependent on the uninterrupted operation of two reactors, HFIR and ATR. Both are ancient machines and subject to frequent unscheduled shutdown. Modernization efforts are modest and the pressure-containing members are subject to radiation degradation and must be retired from service in the near term. This uncertainty in the production of iridium gamma sources in the U.S. has led many customers to choose Russia as their supplier. The same will be true for Pu-238 if the proposed program does not go forward.

Ideally, the development of another research reactor and the restart of FFTF would assure the uninterrupted production of all radioisotopes needed in civilian programs in this country.

I believe three other points need to be made with regard to the scope of the present and proposed programs in the NI PEIS.

Response to Commentor No. 22

22-1: DOE notes the commentor's support for Alternative 1, Restart FFTF, in combination with Alternative 4, Construct New Research Reactor. Based on the alternatives presented in the NI PEIS, the Record of Decision can implement one or more alternatives, or a combination of elements from one or more alternatives.

22-2: See response to comment 22-1.

22-3: The use of HFIR for plutonium-238 production would not involve cannibalizing facilities now used for iridium irradiation and would not impact current missions. As stated in the NI PEIS, Section 2.5.3 of Volume 1, "Depending on the combination of facilities used in Alternative 2, HFIR and ATR could continue their current support of the medical and industrial isotope and research and development missions, including some near-term growth, while accommodating the production of plutonium-238."

DOE agrees with the commentor's concern about the reliability of the current sources of radioisotopes. This PEIS is a necessary step in the process of expanding isotope production in the United States.

22-4: Current domestic and global producers of radioisotopes include governments that operate reactors and accelerators at national laboratories or institutes, and private sector companies that own and operate accelerators. There are also many partnership arrangements wherein companies lease irradiation space in government reactors or operate processing facilities in coordination with the government. A

Commentor No. 22: Richard E. Schreiber (Cont'd)

C.E. Brown

Page 2

- (1) The document makes no mention of how the government isotope program fits into the total isotope production and use in this country, and the world. There are many more isotopes used, and greater quantities (curies), that are produced in accelerators than in government reactors. Some materials are produced in university reactors and some of the dominant isotopes used in medicine are derived from sources provided by Canada. Some European countries other than Russia also provide isotopes that compete with USDOE sources. It would be useful if the PEIS examined in some detail just how the DOE program shares in the overall radioisotope economy. Those parts that compete and those parts that are unique should be highlighted.
- (2) The iridium program, and other radioisotope programs as well, could greatly benefit from expanded use of the calutrons at Oak Ridge (Y-12). These devices are used to separate naturally occurring mixtures of isotopes. At present, it is necessary to allow the iridium sources to cool after irradiation to reduce the amount of high energy gammas coming from an undesired isotope which decays faster than the lower energy, desired isotope. The time lost reduces the service longevity of the sources. Separation of the isotopes prior to irradiation would solve this problem and reduce handling difficulties, as well. The same concept applies to many other radioactive sources that have many (non-radioactive) isotopes occurring together in nature.
- (3) Radio- and non-radioisotopes are largely sold to commercial users, or provided to researchers with government grants. The income from commercial users should be retained by the DOE facility making the sale, instead of being sent to the US Treasury. Normal commercial incentives, and the flexibility to use income for development purposes, should be available to the local DOE laboratory or other facility that actually makes the transaction. This would not only be a spark plug for the operation, stimulating efficiencies and morale, but would also make visible the income-producing capability of the program. This visibility would be helpful when seeking funding from Congress, funding which would still be necessary because of the large infrastructure costs associated with reactor and hot cell operation. The same concept applies for calutron and accelerator-produced isotopes. Seeing the contribution and social need for these materials would give greater public and Congressional support.

I believe it would be of great benefit to the argument presented in the PEIS if these points are included.

Sincerely,



Richard E. Schreiber

Response to Commentor No. 22

few universities also produce radioisotopes, but their ability to provide reliable and diverse supplies are generally limited by the small-scale capabilities or operating schedules of their facilities.

DOE's production and sale of radioisotopes fall into two categories—"commercial" and "research" and both types of isotope production are considered under the proposed actions. Commercial radioisotopes are those that are produced in large, bulk quantities and sold to pharmaceutical companies or distributors, or to equipment or sealed source manufacturers. Examples of commercial radioisotopes produced by DOE include strontium-82 and germanium-68 for medical applications, and iridium-192 and californium-252 for industrial applications. DOE only produces commercial isotopes when there is no U.S. private sector capability or when foreign sources do not have the capacity to meet U.S. needs reliably. In contrast, research radioisotopes are typically produced and sold in small quantities in response to specialty orders from researchers preparing experiments in the field of medicine, with small quantities of these radioisotopes also purchased by industrial researchers. Because small-quantity production of research isotopes is not financially attractive to private-sector producers and is generally not undertaken, DOE attempts to provide all research radioisotopes that are requested, subject to production capability, inventory, and financial constraints. As successful application of a specific research isotope is established, the production and sales of that radioisotope may shift from research to commercial status. In recent years, over 95 percent of DOE's sales of radioisotopes by dollar volume were commercial and 5 percent have been for research. Additional discussion of how DOE's isotope program fits into the overall U.S. and foreign isotope production capabilities was incorporated into Section 1.2.1 of Volume 1.

- 22-4: The document makes no mention of how the government isotope program fits into the total isotope production and use in this country, and the world. There are many more isotopes used, and greater quantities (curies), that are produced in accelerators than in government reactors. Some materials are produced in university reactors and some of the dominant isotopes used in medicine are derived from sources provided by Canada. Some European countries other than Russia also provide isotopes that compete with USDOE sources. It would be useful if the PEIS examined in some detail just how the DOE program shares in the overall radioisotope economy. Those parts that compete and those parts that are unique should be highlighted.
- 22-5: The iridium program, and other radioisotope programs as well, could greatly benefit from expanded use of the calutrons at Oak Ridge (Y-12). These devices are used to separate naturally occurring mixtures of isotopes. At present, it is necessary to allow the iridium sources to cool after irradiation to reduce the amount of high energy gammas coming from an undesired isotope which decays faster than the lower energy, desired isotope. The time lost reduces the service longevity of the sources. Separation of the isotopes prior to irradiation would solve this problem and reduce handling difficulties, as well. The same concept applies to many other radioactive sources that have many (non-radioactive) isotopes occurring together in nature.
- 22-6: Radio- and non-radioisotopes are largely sold to commercial users, or provided to researchers with government grants. The income from commercial users should be retained by the DOE facility making the sale, instead of being sent to the US Treasury. Normal commercial incentives, and the flexibility to use income for development purposes, should be available to the local DOE laboratory or other facility that actually makes the transaction. This would not only be a spark plug for the operation, stimulating efficiencies and morale, but would also make visible the income-producing capability of the program. This visibility would be helpful when seeking funding from Congress, funding which would still be necessary because of the large infrastructure costs associated with reactor and hot cell operation. The same concept applies for calutron and accelerator-produced isotopes. Seeing the contribution and social need for these materials would give greater public and Congressional support.
- 22-5: Separation of naturally occurring isotopes using the Oak Ridge calutrons is not within the scope of the NI PEIS. However, nothing in this PEIS would prevent their use to purify isotopes prior to irradiation if DOE deemed such use to be beneficial.
- 22-6: DOE notes the commentor's ideas about income allocation. DOE has not ruled out shared-income approaches related to future operation of isotope production facilities.

Commentor No. 23: Eugene C. Koschik

U. S. Department of Energy, Office of Space and Defense Power Systems, NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

Dear Mr. Secretary,

I help build FFTF while an employee of Westinghouse Hanford Company starting in 1971.

During 1980, FFTF achieved power status.

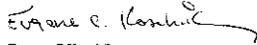
It only operated a few years and then was on "standby status" - WHAT A WASTE!

My wife had colon cancer surgery last year and did not require chemo or radiation.

However, the future is very uncertain regarding necessary treatments?

PLEASE RESTART FFTF FOR MEDICAL ISOTOPIES.....

Thanks.



Eugene C Koschik
121 W. 51st
Kennewick, WA 99337

|| 23-1

Response to Commentor No. 23

23-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 24: Barbara Poulson

Aug 21 00 10:08a Barbara Coviello 509-234-0445 p.1

Draft PEIS Comment Form

I wish to show my support for Alt 1
 There is a growing need for medical +
 industrial isotopes and a need to support
 future NASA space missions. To be involved
 in civilian nuclear energy research
 is highly desirable, especially for Washington
 state & will keep our area highly employable.
 The first Flux Test Facility is an excellent
 way to expand our knowledge in many areas

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Barbara Poulson

Organization: _____

Home/Organization Address (circle one): 6290 WSR 260

City: Corvallis State: OR Zip Code: 97331

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Collette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

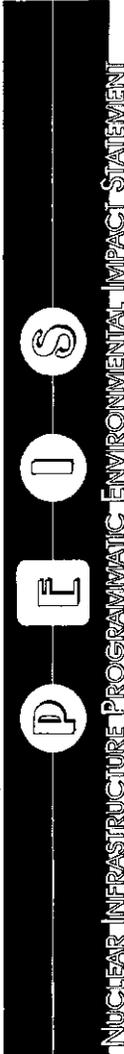


7/12/00

Response to Commentor No. 24

24-1

24-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.



Commentor No. 25: Elizabeth Miles

8/13/00

Ms. Collette Brown

NE-50

USDOE

19901 Germantown Rd.

Germantown, MD 20874

Dear Ms. Brown:

I am outraged that the DOE
is considering firing up the
experimental reactor at Hanford.

No! This area is already
contaminated with radioactive
waste which cannot be fully
contained. We do not need more
space fuel and weapons processing.

No! Do not use my tax
dollars for this dangerous project.

Thank you.

Elizabeth Miles

Elizabeth Miles 138

800 NE Roberts #

Gresham OR 97030

Response to Commentor No. 25

25-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF. The commentor should be aware that FFTF is not an experimental reactor, but rather was built to test fuel for the breeder reactor program.

25-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

25-3: Current waste management activities are conducted in accordance with applicable Federal and state laws and regulations and appropriate DOE orders.

25-4: 25-3: The purpose of the NI PEIS is to evaluate the environmental impacts of a range of reasonable alternatives to fulfill the proposed action, one of which is the domestic production of plutonium-238. Plutonium-238, used to support NASA space missions, is not weapons-grade plutonium (i.e., plutonium-239), and no defense missions or weapons processing activities are associated with the proposed action. Section 1.2.2 of Volume 1 was revised to clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

25-4: DOE notes the commentor's opinion.

Commentor No. 26: George T. Dvorak

Response to Commentor No. 26

Draft PEIS Comment Form

I support the restart of FTFE for use in the production of tritium and medical isotopes.

26-1

26-1: DOE notes the commentor's support for Alternative 1, Restart FTFE. The production of tritium or any other defense-related mission are not within the scope of actions proposed for FTFE in this NI PEIS.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): GEORGE T. DVORAK

Organization: _____

Home Organization Address (circle one): _____

58411 N. DEMOSS RD

City: BENTON CITY State: WA Zip Code: 99030

Telephone (optional): 1-509-588-5725

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 27: Craig A. Maydole

Response to Commentor No. 27

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

After fully reviewing the Draft PEIS I have concluded that the best possible action would be a restart of the FFTE for the production of medical isotopes, Pu-238, and nuclear research. I feel that further delaying the restart of the FFTE is a waste of my tax dollars. Further, delaying the restart of FFTE places undue risk on my life by delaying valuable research time to a cure for cancer and other diseases. Additionally delaying a restart of the FFTE places the US at risk by forcing us to become dependant on foreign sources of radioisotopes. I urge the Secretary to order the immediate restart of FFTE.

27-1

27-1: DOE notes the commentor's support for Alternative 1, Restart FFTE.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Craig A. Maydole

Organization: private citizen

Home/Organization Address (circle one): 3720 Lexington Ave

City: West Richmond State: WA Zip Code: 99353

Telephone (optional): _____

E-mail (optional): ca35@excite.com

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Commentor No. 28: Barry Egner

1639 SW Skyline Blvd.
Portland, OR 97211
August 11, 2000

Collette E. Brown
NE-50
U.S. Department of Energy
19901 Germantown Rd.
Germantown, MD 20874

Dear Ms. Brown,

Enclosed with the letter is a copy of a letter that I sent (twice!) before, dated as indicated, to which I received no reply.

I understand that the Department is considering restarting the reactor at Hanford. In 1994 Secretary O'Leary said that the Hanford reservation would never make nuclear material again, that its sole activity would be repairing the damage already done.

So aside from the further detriment to credibility that the reconsideration of this decision creates, what am I to make of current proposals?

I can only conclude that I do not trust those managing the Hanford reservation to be cautious or truthful.

I strongly urge Secretary Richardson to resist any consideration to reopen the reactor at Hanford.

Yours truly,



Barry Egner MD

28-1

28-2

Response to Commentor No. 28

28-1: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The prior Secretary's statement pertained to nuclear weapon materials. No weapons material will be produced within the stated mission. All stated missions are for civilian purposes.

28-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 28: Barry Egner (Cont'd)

July 18, 1997
1639 SW Skyline Blvd.
Portland, OR 97221

Department of Energy
Washington DC

To Whom It May Concern:

This letter is in regard to the May, 1997 explosion at Hanford in Washington.

As an American citizen and as a resident of the NW, I am concerned about the incompetence and (lack of) credibility of those managing this hazardous facility.

Since your office and the contractors have already established that information you provide to the public is not trustworthy, I am not interested in receiving reassurances about procedures or planned corrections. We've been there before.

Instead, this letter is a request for an address where I can write to follow subsequent actions that are taken in regard to the management of the facility. Preferably, this would be a public watchdog organization or a federal office outside of your own.

Thank-you.

Barry Egner MD

cc: Ron Wyden, US Senator

28-3

Response to Commentor No. 28

28-3: DOE notes the commentor's concern about continued safe operations at the Hanford site. For a specific response to the concerns over the May, 1997 tank explosion at the Plutonium Reclamation Facility, please refer to the Comment Response, ORD 07-16, p. 3-417, included in the Surplus Plutonium Disposition FEIS, Volume 3.

For a general oversight of Hanford cleanup operations, there are two information sources.

1. The Defense Nuclear Facilities Safety Board (Attention: Andrew L. Thibadeau, Post Office Box 7887, Washington, D.C. 20044-7887, 1-800-788-4016, mailbox@dnfsb.gov; URL: <http://www.dnfsb.gov/>) is responsible for independent, external, nuclear health and safety oversight of all activities in DOE's nuclear weapons complex. The Board reviews operations, practices, and occurrences at DOE's defense nuclear facilities and makes recommendations to the Secretary of Energy that are necessary to protect public health and safety. Activities that would occur under the nuclear infrastructure alternatives (described in Section 2.5 of Volume 1) are unrelated to the national defense. Neither nuclear weapons nor components for nuclear weapons would be produced under these alternatives (See Section 1.2 of Volume 1 for a description of the nuclear infrastructure missions).

2. The Hanford Advisory Board (Hanford_Advisory_Board@rl.gov; URL: <http://www.hanford.gov/boards/hab/charter/charter.htm>) may also be of interest. It is an independent, oversight body consisting of a balanced mix of the diverse interests that are affected by Hanford cleanup issues. Its mission is to provide informed recommendations and advice to the DOE's Richland Operations Office, the U.S. Environmental Protection Agency, and the State of Washington Department of Ecology -- the Tri-Party agencies -- on selected major policy issues related to the cleanup of the Hanford site.

Commentor No. 29: Anonymous

For your information
 In my opinion, this
 distorts the benefit
 of having public
 meetings. ADIS is
 trying to dominate
 the hearings.

29-1

Response to Commentor No. 29

29-1: DOE notes the commentor's concern that the public hearings are susceptible to domination by individual groups. In addition to the public hearings, comments could be submitted by various means including mail, a toll-free telephone and fax line, and a web site (<http://www.nuclear.gov>). The public hearing format used was based on stakeholder input and was presented in the Notice of Availability (65 FR 46443 et seq.) for the Draft NI PEIS. This format was intended to encourage public discussion, regardless of the motivation for attending the hearing. It provided an opportunity for the participants to meet one another, exchange information, and share concerns, with DOE personnel available throughout the course of each hearing to answer questions. The meetings were facilitated so as to ensure that all persons wishing to speak had an opportunity to do so. Persons wishing to comment were selected at random from the audiences rather than according to the order in which they registered. This was accomplished by a random number drawing. In addition to the comment recorder stationed at the main hearing, a second recorder was available in an adjacent room to receive comments without the need to await selection at the main proceeding. The hearing format used promoted open and equal representation by all individuals and groups. Equal consideration was given to all comments, regardless of how or where they were received.

A Call To Action!!!

The FFTF EIS Hearings are COMING!!!

August 28, Hood River, Or.
August 29, Portland, Or.
August 30, Seattle
August 31, Richland

All hearings are scheduled for 6:00 p.m. to 9:00 p.m.
Hood River hearing is at Hood River Inn, 1108 E. Marina Way.
Portland hearing is at Oregon Museum of Science & Industry (OMSI), 1945 SE Water Ave.
Seattle Hearing is at Wa. State Convention & Trade Center, 800 convention Place.
Richland hearing is at Tower Inn, 1515 George Washington Way.

These hearings are pivotal to the future of the FFTF!!
We have been told that public input will be a factor in
the final decision. Everyone who has an interest in
FFTF, please attend as many of these hearings as you
possibly can!! This may well be the make-or-break point
in the FFTF campaign. There has already been reaction to
the draft EIS. Do NOT let others dominate the
discussion! Get with your friends, co-workers and
neighbors and carpool. If you need transportation,
please call 946-6965 and leave a message.

It is also important that written comments be sent to:

Ms. Colerte Brown
DOE Office of Space & Defense Power Systems, NE-50
19901 Germantown Road
Germantown, Md. 20874-1290

.....or E-mail them to: Nuclear.Infrastructure-PEIS@hq.doe.gov
By September 18.

Commentor No. 30: Dianne Cooper

From: MDCOOPER2@aol.com%internet[SMTP:MDCOOPER2@AOL.COM]
 Sent: Monday, August 21, 2000 12:10:14 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: PEIS comment
 Auto forwarded by a Rule

To Ms. Colette Brown
 U.S. Department of Energy
 Office of Space and Defense Power Systems
 NE _ 50
 19901 Germantown Road, Germantown, MD 20874_1290

Ms. Brown

This letter is to express my comments on the draft PEIS for accomplishing expanded civilian nuclear energy research and development and isotope production missions in the United States, including the role of the Fast Flux Test Facility.

I support option #1. Restart of the FFTF at Hanford, Washington, to meet all isotope production and research requirements.

Believe the FFTF is a valuable asset that should be utilized. It makes economic sense to use the FFTF since it is already constructed, had an outstanding operating history, and has fuel available for these missions. Here in San Diego, California we are experiencing electrical rate hikes due to deregulation and not enough generation capacity, therefore isotopes should not be made in other reactors, which could take away needed space for fuel and reduce generation capacity. Medical isotopes will be needed in quantities (after medical trial experimental quantities are used) for distribution that only a large reactor like FFTF can provide.

Construction of one or two accelerators would take years to license and would only be another drain on the already stretched power generation capacity of the United States.

Construction of a new research reactor is not required when FFTF is already there and fully capable to meet this need. The legal challenges to build a new reactor are also very big and a new reactor could not be constructed in less than ten years and at great expense in these times.

Again I want to express support for the restart of the FFTF.

Thank you very much

Dianne Cooper

30-1

30-2

30-3

30-1

Response to Commentor No. 30

30-1: DOE notes the commentor's support for Alternative 1, Restart FFTF, and opposition to Alternative 3, Construct New Accelerator(s) and Alternative 4, Construct New Research Reactor.

30-2: See response to comment 30-1.

30-3: See response to comment 30-1.

Commentor No. 31: Alan E. Waltar
Texas A&M University

From: Alan E. Waltar[SMTP:WALTAR@NE.TAMU.EDU]
Sent: Sunday, August 20, 2000 6:01:02 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF Restart
Auto forwarded by a Rule

Dear Leaders of the Next Millennium,

It will not be physically possible for me to attend any of the upcoming public hearings associated with the FFTF EIS. Hence, please permit me to record my support for the restart for the FFTF in the strongest possible language!

I had the great privilege of working on the FFTF for a large part of my professional career. As such, critics may say that such an association clearly biases my support—somewhat akin to a father who would protect his son to the bitter end. If someone were to use such an analogy to dismiss my testimony, I would readily accept the charge. To me, the FFTF is very much like a son. It represents everything that is right about our nation and, in many ways, the technology that FFTF is capable of developing is, in my opinion, absolutely crucial to the welfare of our nation—and possibly all of humanity. Hence, like a responsible son, it deserves to live and make the unique contributions to society that only it can make.

During the last two years of my association with this marvelous machine, I had the pleasure of traveling all around the world in hopes of establishing sufficient support for FFTF to turn it into a true international user facility. Nowhere did I ever hear a disparaging remark about the technical capabilities of this queen ship. It is universally recognized among the qualified technical community that it is in a class all by itself.

There were certainly questions related its cost of operation. Indeed, it is not an inexpensive machine to run. But quite frankly, the costs of operation (though substantial) are, I believe, miniscule in comparison to the benefits that can still be derived from this facility. Furthermore, I know that substantial private capital is available to offset federal expenses, but this option has never been seriously considered by the Department of Energy. Hence, if costs are truly a pivotal issue, a public/private partnership should be given full and honest consideration.

The missions have been well articulated, so there is no reason to repeat these here. I simply submit that if the United States has any hope of re-establishing itself as a world leader of nuclear technology—a technology that is CERTAIN to gain in importance on the global scene—restarting the FFTF would be both technically and symbolically perhaps the most important forward-looking decision it could make.

Alan E. Waltar
Professor and Head
Department of Nuclear Engineering
Texas A&M University
129 Zachry Engineering Center
College Station, TX 77843_3133
Phone: 979_845_1670
Fax: 979_845_6443
e_mail: waltar@ne.tamu.edu

Response to Commentor No. 31

- 31-1** **31-1:** DOE notes the commentor's support for Alternative 1, Restart FFTF.
- 31-2:** DOE has not ruled out shared-cost approaches related to future operations of isotope production facilities. Although private manufacturers produce medical radioisotopes, DOE remains the key provider for a large number of radioisotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially experimental, these isotopes are not generally purchased in large-enough quantities to make their production financially attractive to private industry. Under the NI PEIS proposed action and consistent with its mandates under the Atomic Energy Act, DOE would enhance its existing nuclear facility infrastructure to, among other things, more effectively support production of radioisotopes for medical applications and research. DOE's intent is to complement commercial sector capabilities to ensure that a reliable supply of isotopes is available in the United States to meet future demands, and encourage the commercial sector to privatize the production of isotopes that have established applications to a level that would support commercial ventures.
- 31-2**
- 31-1**

Commentor No. 32: Ken and Nancy VanDyken

From: Ken (038) Nancy VanDyken[SMTP:NVANDYKEN@PRODIGY.NET]
Sent: Sunday, August 20, 2000 3:12:57 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF
Auto forwarded by a Rule

We believe that FFTF should be restarted for medical isotope production and for use in cancer diagnosis, treatment and research. It makes little logical sense to toss aside this facility and its unique abilities for our nation. Thank you.

_Ken & Nancy VanDyken
nvandyken@prodigy.net

32-1***Response to Commentor No. 32***

32-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 33: Sidney J. Goodman

From: Sidney J. Goodman[SMTP:SJGDESIN@MINDSPRING.COM]
 Sent: Saturday, August 19, 2000 9:44:13 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Cc: Sidney J. Goodman
 Subject: The nuclearization of space
 Auto forwarded by a Rule

To whom it may concern:

I am horrified by the arrogant schemes proposed by NASA to nuclearize space.

The risks being stealthily foisted on an unsuspecting public are atrociously unacceptable.

The assurances issued by NASA reek of unethical and stupid neglect of fundamental reality.

NASA's funding deserve drastic cuts.

Angry in Paramus,

Sidney J. Goodman, P.E., M.S.M.E.
 170 Villanova Drive
 Paramus, NJ 07652

33-1

Response to Commentor No. 33

33-1: DOE notes the commentor's opposition to NASA's use of nuclear materials for space missions. NASA's policies concerning nuclear power are outside of the scope of this PEIS. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and provides a thorough NEPA evaluation for each launch.

Commentor No. 34: Janice Jolly

From: JANJOLLY@aol.com%internet[SMTP:JANJOLLY@AOL.COM]
 Sent: Saturday, August 19, 2000 8:01:49 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Closedown of Fast Flux Test Facility
 Auto forwarded by a Rule

I am writing to express my sincere concern at learning of your intent to close down the Fast Flux Test Facility, as expressed in the draft "Nuclear Infrastructure Programmatic Environmental Impact Statement" issued for hearing and comment. As the newest, and the most advanced, versatile and safest of all DOE reactors, its purpose has always been beneficial uses of nuclear science. It has never been a defense reactor. We understand that some 20 years of design life remain for the reactor. The U. S. needs a wide variety of isotopes for leading edge medical research and therapy. Materials that could have been made at FFTF will result in clinical trials for several types of cancer, arthritis and other medical concerns being cancelled or abandoned. Useful Plutonium isotopes can also be produced at this facility rather than buying supplies from Russia. Any new facility to do these same important jobs would cost on the order of \$3 billion to \$9 billion to reestablish at another locality. We need FFTF, please restart it.

Sincerely,

Janice Jolly

34-1

34-2

34-1

Response to Commentor No. 34

- 34-1:** DOE notes the commentor's support of Alternative 1, Restart FFTF and opposition to Alternative 3, Construct New Accelerator(s) and Alternative 4, Construct New Research Reactor.
- 34-2:** See response to comment 34-1.

Commentor No. 35: Tanja Winter

From: Tanja Winter[SMTP:TANJA@CTS.COM]
Sent: Friday, August 18, 2000 11:53:41 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: What happened to renewables?
Auto forwarded by a Rule

RE: DOE Releases Draft Nuclear Infrastructure Programmatic Environmental Impact Statement

I urge you stop your continued investment in nuclear technology. It is an outrage that the DOE has remained a major player in the promotion and subsidy of nuclear power and weapons research.

All DOE research and development money should be directed toward renewables such as solar voltaic, etc. There should be no more federal funding for nuclear of ANY kind. Both weapons and power are too dangerous and too expensive. All the social, environmental and medical costs are ignored and the public is once again being taken for a ride.

Right from the start "Atoms for Peace" was a cover for the nuclear weapons program. Unfortunately we know that all this "public input" is for show only. Your decisions to go with nuclear have already been made. It is unfortunate that neglect of human needs today and of future generation will be the price paid.

Tanja Winter, 8315 Paseo Del Ocaso, La Jolla, CA 92037

Response to Commentor No. 35

35-1

35-1: The commentor's opposition to nuclear technology is noted. DOE also notes the commentor's interest in alternative energy sources, although issues of research and development of alternative energy sources are beyond the scope of this NI PEIS. Other offices of DOE are responsible for the research and development of alternative energy sources.

35-2

The actions proposed in the NI PEIS neither support nor involve weapons material development. All social, medical, and environmental impacts of all alternatives, including no action, are evaluated in this PEIS. The results of this evaluation are presented in EIS Volume 1, Section 2.7.1.

35-2: The Atoms for Peace Program promoted peaceful applications of nuclear technology. The program was not a cover for nuclear weapons development. DOE policy encourages effective public participation in its decision-making process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE considered comments received from the public. No decisions have been made with regard to the facilities and locations evaluated to fulfill the requirements of the DOE missions. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

Commentor No. 36: Kevin J. Bartlett

From: Kevin Bartlett[SMTP:KJBART@EMAIL.MSN.COM]
 Sent: Wednesday, August 16, 2000 8:28:01 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: RESTART FFTF
 Auto forwarded by a Rule

8_16_00

Colette E. Brown,
 U.S. Department of Energy,
 NE_50, 19901 Germantown Road,
 Germantown, MD 20874_1290,
 1_877/562_4592
 Nuclear.Infrastructure_PEIS@hq.doe.gov

Kevin J. Bartlett
 3814 W Rockwell Ave
 Spokane, WA 99205
 (509) 323_0951

Dear Collette E. Brown:

I believe that FFTF should restart due to the variety and quantity of tasks FFTF can perform, and due its s proven safety and reliability. With alternative two, existing facilities can't provide the quantity and flexibility that FFTF offers. Construction of new accelerators are cost prohibitive, don't offer the flexibility FFTF offers, and will require far more electrical power than this country currently has available. Construction of a new research reactor makes totally no sense when you have a proven reactor that is already built and has procedures to operate it. Not to mention the politics to get a new reactor permitted, and the very high costs of trying to build it. The last alternative of permanently deactivating FFTF would mean deactivating a facility that is environmentally safe, and has an expected life of 35 years left of operation.

The simplest alternative is to do nothing, which DOE has perfected. Here in Washington State we amazingly enough have a Major League Baseball team in Seattle. For years they were looked upon as little more than a minor league team, then the State government had the foresight to build a state of the art baseball stadium in Seattle (Safeco Field). Now the Mariners are top of their division, and their stadium will host the MLB All_star Game next season. My point is, if you build it, they will come. If somebody has the vision to restart FFTF and manage it well, old successful missions will return, along with new missions not developed yet due to lack of opportunity. There is no telling how many lives can be saved, or significantly improved due to medical isotopes produced at FFTF.

Thank You For Your Time,

Kevin Bartlett

Response to Commentor No. 36

- | | |
|-------------|---|
| 36-1 | 36-1: DOE notes the commentor's support for Alternative 1, Restart FFTF. |
| 36-2 | 36-2: DOE notes the commentor's opposition to Alternative 2, Use Only Existing Facilities. |
| 36-3 | 36-3: DOE notes the commentor's opposition to Alternative 3, Construct New Accelerator(s). |
| 36-4 | 36-4: DOE notes the commentor's opposition to Alternative 4, Construct New Research Reactor. |
| 36-5 | 36-5: DOE notes the commentor's opposition to Alternative 5, Permanently Deactivate FFTF. |
| 36-6 | 36-6: The commentor's position is noted. |

Commentor No. 37: Karen L. Skelly

From: Karen_L_Skelly@rl.gov%internet[SMTP:KAREN_L_SKELLY@RL.GOV]
Sent: Thursday, August 17, 2000 2:09:37 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF SUPPORT
Auto forwarded by a Rule

Political agendas should be set aside and the FFTF should be restarted for the purpose of producing medical isotopes.

Thank you
K. L. Skelly

|| 37-1

Response to Commentor No. 37

37-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 38: Edward Maiuri

From: Edward G Maiuri[SMTP:EMAIURI@JCPENNEY.COM]
Sent: Friday, August 18, 2000 11:21:12 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF
Auto forwarded by a Rule

I support the Fast Flux Test Facility and would like to see it become a reality.

|| 38-1

—
Cordially,
Edward Maiuri
Store Manager
0164_4

Response to Commentor No. 38

38-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 39: Lynn Reer

From: Lynn Reer[SMTP:LREER@WORLDACCESSNET.COM]
Sent: Friday, August 18, 2000 12:34:18 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Hanford
Auto forwarded by a Rule

This is to express concern, fear, and outrage at the idea of starting of FFTF or any other nuclear processes at Hanford. We have not even cleaned up the nuclear waste that already exists. Please have compassion and wisdom and do not pursue this course.

Sincerely,

Lynn Reer

39-1

39-2

Response to Commentor No. 39

39-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

39-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Commentor No. 40: David Babad

From: David Babad[SMTP:DAVID_BABAD@AUTO_SOFT.COM]
 Sent: Tuesday, August 15, 2000 6:23:19 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: FFTF at Hanford, Wa.
 Auto forwarded by a Rule

Collette E. Brown
 15 August, 2000
 NE_50
 US Dept. of Energy
 19901 Germantown Rd.
 Germantown, MD 20874

Ms. Brown,

These comments are in response to the news that the DOE is considering restart of the FFTF at Hanford, Wa. I will be unable to attend the public comment forums in Hood River, Or. and Portland, Or. Please see that this letter is included in the proceedings of one of those meetings.

I find the DOE's attitude remarkable, and not a little disgusting, that the government would consider restarting the FFTF before adequately providing for the waste stream that this reactor would produce. Hanford has an abysmal record of containing its past waste stream. This stream currently is moving toward the Columbia river and very little is being done to stop the plume. Now you are suggesting that the NorthWest should shoulder yet more toxins?

If I were the DOE's parent I would tell you to go clean up your room before you take anything else out to play with!

We need solutions; not more pollution.

As you will no doubt notice, I fall strongly on the NO category concerning the FFTF restart.

Thank you,

David Babad
 32865 Watson Rd.
 Scappoose, Or. 97056

40-1

40-2

40-3

Response to Commentor No. 40

40-1: Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435-1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

40-2: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

DOE notes the commentor's concerns regarding the migration of contaminants to the Columbia River. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

More specific to the stated missions presented in the NI PEIS, FFTF is located approximately 4.5 miles from the Columbia River. There are no

Commentor No. 40: David Babad (Cont'd)

Response to Commentor No. 40

discharges to the river from FFTF and no radioactive or hazardous discharges to the groundwater. Analyses presented in Chapter 4 of the NI PEIS (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4) indicate that there would be no discernible impacts to groundwater or surface water quality at Hanford from normal operation of the existing Hanford facilities in support of the stated missions. Also, no water quality impacts would be expected as a result of permanent deactivation of FFTF (Section 4.4.1.2.4).

The Hanford Site also has a comprehensive waste minimization and pollution prevention program in place as summarized in Volume 1, Section 3.4.11.7 that would control any new site activities.

40-3: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 41: Norm and Billie Davis

From: Ncbj2@aol.com%internet[SMTP:NCBJ2@AOL.COM]
Sent: Monday, August 14, 2000 11:27:39 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: (no subject)
Auto forwarded by a Rule

We support start up of FFTF
Norm and Billie Davis



41-1

Response to Commentor No. 41

41-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 42: Frank Shaw

From: Pressley F Shaw, Jr.[SMTP:P.F.SHAW@JUNO.COM]
Sent: Tuesday, August 15, 2000 12:07:54 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Nuclear.Infrastructure_PEIS; decision
Auto forwarded by a Rule

Nuclear,Infrastructure

I'm in favor of the restart of F.F.T.F. for the medical isotopes. Plus anyother it can help the American people to become independent country, not being dependant of another country. So please let be sensible about our lives, and restart the facility, we need so desperately.

Frank Shaw
86503 West O.I.E. Hwy.
Prosser, WA. 99350
h. 509_973_2736

42-1

Response to Commentor No. 42

42-1: DOE notes the commentor's support for Alternative 1, Restart FFTE.

Commentor No. 43: Brian R. Duncan

From: Brian R. Duncan[SMTP:BDUNCAN1@HOME.NET]
Sent: Monday, August 14, 2000 10:16:18 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF
Auto forwarded by a Rule

Just a quick note but don't let its brevity be confused with lack of interest. I strongly support the start_up of the Fast Flux Test Facility (FFTF) at the Hanford Reservation Site in Washington State. FFTF can start making Medical Isotopes for the treatment of many different forms of Cancer and Medical Research.

Brian Duncan
San Diego, CA

|

43-1**Response to Commentor No. 43**

43-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 44: Gerald L. and Deborah A. Maiuri

From: JDMAIURI@aol.com%internet[SMTP:JDMAIURI@AOL.COM]
Sent: Monday, August 14, 2000 10:51:31 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: RESTART FFTF
Auto forwarded by a Rule

MY HUSBAND AND I STRONGLY SUPPORT THE RESTART OF
THE FAST FLUX TEST FACILITY (FFTF).

44-1

THANK YOU,

GERALD L MAIURI
DEBORAH A MAIURI
JDMaiuri@aol.com
1925 McPherson
Richland WA 99352

Response to Commentor No. 44

44-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 45: D. A. Johnson

From: DAJDHOME@aol.com%internet [mailto:DAJDHOME@aol.com]
Sent: Friday, August 04, 2000 1:06 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF

Please restart FFTF for medical isotopes.
Thank you for this chance to comment.

D.A. Johnson

45-1

Response to Commentor No. 45

45-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 46: Chris Pennock

From: C(038)L Pennock [mailto:blue@3_cities.com]
Sent: Monday, August 07, 2000 3:16 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF Hanford

Please re_start FFTF for Medical Isotopes.

|| 46-1

Thank you,
Chris Pennock

Response to Commentor No. 46

46-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 47: Keely Lake

From: Keely Lake [mailto:keely_lake@uiowa.edu]
 Sent: Tuesday, August 08, 2000 2:34 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: ?Check_Subject

Dear Sir or Madame,

I am writing to show my support of the FFTF (Fast Flux Test Facility) in Richland, Washington. I believe that it is important that it restart with the purpose of making medical isotopes. I realize that I do not live in that area, but I am concerned that no medical isotopes are currently being produced in this country when we have a facility which can do so if given proper support. Please count me among those who support the FFTF facility. Thank you.

Sincerely

Keely Lake

Graduate Student, Univ. of Iowa
 2028 9th St. #8
 Coralville, IA 52241

47-1

Response to Commentor No. 47

47-1: DOE notes the commentor's support for Alternative 1, Restart FFTF. The commentor should note that medical isotopes are currently produced in the United States.

Commentor No. 48: Richard A. Gorringer

From: Richard A. Gorringer [mailto:richgorr@mail.pacifier.com]
Sent: Friday, August 11, 2000 3:32 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Fast Flux Test Facility at Hanford

Collette E. Brown,
NE_50
US Dept. of Energy
19901 Germantown Rd.
Germantown, MD 20874

Dear Ms. Brown:

I OPPOSE any nuclear reactor startup at Hanford. Specifically, I urge you to decommission the Fast Flux Test Facility FFTF, the advanced liquid metal nuclear reactor at Hanford. There are already billions of gallons of high_level waste out of control at Hanford, the most contaminated place in the Western Hemisphere. Reactor operation would only create more radioactive waste streams, which would mean even more dangerous waste to manage.

And I live downwind from this toxic mess!

Sincerely,

Richard A. Gorringer, Ph. D.
3574 NE Stanton Street
Portland, OR 97212

Response to Commentor No. 48

- 48-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF and support for Alternative 5, Permanently Deactivate FFTF.
- 48-2:** See response to comment 48-1.
- 48-3:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

There are currently 53 million gallons of waste stored in 177 underground tanks at Hanford, primarily in double-shell structures. The disposition of this waste has been determined and the project is currently underway. As discussed throughout Section 4.3 of Volume 1, none of the proposed alternatives would add waste to the waste tank inventories at Hanford.

Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435-1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

48-1

48-2

48-3

Commentor No. 49: George Baggett

From: GeoBaggett@aol.com%internet [mailto:GeoBaggett@aol.com]
 Sent: Wednesday, August 02, 2000 12:26 PM
 To: INFRASTRUCTURE-PEIS, NUCLEAR
 Cc: KCHNews@sound.net%internet; Kbirns@kuhub.cc.ukans.edu%internet;
 tbogdon@webtv.net%internet; J5bowser@aol.com%internet;
 gicron@nex.net.au%internet; accuppy@planetkc.com%internet;
 DikoDawson@aol.com%internet;
 gntlcare@gntlcareanimalhospital.com%internet;
 Fenton.Kathleen@epamail.epa.gov%internet; fneff@cctr.umkc.edu%internet;
 maguy@sirius.com%internet; Rachel93@wichita.infi.net%internet;
 mollyivins@star-telegram.com%internet; KingHouse@aol.com%internet;
 Martyk@allspecies.org%internet; mmansur@kcstar.com%internet;
 Mtmc929@aol.com%internet; mimimoffat@lawyer.com%internet;
 SueBNelson@aol.com%internet; Gmorisaki@aol.com%internet;
 dreck@sky.net%internet; tshistar@falcon.cc.ukans.edu%internet;
 StanSlaugh@aol.com%internet; Suzyspalty@aol.com%internet;
 Claudine.Thomas@worldnet.att.net%internet;
 ross.vincent@sierraclub.org%internet; Hartwood@gvi.net%internet;
 GeoBaggett@aol.com%internet
 Subject: Comment to DOE RE: development of nuclear energy facilities
 PEIS July 2000

Colette E. Brown, NE-50
 U.S. Department of Energy
 19901 Germantown Road
 Germantown, MD 20874

RE: Comment on DRAFT PEIS

Thank you for providing the Summary Document regarding the current Programmatic Environmental Impact Statement for Expanded Nuclear Energy Research and Development and Isotope Production Missions in the US. The document is an improvement in readability over past documents, and below are my comments.

Comment #1.

Regarding the mission of the Department of Energy as mandated by the Atomic Energy Act of 1954, a number enlightening experiences have occurred as a result of attempting to meet the "needed" isotopes for medical, industrial, and research applications. In subsidizing various industries "needing" these isotopes, the numerous DOE facilities have created environmental and economic burdens with no remediation endpoint in site. Thus, this brings to question if the mandate of the Atomic Energy Act of 1954 is still valid at this point in history. Therefore, it would seem prudent for the Department of Energy to request the U.S. Congress to aid the downsizing of the Department's mission by a modification that will limit the scope of responsibility of the Department to only meeting the requirements for nuclear isotopes in medical and research applications, and environmental restoration of the numerous facilities in North America.

49-1

Response to Commentor No. 49

49-1: DOE notes the commentor's views concerning DOE's missions. DOE is guided by the intentions of the U.S. Congress as found in legislation and appropriations. Currently, Congress continues to provide funding directing DOE to carry out its mandate for isotope production and civilian nuclear energy research and development. Congress continues to direct DOE to complete its environmental restoration commitments at existing DOE sites.

Commentor No. 49: George Baggett (Cont'd)

Granted, this reduction in the mission would greatly impact the nuclear power industry. However, as we look at the halting of the development and expansion of this technology, it becomes very clear that we will soon be entering a period of closure and remediation of aging facilities. Some of these facilities have been operating or are in a standby position, well beyond their anticipated closure. A notable reduction in the availability of fuel products will then force closure of these aging facilities, and greatly reduce complications that are so notable throughout the world.

The driving rationale in my mind is that nuclear isotopes have been demonstrated to have significant value. I am very concerned that future generations will look back upon the last forty-five years of use and waste of these valuable materials, and they will be extremely critical as to why we were so short sighted in wasting these materials primarily to boil water and contaminate the environment.

Comment #2

I strongly disagree with the statement that "In view of these energy and environmental contributions, there is renewed interest in nuclear power to meet an equivalent portion of the Nation's future expanding energy requirements." None of the environmentalists that I know are remotely considering nuclear power as a method of reducing greenhouse gases. Most familiar with the ramifications of this technology know the tradeoffs do not come close to meeting any benefit in the reduction of greenhouse gases.

There may be the ilk of Westinghouse, Bechtel, and others whom would profit from a so-called "renewed interest," but the Department should be assured that there is a quiet majority of Americans who oppose this technology, whom will side with more militant and vocal groups who will rise against any proposed commercial or research nuclear power plant development. The Department should also be aware that siting such facilities is and will continue to be virtually impossible. Further, as the fleet of nuclear power stations become obsolete, the cost of remediation and closure will place in public view such a staggering price tag upon the true costs of this technology that the circle of opponents will grow to include the economic and finance community.

**49-1
(Cont'd)**

49-2

Response to Commentor No. 49

49-2: Clean, safe, reliable nuclear power has a role today and in the future for our national energy security. In recognition of this need, nuclear energy research and development programs have been initiated to address potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) and to ensure that current nuclear power plants can continue to deliver adequate and affordable energy supplies. An enhanced DOE nuclear facility infrastructure is required to support such nuclear energy research and development for civilian applications. Information on the need for nuclear energy research and development is provided in Section 1.2.3 of Volume 1.

Commentor No. 49: George Baggett (Cont'd)

Comment #3

Granted, there are significant benefits from medical and some commercial use of nuclear isotopes. However, the gist of the public discussion regarding this document is how and where to draw the line on the continued mission of the Department of Energy. If one considers the current direction of remediation of DOE facilities throughout North America, the tasks and costs are staggering. There are considerable challenges at SRS, Hanford, as well as some of the smaller facilities like the Paducah - Gaseous Diffusion Plant. The environmental restoration program is the most important program mission for the Department, not only to ensure the problems do not worsen, but to demonstrate to the public that seemingly insurmountable problems can be resolved. The Department has demonstrated considerable talent and persistence in its environmental restoration program to date, but as for resolving the seemingly "insurmountable problems," there is considerable work to do.

As a member of the Waste Commission in Kansas City, Missouri, some years ago, we learned a valuable lesson in the management of specific tasks. That lesson was that though history had told us that we (the city) were responsible for the waste problems, it was not necessarily so. Two examples:

(1) old tires and (2) used motor oil come to mind. Under the old form of thinking the problem would need to be resolved by the city. The city would have to provide management for these waste products as an alternative to improper disposal - dumping and discharge of used motor oil to the sewer or a spot on the ground. We first resolved that it would be best to recycle these waste streams. Second, we noted where the waste streams were concentrated. We then approached tire dealers and oil change shops, and learned that they had a system in place to recycle these waste streams. We held meetings with representatives from these groups, requested that they aid us in expanding the program to include do-it-yourself sources, and then set in place a city ordinance requiring suppliers of tires and motor oil to provide suitable and responsible disposal options for the waste products generated by the use of their products. The result is that the city is not responsible for these waste streams, retail tire outlets will take used tires from ordinary citizens (often charging \$0.50 per tire), oil change stores and auto parts stores provide a service of taking and collecting used motor oil to be recycled, and all this is done without cost to the city or the tax payer.

Response to Commentor No. 49

49-3

49-3: DOE notes the concerns expressed by the commentor relating to the multiple missions of DOE. Both isotope production and environmental restoration must be managed in ways that address each mission. In the case of isotopes, DOE is aware of the advantages of commercial production, and its isotope programs have and will continue work to that end, where appropriate. DOE, at the direction of the U.S. Congress, has a wide range of cleanup as well as research and development missions under the Atomic Energy Act. Any enhancement of DOE's nuclear infrastructure would be made only if it is clear that to do so would help better meet isotope and civilian nuclear energy research missions, and be consistent and in balance with environmental stewardship at DOE sites.

Commentor No. 49: George Baggett (Cont'd)

The DOE is in the same situation. Asked to resolve all problems, the agency has evolved into a complex organization that assumes that they must provide all nuclear isotopes used in America. In my opinion, the mission of the DOE has changed to environmental restoration and management of the waste products and materials from decommissioning weapons. Conservation of the value of isotopes, as well as purchase valuable isotopes from the world communities are compatible with this mission. Yet just because a commercial venture desires a supply of isotopes for a nonmedical venture, I question the mission statement that results in subsidizing such a venture and adds considerable cost and burden to the Department and its more important missions.

**49-3
(Cont'd)**

Thus, considering options 1-5, Alternative 5 - Permanently Deactivate FFTF (with No New Missions) comes closest to my thinking. Second would be the No Action Alternative.

49-4

49-4: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, or as a second choice, the No Action Alternative.

49-5

49-5: See response to comment 49-4.

For discussion, I can be reached at the address below:

George Baggett
 820 West 35th Street
 Kansas City, Missouri 64111
 Phone#: 816-931-9578
 Fax#: 816-931-7578

As in the past, I will be more that pleased to continue to review DOE documents and summaries. I will also be pleased to provide comment as time permits.

**Commentor No. 50: Paige Knight
Hanford Watch**

From: paige s knight <paigeknt@juno.com>
 To: collette.brown@us.doe.gov
 Cc: hanfordwatch@telelists.com,
 Date: Wed, 26 Jul 2000 11:24:16 _0700
 Subject: FFTF report and hearings
 Message_ID: <20000726.115924._129217.0.paigeknt@juno.com>

Dear Collette,

I can't begin to express how frustrated and close to outrage I am at the DOE's separation of the of the cost and nonproliferation studies on the FFTF (Fast Flux Test Facility) at Hanford.

Apparently, the US DOE, in it's continuing disfunction, insists on the fragmentation or piece_mealing of nuclear weapons/cleanup issues. It also appears that the Department has retrenched more than ever into its "DECIDE, Announce, DEFEND" posture. You have heard the concerns of the public out West who have the most to loose if the FFTF is restarted.

So, isn't it great that we get a 3rd chance to say NO yet another time, but will not able to address the issues of cost and weapons proliferation because they are not "on the table" yet.

I request on behalf of numbers of us in the Hanford region that the hearings on the FFTF be delayed until the other studies come out. We have experienced receiving pertinent documents the day or hour after a public hearing is held. It doesn't fly.

You have little choice but to get us the pertinent documents or delay the hearings until we receive them with time to digest them, unless you want to be blatantly undemocratic (as in democracy) in your handling of these issues. I urge you to do the right thing.

Sincerely,
 Paige Knight, Hanford Watch
 503_232_0848

50-1

Response to Commentor No. 50

50-1: CEQ (40 CFR 1500 et seq.) and DOE (10 CFR Part 1021) implementation regulations do not require inclusion of cost and nonproliferation studies in an environmental impact statement. The basic purpose of the NI PEIS is to describe the alternatives under consideration for implementation (Section 2.5 of Volume 1) and the environmental impacts that would occur if these alternatives were implemented (Chapter 4 of Volume 1). Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. The associated cost report and nonproliferation report were made available to the public on August 24, 2000 and September 8, 2000, respectively.

Production of nuclear weapons and Hanford cleanup are outside the scope of this NI PEIS. Plutonium-238 produced in support of NASA's deep space missions (Section 1.2.2) is not used to make nuclear weapons. Missions described in Section 1.2 of Volume 1 are unrelated to the national defense. Implementation of Alternative 1, Restart FFTF, would have no impact on funding for ongoing cleanup activities at the Hanford Site (Section N.3.2 of Volume 2).

The commentor's concerns about Alternative 1, Restart FFTF, are noted. As discussed throughout Section 4.3 of Volume 1, implementation of Alternative 1 would pose small risks to persons in areas adjacent to the Hanford Site. Risks to persons in areas more than 80 kilometers (50 miles) from the site would be essentially zero.

DOE did not delay public meetings on the Draft NI PEIS because ancillary decision documents such as the cost report and nonproliferation report are not required to evaluate the environmental impacts that would result from implementation of the alternatives described in Section 2.5 of Volume 1.

Commentor No. 51: Everett L. Hughes

From: EVERETT L HUGHES EA
To: nuclear.infrastructure_PEIS@hq.doe.gov
Sent: Saturday, July 29, 2000 1:59 PM
Subject: civilian nuclear

DOE:

I have not read, word for word, the document sent to me in the mail.

However, I believe we are 25 (twenty_five) years behind what has been needed in the areas of products for the citizens developed by nuclear means.

We must move forward, for the good of the United States.

The agenda of multi_national enviornmental groups must be worked around. We are leading the world in our adherence to those issues.

Fast Flux must move forward.

ALL production must be domestic, please do not buy Pu_238 from Russia, or any other source.

I sense that our control and development of these product for the benefit of US civilians, is in the interest of our National Security.

I have no degree in this area.....but I have an awareness of our needs that can be met via what we seem to fear.

Everett L Hughes EA
360_427_0427 Fax 360_427_0421
www.everetthughes.com
www.accountant_city.com/everetthughes
Collier Bldg Suite 4
Shelton, Washington

Response to Commentor No. 51

51-1

51-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

51-2: DOE notes the commentor's support for the domestic production of plutonium-238 and medical and industrial isotopes.

51-2

Commentor No. 52: Kristine R. Brotherton

From: Kristine Rosemary [mailto:rose2@gemsi.com]
 Sent: Wednesday, July 26, 2000 8:28 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: draft peis comment due by 9/11/00

please forward or direct to:
 Ms. Colette E. Brown, NE_50
 usdoe germantown maryland

Dear Ms. Brown,

I appreciate very much receiving the draft doe/eis_03100 for expanded civilian nuclear energy R&D and for the opportunity to review the document.

However, as a resident within a 50 mile radius of the Hanford site, I must respectfully request that the department consider cleanup at Hanford and at the other national labs to be an absolute top priority ahead of all other missions. Land restoration at the Hanford site, specifically at the Fitzner_Eberhart Arid Lands Ecology reserve, also is in the public interest, as the native shrub_steppe sagebrush grasslands preserved at Hanford for the past 50 years are an outstanding example of lands among the most rare and endangered of those plant communities in the continental U.S. Very fine work has been done at the site to make inventories of the many plant and animal species occurring on Hanford lands by federal and state agencies, Battelle, and with the cooperation of The Nature Conservancy. A good effort has begun there which probably could use more funding and support.

However, additional R&D of the kind described in the eis under review does not appear to be compatible with those efforts. Please accept my preference for a No Action alternative, and if that is not a possibility, for alternative 2, use only existing operational facilities. Thanks for the chance to comment.

Very truly yours,
 kristine r. brotherton
 moses lake, washington

52-1

52-2

52-3

Response to Commentor No. 52

52-1: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to “ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use.” The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

DOE notes the commentor’s concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Although the land composing the Fitzner-Eberhart Arid Lands Ecology Reserve is owned by DOE, the management of this and nearly all other National Monument lands at Hanford are now the responsibility of the U.S. Fish and Wildlife Service (F&WS). Funding for that management comes directly from F&WS. All restoration activities from legacy DOE missions on these lands have been completed.

52-2: DOE notes the commentor’s support for the No Action Alternative, or as a second choice, Alternative 2, Use Only Existing Operational Facilities.

52-3: See response to comment 52-2.

Commentor No. 53: Dorothy Meyers

From: Connect2dm@aol.com%internet
[mailto:Connect2dm@aol.com]
Sent: Friday, July 28, 2000 2:21 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: re: Please restart FFTF for medical Isotopes!

Hello, Governor Locke,

I have had breast cancer (mastectomy was the Doctors answer) and lung cancer;(an upper left lobe labotomy was the Doctors answer). I had gall bladder attacks for 16 years and finally a Doctor used a medical Isotope to determine that the gall bladder was indeed not functioning properly.

Please, seriously consider restarting FFTF to produce medical Isotopes. The Isotopes would not be as expensive, and more people would be employed. I believe this to be a very profitable "Win_Win" enterprise for many people. The most important factor being the saving of lives from cancer and bringing medical costs down. Thank you.

Sincerely,
Dorothy Meyers
236 N Palouse St
Kennewick, Washington 99336
(509) 582_3111

53-1

Response to Commentor No. 53

53-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 54: Gerald Cox

From: Gerald Cox [mailto:gcox@Harding.edu]
Sent: Friday, July 28, 2000 2:26 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF

My name is Gerald Cox and I live in Searcy, Arkansas.
I am in favor of the restart of FFTF (Fast Flux Test
Facility) in Richland, Washington for the purpose of
making medical isotopes.

Thank you.

54-1***Response to Commentor No. 54***

54-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 55: Tom Clements
Nuclear Control Institute

From: Tom Clements [mailto:clements@nci.org]
Sent: Friday, July 28, 2000 1:31 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Cc: Johnson, Shane
Subject: re PEIS hearings

To Whom it Concerns:

I am writing to register my complaint about hearings on the FFTF/isotope production PEIS being held before the public has seen the associated cost and nonproliferation documents. These two documents should be included as part of the PEIS process but as DOE has not yet chosen that path, any PEIS hearings held prior to release of those documents is unacceptable.

I have been informed by DOE that the cost study will be out in early August and the nonproliferation statement at the end of August or first of September. Any slippage in the release of the cost study will insure that it will not be available far enough in advance of the PEIS hearings for the public to be adequately informed. Even as it stands, the nonproliferation assessment might not come out at all until the hearings are over.

Given this bad situation, I request one of two things:

1) that the cost and non_proliferation studies be released immediately, at least two weeks in advance of the first PEIS hearing, or 2) the PEIS hearings be postponed until after the two documents in question have been released and the public has adequate time to review them.

The decision about isotope production and FFTF restart is far too important to give the public short shrift in the decision_making process. I can assure you that withholding information before the hearings will not be productive for this entire process and urge you to take immediate action to change this situation.

Sincerely,

Tom Clements, Executive Director
Nuclear Control Institute
1000 Connecticut Ave., NW Suite 804
Washington, DC 20036, USA
tel. 1_202_822_8444, fax 1_202_452_0892
clements@nci.org www.nci.org/org

Response to Commentor No. 55

55-1: CEQ (40 CFR 1500 et seq.) and DOE (10 CFR Part 1021) implementation regulations do not require inclusion of cost and nonproliferation studies in an environmental impact statement. The basic purpose of the NI PEIS is to describe the alternatives under consideration for implementation (Section 2.5 of Volume 1) and the environmental impacts that would occur if these alternatives were implemented Chapter 4 of Volume 1). The comment response process concerned with the environmental impacts of the NI PEIS alternatives is described in Section 1.1 of Volume 3.

The associated cost report and nonproliferation report were made available to the public on August 24, 2000 and September 8, 2000, respectively. Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. The Record of Decision concerning enhancement of DOE's nuclear infrastructure is scheduled for January 2001.

Public hearings on the Draft NI PEIS were not delayed because ancillary decision documents are not required to evaluate the environmental impacts that would result from implementation of the alternatives described in Section 2.5 of Volume 1.

The decision process will be conducted in accordance with 40 CFR 1505.1. Public comments are an integral part of DOE's decision process. All relevant information required to evaluate the environmental impacts that would result from implementation of the alternatives was made available to the public on July 28, 2000. Public hearings on the draft NI PEIS were held at seven locations from August 22, 2000 to September 6, 2000.

55-1

Commentor No. 56: Mark Cheney

From: MACHeney3@aol.com%internet[SMTP:MACHENEY3@AOL.COM]
 Sent: Sunday, August 13, 2000 11:07:21 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: FFTF
 Auto forwarded by a Rule

I believe that medical isotopes are needed more than ever in the world today. We have a reactor that can produce them at minimal cost to the public. Since FFTF is a breeder reactor, and according to experts in the nuclear industry, it produces about half the waste that normal reactors do. It is also a smaller reactor; this means it even produces less nuclear waste than a full size breeder reactor. Also, if a great portion of the waste will be actually used as medical isotopes to treat people dying of cancer, why in the world would anybody consider destroying it??!! It seems totally absurd to me. Does anybody in charge of deciding what to do with it understand these facts?

Why haven't these facts been explained to rational environmentalists? Are people going to listen to the far environmental extremists who believe that any amount of waste is bad, or the other ignoramuses to don't even know what's is going on and just want to get involved with any "environmental" cause that comes there way?

If there is some rational explanation for destroy FFTF, I would like to know about it. Until then, I am totally against it.

Mark Cheney
 4606 W 4th Ave
 Kennewick, WA 99336
 509_783_3455

56-1**56-2****Response to Commentor No. 56**

- 56-1:** DOE notes the commentor's support for Alternative 1, Restart FFTF, and opposition to Alternative 5, Deactivate FFTF. It should be noted that while FFTF supported the breeder reactor program, it is not itself a breeder reactor, but rather a fast flux research reactor.
- 56-2:** See response to comment 56-1.

Commentor No. 57: John Swanson

From: John Swanson[SMTP:JOHNLSWANSON@WORLDNET.ATT.NET]
 Sent: Sunday, August 13, 2000 4:42:24 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Comments
 Auto forwarded by a Rule

Comments resulting from a skimming of the Draft PEIS Summary are:

1) In discussing the subject of SPENT FUEL MANAGEMENT (p.S_63), the argument is made that the environmental impacts associated with spent fuel management would remain minimal because the 16 MTHM of spent fuel resulting from FFTF restart is less than 1% of the spent fuel already stored at Hanford. While the conclusion of minimal impact may be valid, the validity of the argument given in support of the conclusion is very questionable.

Comparison of risks should not be based just on spent fuel quantities; it should include factors such as the quantities of hazardous radionuclides contained in the spent fuel. For example, most of the spent fuel currently stored at Hanford contains plutonium at concentrations of ~0.1% or less, while the mixed oxide fuel used in the FFTF contains ~10% or more Pu. Thus, the amount of Pu contained in 16 MTHM of spent FFTF fuel is approximately the same as (NOT <1% as much as) the amount of Pu contained in the 2,133 MTHM of spent fuel that is currently stored at Hanford.

2) Near the bottom of page S_27 is the statement "Collocation would also minimize transportation risks because some isotopes have short half lives." I can readily understand how collocation would minimize transportation risks, but I don't understand the significance of short half lives in this context.

3) Conversions between units should be checked. Two errors that jumped out at me are: a) In the last paragraph on page S_27 _ "(0.2 to 20 kilometers [0.07 to 12.4 miles]) ___." A factor of 10 in kilometers should also be a factor of 10 in miles. b) In the next_to_last paragraph on page S_29 _ "___200 C (44 F) ___". At least one of these numbers is obviously incorrect.

John L. Swanson
 Richland, WA

Response to Commentor No. 57

57-1: The discussion in the Summary and Section 4.8.3.5 of Volume 1 on the cumulative impacts for spent nuclear fuel management at Hanford was revised to clarify that the management of the existing spent nuclear fuel at Hanford results in a dose of less than 0.1 millirem per year of the maximally exposed member of the public. This dose is well within the DOE limits given in DOE Order 5400.5. As discussed in that Order, the dose limit from airborne emissions is 10 millirem per year, as required by the Clean Air Act; drinking water is 4 millirem per year, as required by the Safe Drinking Water Act; and the dose limit from all pathways combined is 100 millirem per year. DOE has committed to remove the spent nuclear fuel at Hanford for ultimate disposition in a geologic repository.

57-1

The incremental impacts associated with managing the additional 16 MTHM of FFTF spent nuclear fuel were evaluated in Section 4.3.1.1.14 of the NI PEIS for the restart of the FFTF. As stated, the radiological impact to the public from overall radionuclide releases from the entire FFTF complex during the last year of reactor operation was less than 0.0001 mrem/year. Additionally, the dose contribution from FFTF spent fuel management would be expected to be a small fraction of the FFTF reactor operation dose. Therefore, it would have no discernible impact on the 0.1 mrem/year dose from the existing 2133 MTHM Hanford spent nuclear fuel inventory. The currently used FFTF-specific spent fuel storage system designs (i.e., facility storage vessels and dry storage casks) are the key contributors for determining that the incremental radiological impact is minimal, not the difference in plutonium quantity in the FFTF spent nuclear fuel.

57-2

57-2: The statement in the Summary has been revised as follows: Collocation with the irradiation facility would be needed to process some irradiated target materials promptly after removal from the reactor/accelerator because some isotopes have short half-lives. Collocation would also minimize transportation risks.

57-3

57-3: Conversions have been checked and corrected.

Commentor No. 58: Jacqueline N. Foxworthy

From: Jacqueline N Foxworthy[SMTP:GRANNYFOX@JUNO.COM]
 Sent: Sunday, August 13, 2000 12:49:35 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: FFTF
 Auto forwarded by a Rule

Sir,

Please re_start the FFTF for medical isotope production for use in cancer diagnosis, treatment and research. My husband passed away a year ago from pancreatic cancer. This cancer has to be diagnosed early and a treatment must be found to stop it's spread when found. I support the re_start of the FFTF for medical isotope production.

Thank you.

Sincerely,
 Jacqueline N. Foxworthy
 5604 86th Place NE
 Marysville, WA 98270

58-1

Response to Commentor No. 58

58-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 59: Martin Bensky

From: Martin Bensky[SMTP:MBENSKY@EMAIL.MSN.COM]
 Sent: Saturday, August 12, 2000 6:09:21 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Cc: Gordon Rogers
 Subject: FFTF EIS
 Auto forwarded by a Rule

I have been a resident of Richland, Washington, for nearly 23 years, 17 as an employee of the site operating contractor (Rockwell, then Westinghouse) and 6 as a retiree. My background has been heavily in the areas of site performance assessment, long_term waste management, and Systems Engineering. I am currently an alternate to a Public_at_Large seat on the Hanford Advisory Board, but let me make it perfectly clear that my comments are entirely my own as a private citizen and in no way represent views of the Board. Some of my comments, as you will see, are focused upon Hanford cleanup rather than directly on FFTF startup and operation because one of the specious arguments against FFTF is that funding of FFTF will detract from Hanford cleanup funds.

The point I want to make most strongly is that the meetings in Seattle, Portland and Hood River are almost certainly not a source of useful scientific data. If I may be quite frank, the hysterical fears of cancer, etc., that you have heard (or will hear, depending on when you read my comment) in meetings at those locales, are totally unfounded and are the result of effective propagandizing by environmental activist groups. Quite obviously, Seattle is unaffected by FFTF and Hanford cleanup except that the residents pay federal taxes and in the unlikely event that shipments of foreign waste to Hanford are permitted and arrive at the port of Seattle. Residents of Portland, Hood River and, in fact, anyplace downstream of, say, Hermiston, really have no sound basis for claiming that they could be adversely affected by contaminants that might eventually reach the Columbia River from any Hanford sources.

59-1

Response to Commentor No. 59

59-1: DOE notes the commentor's views on the necessity for reliance on objective, scientific data as the basis for sound decision making. DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and to providing ample opportunity for public comment on those actions.

Commentor No. 59: Martin Bensky (Cont'd)

If unfounded fears should not be your concern, what then, should you be looking for in the comments from your meetings? The only real issues involve possible adverse impacts of a major facility on the local quality of life (e.g., adequacy of schools and local infrastructure) or perhaps a deep-seated revulsion towards anything "nuclear". I personally would be proud to live in a community that is producing life-saving isotopes and vital materials to support our space program. I believe that that is the prevalent attitude of Tri-citians, and if residents of other communities are somehow ashamed to be part of a "nuclear" project, let them keep FFTF or similar projects out of their communities. Their attitudes and false fears are their own problems, but the dedicated, competent scientists and engineers in this community want to continue to do what we know is right; we cannot combat the lies and distortions that have hampered, and will continue to hamper, our progress.

In summary, let me reiterate my initial point. Your own investigations, separate from these meetings, will provide the objective information that you need in your decision process. Subjective beliefs and attitudes are important, too, but the attitudes and beliefs of the people right on the scene; i.e., the people of Benton and Franklin counties, matter a whole lot more than those of activists far from where the action is.

Martin Bensky
2121 Briarwood Ct.
Richland, Washington 99352
(509) 375_1704
mbensky@msn.com

**59-1
(Cont'd)**

Response to Commentor No. 59

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

Page 5-2 P.P. Isotope Production is done on a not to interfere basis. This is incorrect. Isotope Production has always been a primary mission of the HFIR. The only area of concern is if the impact of ~~production~~ ~~of~~ ~~specialty~~ ~~materials~~ ~~irradiation~~ ~~(not~~ ~~isotopes)~~ impacts the shut or fuel cycle length by more than 5-10%. The OSE at DOE will be informed as soon as the order to provide equity to users.

60-1

60-1: The commentor is mistaken about HFIR's primary mission. As stated on page 2-21 of the Draft PEIS, HFIR's primary mission is neutron science research. Isotope production at HFIR is done only on a not-to-interfere basis.

Page 2-66
 A HFIR this option is precluded. This is incorrect the ~~same~~ option is not precluded due to a long outage. The outage needed to implement 100mw operation is estimated to be less than 1 month. We will be an extensive ~~planned~~ effort to ~~change~~ change the authorization basis, get approval and change procedures. This work can be done while the reactor is operating. Going to 100 mw is high priority sensitive and is being designed by ~~the~~ ~~user~~ ~~needs~~ ~~for~~ ~~such~~ ~~a~~ ~~change~~ ~~(over)~~

60-2

60-2: The text on page 2-66 has been revised to incorporate the comment on extended outage. Growth estimates in diagnostic and therapeutic medical isotope usage in the United States were based on a study issued by Frost and Sullivan in 1997. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at a rate consistent with the study findings. The Cost Report presents operating costs for each alternative. The operating cost estimates did not take credit for revenue from the sale of isotopes or leasing facilities to offset the operating costs.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): George Flanagan

Organization: ORNL

Home/Organization Address (circle one): Po Box 2008

City: Oak Ridge State: TN Zip Code: 37831

Telephone (optional): _____

E-mail (optional): GFF@ORNL.GOV

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



Commentor No. 60: George Flanagan (Cont'd)

The isotope demand is inflated
and revenue streams are based on
past experience ~~that~~ is not justified.
Need to have a high/normal/low
isotope production estimate/revenue options.

Fold on lines and fasten with tape

Place
stamp
here

**Colette E. Brown, NE-50
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874**

**60-2
(Cont'd)**

Response to Commentor No. 60

Commentor No. 61: Kalle H. Hyrkas

From: Kalle_H_Hyrkas@rl.gov%internet
[SMTP:KALLE_H_HYRKAS@RL.GOV]
Sent: Friday, August 11, 2000 4:30:53 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Support of FFTF Restart (Draft PEIS)
Auto forwarded by a Rule

Hi,

I fully support the restart of the Fast Flux Test Facility
for all viable missions.

Kalle Hyrkas
FFTF Nuclear Training
372_0207

61-1

Response to Commentor No. 61

61-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 62: Ken Stowell

From: Ken Stowell [mailto:kstowell@bentonrea.com]
 Sent: Friday, August 11, 2000 1:22 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Hanford's FFTF

I'm not sure if this is the place for this type of comment, if it isn't if you could let me know where to submit it I would be glad to.

I fully support the idea of restarting the FFTF facility. I strongly feel it would greatly benefit almost everyone. FFTF has proven its capability and reliability during its early years. It would be a shame to close it down and decommission the facility since it has so many possibilities. I know that people are concerned about the "waste" from the facility but they don't understand that no matter what is done there is a waste product of some type.

Again, to keep it short I would like to see the facility operate once again, it has so many positives it can produce that will certainly out weigh the negatives!!!

Ken Stowell
 P.O. Box 70
 Mabton, WA. 98935
 kstowell@bentonrea.com
 kb7csp@wa7v.#sewa.wa.usa.noam

62-1

Response to Commentor No. 62

62-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 63: William E. Schenewerk

From: William Schenewerk[SMTP:WILLIAM.SCHENEWERK@PARSONS.COM]

Sent: Wednesday, August 16, 2000 2:15:24 PM

To: INFRASTRUCTURE-PEIS, NUCLEAR

Subject: FFTF Restart 08162000

Auto forwarded by a Rule

From

William Ernest Schenewerk, Ph.D. 5060 San Rafael Ave,
08/16/2000, Los Angeles CA 90042-3239

Home: 323-257-6672 Work: 626-440-3708

william.schenewerk@parsons.com

To:

Ms. Colette Brown, Doe Office of Space and Defence
Power System

Ms. Brown:

I am presently working in chemical demilitarization. I have done nuclear work and hold a California Professional Nuclear Engineer license. I am very much concerned about the fate of FFTF. I enclosed a paper that I am still working on. The future looks bad, even with maximum nuclear power deployment. Absence of nuclear power, we are faced with disaster within 100 years. Breeder reactor deployment should start by 2020 for best results.

Thank You, William E. Schenewerk, Ph.D.

63-1

Response to Commentor No. 63

63-1: DOE notes the commentor's support for Alternative 1, Restart FFTF. None of the missions for which FFTF would be restarted involve fast breeder technology and, although FFTF would be used to test some nuclear fuels, they do not include fast breeder fuels. At present, U.S. policy prohibits the pursuit of breeder reactors and, as noted above, FFTF has other potential uses beyond testing fast breeder reactor technology.

Commentor No. 64: Daniel Axelrod

NI PEIS Toll-Free Telephone

08/23/00

Daniel Axelrod
 Candidate for President of the United States
 105 East Geneva Lane
 Oak Ridge, TN 37830

This is Mr. Daniel Axelrod from Oak Ridge, Tennessee. I testified at length last night at the public hearing. I don't recall in my oral statement if I mentioned the source for World Estimated Ultimately Recoverable Oil 2000. The source was Popular Science, May 2000, page 56. It was based on the oil and gas journal. Please add that note to my transcribed testimony if possible or as a supplementary comment. I would appreciate if you would send me a copy of my transcript of my statement.

Ms. Brown can indicate when she mails out the transcript if she wants me to send the copy of the letter from Secretary Richardson if she has not obtained it from him directly. Out.

64-1

Response to Commentor No. 64

64-1: DOE noted the source indicated.

Commentor No. 65: Bobby Flowers

NI PEIS Toll-Free Telephone

08/23/00

Bobby Flowers
418 W. 17th Street
Apartment 22A
New York, NY 10011
212-242-0319

Hi. Good afternoon, Bobby Flowers calling from New York City.

The reason why I am calling is I want to protest expansion of the Nuclear Power for Space Missions. Thank you have a good day. Thank you.

65-1

Response to Commentor No. 65

65-1: DOE notes the commentor's opposition to enhancing its existing nuclear facility infrastructure to support production of plutonium-238 for use in future NASA space exploration missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. NASA makes the final determination, through its own NEPA process, whether or not these radioisotope power systems would be used to support individual NASA space exploration missions; this is not a DOE decision. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Commentor No. 66: John Saemann

NI PEIS Toll-Free Telephone

8/19/00

John Saemann
1775 Atkins Street
#2
Eugene, Oregon 97401
541-687-7712

This is John Saemann calling from Eugene, Oregon, to make a statement on the Nuclear Infrastructure Programmatic Environmental Impact Statement. I would like to go on record as preferring the no action alternative regarding the production of Pu-238 for future NASA space missions and civilian nuclear energy research and development activities. I oppose building any new accelerators or restarting the Fast Flux Test Facility and I believe we need not, we should not, make it easier to have more Pu-238 available for whatever use is claimed.

Let's first clean up the mess that we made and not go any further until that's taken care of.

Thank you.

66-1

66-2

66-3

66-4

Response to Commentor No. 66

- 66-1:** DOE notes the commentor's support for the No Action Alternative and opposition to Alternative 3, Construct New Accelerator(s), and Alternative 1, Restart FFTF.
- 66-2:** See response to comment 66-1.
- 66-3:** The commentor's opposition to the production and availability of plutonium-238 is noted. However, the United States has been using radioisotope power sources in space safely and reliably for approximately 40 years. In accordance with the Atomic Energy Act of 1954, DOE is obligated to continue supporting NASA in the use of radioisotope power sources. NASA has determined that it will continue to require plutonium-238 for power sources and heating in deep space missions.
- 66-4:** DOE notes the commentor's concerns regarding the cleanup of existing contaminants at the Hanford Site. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The Hanford Site has a comprehensive waste minimization and pollution prevention program in place as summarized in Volume 1, Section 3.4.11.8, that would control any new site activities.

Commentor No. 67: John Saemann

NI PEIS Toll-Free Telephone

08/24/00

John Saemann
541-687-7112

We looked at some more at the NI PEIS and out of a bad deal I think most desirable one alternative seems to be to us the option of purchasing Pu-238 from Russia through the existing contract. That's probably the best of a bunch of bad deals. Ideally we shouldn't proceed with it at all but if you gotta have some Pu-238 then probably the best way to proceed is to obtain from Russia. Thank you very much for asking for public comment, but I suspect you probably are going to do what the DOE wants to do in the first place. Anyway, lots of luck to you and thanks for spending taxpayer money on something we really don't need.

Goodbye.

67-1

67-2

Response to Commentor No. 67

67-1: DOE could purchase plutonium-238 from Russia to satisfy its responsibility to supply NASA with the necessary fuel to support future space exploration missions. Under the current contract set to expire in 2002, the United States is authorized to purchase up to 40 kilograms of plutonium-238, with the total available for purchase in any one year limited to 10 kilograms. To date, DOE has purchased approximately 9 kilograms of plutonium-238 under this contract. Under the No Action Alternative, DOE would continue to purchase plutonium-238 to meet the space mission needs for the 35-year evaluation period considered in the NI PEIS. However, DOE recognizes that any purchase beyond what is currently available to the United States through the existing contract would likely require negotiation of a new contract and may require additional NEPA review.

For supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

67-2: DOE policy encourages effective public participation in its decision-making process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

Commentor No. 68: Karen Kotchek

NI PEIS Toll-Free Telephone

8/16/00

Karen Kotchek
1711 Elview Avenue
Apartment 402
Seattle, WA 98122

Hello. I don't agree with any further action to restart the Hanford project in any way shape or form. No Fast Flux Test Facility. Nothing. We should just clean it up and shut it down for good.

Please send me any literature. Thank you.

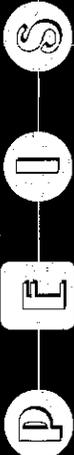
68-1

Response to Commentor No. 68

68-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Draft PEIS Comment Form

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



We need FFTF please Restart it

69-1

69-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): *Harold W. & Ann E. Willis*

Organization: _____

Home/Organization Address (circle one): *7587 Amber St Dr.*

Manassas Va. 20111

City: *Manassas* State: *Va* Zip Code: *20111*

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Commentor No. 72: Keith N. Woods

From: KWoods1507@aol.com%internet
[SMTP:KWOODS1507@AOL.COM]
Sent: Friday, August 25, 2000 10:18:26 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Restart FFTF!
Auto forwarded by a Rule

Please re_start FFTF for medical isotopes.

Keith N. Woods
Richland, WA 99352

72-1**Response to Commentor No. 72**

72-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 73: Laurence Kirby

From: Laurence Kirby[SMTP:VANINI@NETSTEP.NET]
 Sent: Thursday, August 24, 2000 10:42:01 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: comment
 Auto forwarded by a Rule

This is a comment on some of the proposals for use of nuclear power in the Draft Programmatic Environmental Impact Statement.

I strongly oppose expanding the use of nuclear power in space missions, which poses significant danger to Earth before and during launching, and pollutes the extra_terrestrial environment. Production and use of Pu_238 for deep_space probes is highly contaminating and dangerous; the idea of nuclear reactors on Mars is shocking and horrifying. Solar power is adequate to provide operating power for space probes, and alternatives to nuclear_powered rockets are safer and already well developed.

The lessons of the 20th century with regard to nuclear power have to be learned: the many disasters, the radioactive pollution, the gigantic problem of waste, the dangers of terrorism, the high costs (both economic and social), and the long list of uneconomic, dangerous, polluted reactors that are now closed or will soon have to be. A program like the DOE's should be geared toward developing technologies for our future, not preserving the vested interests of outmoded, discredited technologies such as nuclear power. Investment in solar and other environmentally safer technologies is called for.

Laurence Kirby
 Professor of Mathematics
 Baruch College
 City University of New York

Response to Commentor No. 73

73-1

73-1: DOE notes the commentor's opposition to NASA's use of nuclear materials for space missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch.

73-2

73-2: The commentor's opposition to nuclear technology for space applications is noted. DOE also notes the commentor's interest in alternative energy sources [i.e., solar energy], although issues of research and development of alternative energy sources are beyond the scope of this NI PEIS. Other offices of DOE are responsible for the research and development of alternative energy sources. The missions to be addressed in this PEIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and nuclear research and development, can currently only be met using nuclear reactor or accelerator technologies.

Commentor No. 74: G. E. Craig Doupe

From: Craig Doupe[SMTP:DOUPE@EMAIL.MSN.COM]
Sent: Wednesday, August 23, 2000 12:57:49 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF
Auto forwarded by a Rule

The nation needs medical isotopes. Please restart FFTF.

G. E. Craig Doupe'
(509)628_1937
Fax (509) 628_8184

74-1**Response to Commentor No. 74**

74-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 75: Steve Binney

From: Steve Binney[SMTP:BINNEYS@ENGR.ORST.EDU]
 Sent: Friday, August 25, 2000 1:17:37 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Cc: Niles, Ken; _NE_faculty; Schenter, Bob
 Subject: Draft PEIS comment
 Auto forwarded by a Rule

As a Professional Nuclear Engineer and someone who has worked on the production of medical isotopes, I readily recognize the value and uniqueness of the Fast Flux Test Facility (FFTF). Although its original breeder reactor mission has long since vanished, it is nevertheless a particularly viable resource for the production of medical and industrial isotopes. Its high power, hard neutron spectrum, and large irradiation volumes offer great potential for not only producing high specific activities of commonly used isotopes, but also adequate quantities of lesser used research isotopes. It is hard to assign an economic value to the research isotopes. If new research isotopes were more reliably available, especially for diagnostic and therapeutic nuclear medicine procedures, researchers could take advantage of these isotopes to develop even better radiopharmaceuticals. Unfortunately, with an inadequate and irregular supply of these isotopes, researchers can't explore these areas because of cost and the uncertainty of isotope supply. There's no denying that new isotopes are costly; nonetheless they shouldn't be expected to pay their own way. What will prove to be financially beneficial in the long run is the improved health care that comes from newly developed radioisotope procedures.

75-1

Response to Commentor No. 75

75-1: DOE notes the commentor's support for Alternative 1, Restart FFTF. Cost/benefit analyses are normally required in connection with government regulatory actions. While it is plausible that the benefits of medical isotopes far outweigh the costs and risks, the NI PEIS is focused on the environmental impacts that would result from implementation of the alternatives described in Section 2.5 of Volume 1.

Commentor No. 75: Steve Binney (Cont'd)

In that regard, when considering the options of an EIS, consideration needs to be taken not only of the direct costs of operating a facility such as the FFTF and of the value of the isotopes produced, but also of the later costs saved by those isotopes. Although I can't quantify this statement, I would estimate it is conservative to say that for every dollar spent on producing medical isotopes, ten or more dollars are saved in health costs from improved diagnoses and elimination of subsequent costly and unnecessary surgeries. This hidden, but colossal, reduction in health care costs from improved diagnosis alone needs to be considered as a direct impact of operation of a facility such as FFTF.

Based on these and other concerns not mentioned, I strongly urge the adoption of Alternative 1 (Restart FFTF).

Stephen E. (Steve) Binney, Ph.D.
Director, Radiation Center
Professor of Nuclear Engineering and Radiation Health Physics
100 Radiation Center
Oregon State University
Corvallis, OR 97331_5903

Phone: (541)737_2344
Fax: (541)737_0480
Internet: binneys@rc.orst.edu

75-1
(Cont'd)

Response to Commentor No. 75

Commentor No. 76: Tom Cowan

From: Tom Cowan[SMTP:TCOWAN@COWANWALKER.COM]
Sent: Thursday, August 24, 2000 8:10:37 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Fast Flux Test Facility
Auto forwarded by a Rule

The FFTF is needed for the production of medical isotopes for the treatment of cancer and heart disease. It will also fulfill the need for space batteries, hardening computer chips and for research.

76-1

It would be criminal for DOE to waste over \$1 Billion of taxpayers' investment by scrapping this magnificent facility.

76-2

Response to Commentor No. 76

76-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

76-2: DOE notes the commentor's statement about wasting money by scrapping FFTF.

Commentor No. 77: Jane Davis

From: Jane Davis[SMTP:JADAVIS@3_CITIES.COM]
Sent: Friday, August 25, 2000 1:44:15 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF
Auto forwarded by a Rule

Please re_start the FFTF for the production of medical isotopes.

Respectfully yours,

Jane A. Davis

77-1***Response to Commentor No. 77***

77-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 78: Ben Asher

From: Ben[SMTP:BPRACTICAL@YAHOO.COM]
 Sent: Friday, August 25, 2000 2:40:02 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Hanford
 Auto forwarded by a Rule

To whom it may concern:

I urge you not to allow the proposed reopening of the Hanford reactor. The site already has plenty of radioactive waste that no one really knows how to dispose of. Reopening the reactor would only produce more waste, and the reasons cited for reopening it are flimsy. Thank you for your time.

Sincerely,
 Ben Asher
 Seattle

78-1

Response to Commentor No. 78

78-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF. DOE notes the commentor's concerns regarding existing wastes and cleanup missions at Hanford. Although beyond the scope of this NI PEIS ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Commentor No. 79: Bennett H. Orren

From: Bhorren@aol.com%internet
[SMTP:BHORREN@AOL.COM]
Sent: Thursday, August 24, 2000 1:58:47 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Medical Isotopes
Auto forwarded by a Rule

Please re_start FFTF for Medical Isotopes.

Thank You, Bennett H. Orren

|| 79-1

Response to Commentor No. 79

79-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 80: Holly G. Graham

From: Holly Gwinn Graham
[SMTP:DRAGONFLY100@HOTMAIL.COM]
Sent: Thursday, August 24, 2000 7:16:16 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: No more nuclear proliferation
Auto forwarded by a Rule

Dear Ms. Brown:

There is no excuse for the US continuing nuclear works of any kind in an age when to do so only destabilizes the fragility of our relationships with other countries. The US is acting like a terrorist nation by continuing this aggression, not ratifying the CTBT, and trying to abrogate the ABM Treaty. I am ashamed of this behaviour!

WE DO NOT NEED THE FAST FLUX REACTOR AT HANFORD TO BE REOPENED. WE DO NOT WANT STAR WARS, NUCLEAR BASED LASERS IN SPACE, BALLISTIC MISSILE DEFENSE PROGRAMS, INEPT AND UNPROVEN TECHNOLOGIES THAT WAGE DEATH AND DESTRUCTION AND POVERTY UPON THE PEOPLE OF EARTH IN THE NAME OF US SUPREMACY. Please, stop this insanity now.

We shut down the N_Reactor because it was filthy, spewing contaminants across the Downwind area throughout its existence. We were supposed to spend the money that's been used to keep those reactors on standby to SHUT THEM DOWN FOREVER AND CLEAN THEM UP. We told DOE in meetings in Seattle in 1998 that we do not want or need Tritium, or anything the Fast Flux Reactor can give us. We stated clearly then (hundreds of people) that we wanted Hanford cleaned up, and not reopened. You have not listened to us, but I guess because we are just the citizens, and not corporations who will gain billions by perpetuating this Obscene technology, we have no voice with our own agencies.

Response to Commentor No. 80

80-1: The pursuit of DOE's isotope and nuclear technology missions help rather than hurt our relationship with other nations, and are consistent with the policies and goals of the United States, including nuclear nonproliferation. In addition to the NEPA review, potential nonproliferation impacts of the alternatives evaluated in the PEIS have been assessed in a separate Nuclear Nonproliferation Impact Assessment. This report confirms that the alternatives are neither related to nuclear weapons production nor inconsistent with nonproliferation policy.

No radioactive materials were "released" in the Hanford Wildfires of 2000. Wildfires did resuspend some materials already in the environment. The resuspended materials were low, slightly above natural background levels. The low levels required several days of analysis to quantify.

80-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

80-3: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

DOE notes the commentor's opposition to the use of FFTF for the enhancement of its nuclear facility infrastructure. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Since all missions are for civilian purposes, production of tritium for defense use is not included in this PEIS.

80-4: In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and

Commentor No. 80: Holly G. Graham (Cont'd)

So I am saying yet again, NO TO YOUR PLANS! NO TO THE FAST FLUX REACTOR. NO TO STAR WARS. NO BMD. NO TMD. NO BILLIONS TO SUPPORT FOOLHARDY TECHNOLOGY TOSSED INTO WAR ON EARTH AND CONTROL OF EARTH FROM SPACE. NO TO US MILITARY SPENDING IN THE FACE OF THE THINGS WE NEED TO ACCOMPLISH ON THIS PLANET FOR THE INHABITANTS. YES TO PEACEFUL PURSUITS, NO TO MORE WEAPONRY. NO TO THE IDIOT "VISION FOR 2020" OFFERED BY THE AIR FORCE.

We are fortunate the fires at Hanford and Los Alamos were contained. There were still horrible radiation leakages, as you well know. What can be wrong with official thinking, to not realize the utter stupidity of continuing a nuclear attitude in this new millenium?

Add my voice to the millions of Americans who say NO MORE PROLIFERATION OF THIS NUCLEAR MADNESS! SHUT IT DOWN AND CLEAN IT UP!

Sincerely,

Holly G. Graham
Olympia, WA

80-2

80-1

Response to Commentor No. 80

the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS DOE carefully considered comments received from the public. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

Commentor No. 81: Mark M. Giese

From: Giese, Mark M _ RACIWI[SMTP:M.M.GIESE@MODINE.COM]
Sent: Wednesday, August 23, 2000 1:20:00 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Cc: sra@snakeriveralliance.org%internet
Subject: oppose restart of the FFTF in Washington
Auto forwarded by a Rule

Mark M. Giese
1520 Bryn Mawr Ave.
Racine, WI 53403
USA
m.mk@juno.com

08/23/00

Dear Ms. Brown:

Please oppose restart of the FFTF in Washington.
It is too hazardous.

Thank you.

Sincerely,
Mark M Giese

81-1

Response to Commentor No. 81

81-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF. Included in the NI PEIS are the results of analyses that show the risks associated with operating the FFTF are very small.

Commentor No. 82: Pat Hamner

From: Pat Hamner[SMTP:PHAMNER@RICHLANDMED.COM]
Sent: Wednesday, August 23, 2000 6:35:40 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF
Auto forwarded by a Rule

Please restart the FFTF for medical isotopes.

Pat Hamner MD.

82-1

Response to Commentor No. 82

82-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 83: Eve Prior

From: Jim Prior[SMTP:JPRIOR@TELEPORT.COM]
Sent: Thursday, August 24, 2000 3:27:20 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Hanford Nuclear Reservation
Auto forwarded by a Rule

Attention: Bill Richardson

Please shutdown the FFTF reactor and put that
money into cleanup!

Sincerely,

Eve Prior
112 NE 32nd Avenue
Portland, OR 97232

|| 83-1
|| 83-2

Response to Commentor No. 83

- 83-1:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 83-2:** The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Commentor No. 84: R. Swain

From: RSwain203@aol.com%internet
 [SMTP:RSWAIN203@AOL.COM]
 Sent: Thursday, August 24, 2000 1:37:27 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Please re_start FFTF for medical isotopes!
 Auto forwarded by a Rule

Please re_start FFTF for medical isotopes!

Isotopes are an answer to cancer____over 1500 people die each day from cancer and the FFTF can supply a large quantity of high quality isotopes for treatment of cancer, heart disease and arthritis. It also will serve our nation's need for Pu_238 for space batteries, for "hardening" computer chips, and research for new non_proliferative fuels and transmuting our nation's plutonium wastes.

84-1

Response to Commentor No. 84

84-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 85: The Moses Family

From: Arati Moses[SMTP:ARATI7@YAHOO.COM]
 Sent: Thursday, August 24, 2000 1:20:10 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Against Nuclear Power Production
 Auto forwarded by a Rule

To all Concerning:

To date there have been 347 nuclear accidents (recorded).
 WHAT MAKES PEOPLE BELIEVE THERE WILL NEVER
 BE POTENTIAL FOR ACCIDENTS FROM THIS DATE
 FOWARD?

The consequences of nuclear accidents are far too devastating
 to invest our country in. Our national health and commitment
 to its citizens must direct our monies into safer forms of energy.

The Moses Family,
 Medical Doctors, Chemical Engineer, Biologist,
 Environmental Engineer

85-1

Response to Commentor No. 85

85-1:

A detailed discussion of accidents and the evaluation of accidents that could occur under implementation of the alternatives described in Section 2.5 is provided in Appendix I of Volume 2. As discussed in Chapter 4 of Volume 1, implementation of the alternatives would pose a small risk to persons residing within 80 kilometers (50 miles) of candidate facilities, and essentially zero risk outside of that area.

Although outside the scope of this PEIS, the commentor's interest in alternate energy sources is noted. The missions described in Section 1.2 of Volume 1 can only be accomplished with reactors and/or accelerators.

Commentor No. 86: Randy Brich

From: Quail[SMTP:MR.RB@WORLDNET.ATT.NET]
 Sent: Wednesday, August 23, 2000 1:30:27 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: FFTF EIS
 Auto forwarded by a Rule

Gentlemen:

I support the restart of FFTF at Hanford as a viable means to produce cancer_fighting isotopes and other missions. Failure to restart FFTF will indicate a lack of objectivity by the USDOE. The USDOE Low Dose Research Program <http://lowdose.org/index.html> is beginning to quantify the effects of chronic low doses on cancer incidence. Since the concern about low levels of ionizing radiation stems from applying the Linear no_threshold Theory (LNT) to extremely low doses, any information regarding the lack of validity of the LNT needs to be presented in the EIS.

Sincerely,

Randy Brich
 1469 Rimrock Ave
 Richland, WA 99352

86-1

86-2

Response to Commentor No. 86

- 86-1:** DOE notes the commentor's support for Alternative 1, Restart FFTF.
- 86-2:** Ongoing research into the health effects of low level doses of ionizing radiation has the potential to impact the way in which low dose health effects are modeled. As indicated in Appendix H, the linear no threshold model uses dose to cancer conversion factors that are derived from studies of individuals who received relatively large individual doses or were members of groups who received large population doses. One of the goals of current research is to improve health impacts models based upon health impacts to groups who have been exposed to lower level doses. However, this research is not yet conclusive with regard to thresholds for health impacts (if thresholds exist). The linear no threshold model is conservative and remains the currently accepted approach to modeling low level radiation health impacts.

Commentor No. 87: Dale Bartholomew

From: Dale Bartholomew[SMTP:DALEBARTHOLOMEW@WORLDNET.ATT.NET]
Sent: Wednesday, August 23, 2000 7:51:20 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Radioactive Isotope Productio
Auto forwarded by a Rule

I was very fortunate to have I_125 radioactive seeds implanted into my prostate last year. This is one of the isotopes that is and will become in ever increasing short supply. To save the lives of future cancer patients, we need to re_start FFTF. On balance, saving lives takes priority over all objections to the restart.

Thank you for the opportunity to contribute my opinion.

Dale Bartholomew
1330 Broadview Drive
W. Richland, WA 99353

87-1

Response to Commentor No. 87

87-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

**Commentor No. 88: James R. Beaver, Mayor,
City of Kennewick**



August 18, 2000

Colette E. Brown, Document Manager
Office of Space and Defense Power
Systems (NE-50)
Office of Nuclear Energy, Science and Technology
US Department of Energy
19901 Germantown Road
Germantown MD 20874

Attention: NI PEIS

Regarding: *Draft Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility*

Dear Ms. Brown,

The City of Kennewick formally supports Alternative No. 1 in this document (restart FFTF). Please reference attached City of Kennewick Resolution No. 99-13.

The FFTF has a history of successfully testing nuclear fuels, materials, components, operating protocols, and reactor safety designs. It has a proven capability to function as a nuclear science and irradiation services user facility, and has successfully supported large and varied test programs for industry, nuclear energy, medical isotope applications and research, space nuclear power and fusion research programs.

A restart of the FFTF provides an economically viable method to use mixed oxide fuels supplies before using low enriched uranium. At the proposed operating power level of 100 megawatts, the reactor life would be extended and the generation of spent fuel would be reduced. Restart of the FFTF makes sense for the Tri-City Area, for the State of Washington, for the Department of Energy, and the United States.

Restart of the FFTF will provide the quickest method of assuring the availability of isotopes for medical, industrial and research applications while at the same time meeting the material needs of other federal agencies and undertaking research and development activities for the development of nuclear power for civilian use.

Once again the City of Kennewick fully supports Alternative No. 1 contained in the Draft Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility (restart of the FFTF).

Sincerely,


James R. Beaver
Mayor

RDW:dlw/00-061FFTF

215 W. 6th Avenue • P.O. Box 6106 • Kennewick, WA 99336-0106
(509) 585-4200 • Fax (509) 585-4445

Response to Commentor No. 88

88-1

88-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

**Commentor No. 88: James R. Beaver, Mayor,
City of Kennewick (Cont'd)**

CITY OF KENNEWICK
RESOLUTION NO. 99 - 13

A RESOLUTION OF THE CITY OF KENNEWICK IN SUPPORT OF PREPARING AN ENVIRONMENTAL IMPACT STATEMENT FOR RESTARTING THE FAST FLUX TEST FACILITY AT HANFORD

WHEREAS, medical isotopes are increasingly being used in research and in providing new, cost-effective, cutting-edge technologies for the diagnosis and treatment of disease, including cancer, heart disease, and arthritis; and

WHEREAS, the United States is importing more than ninety percent of the reactor-produced medical isotopes currently used to save a significant number of the lives of our citizens; and

WHEREAS, market projections for utilization of medical isotopes for diagnosis and treatment show our country will need new production sources to assure a domestic supply to meet the increasing demand; and

WHEREAS, the Hanford Fast Flux Test Facility (FFTF) has unique capabilities for providing large quantities and a wide variety of high quality medical isotopes; and

WHEREAS, the FFTF was designed, constructed, and safely operated as a state of the art reactor with world class isotope production capabilities and is the newest, most sophisticated reactor in the U.S. Department of Energy complex and as such is an irreplaceable national asset; and

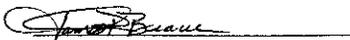
WHEREAS, the FFTF is presently being maintained in a stand-by mode; and

WHEREAS, the public deserves an opportunity to be involved in the decision making process to consider whether the FFTF should be restarted or permanently shut down; and

WHEREAS, preparing an Environmental Impact Statement (EIS) will formally involve the public in any decision about FFTF's future,

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Kennewick that it is in support of preparing an Environmental Impact Statement for restarting the Fast Flux Test Facility at Hanford and hereby encourages U.S. Department of Energy Secretary William Richardson to order an EIS for restarting the FFTF.

ADOPTED by the City Council of the City of Kennewick at its regular meeting on the 16th day of March, 1999.


JAMES R. BEAVER, Mayor

Attest:

VALERIE LÖFFLER, City Clerk

Response to Commentor No. 88

Commentor No. 89: Ana Sherwood

Response to Commentor No. 89

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

We need FFTF, Please restart it. The U.S. must start FFTF as it is a facility we need. Please have restart decision on technical basis of future needs. We must make decisions that will position us for the future. Short term drivers are too often what drives political decisions. Please, Please, restart this worthy facility

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
returning this comment form to the registration desk at the meeting or to the address below
calling toll-free and leaving your comments: 1-877-562-4593
faxing your comments toll-free to: 1-877-562-4592
commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Ana Sherwood
Organization: none
Home/Organization Address (circle one):
City: Richland State: WA Zip Code: 99352
Telephone (optional):
E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

89-1

89-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 90: Dave Hess

Response to Commentor No. 90

ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

Our Nuclear Infrastructure has gone downhill since the election of President Carter. If the US desires to regain some of the forgotten nuclear technologies that it started but never used or developed, the keeping the FFTF on line for ^{research and} medical isotope production is a place to start.

Otherwise, rename the Dept. of Energy to what it really is: The Dept. of Anti Energy and eliminate it.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Dave Hess

Organization: _____

Home/Organization Address (circle one): _____

1324 Davison

City: Palmdale State: CA Zip Code: 91352

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

90-1

90-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

NUCLEAR INFRASTRUCTURE

Commentor No. 91: Joy Fiore

Response to Commentor No. 91

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

Isotopes that can be provided by the FFTF are needed to do more than ever. Let's protect our investment in the FFTF and reopen it so we reduce dependence on foreign countries for isotopes that advance medical and scientific research for America.

91-1

91-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

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- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): Joy Fiore

Organization:

Home/Organization Address (circle one): HCR 31 Box 709

City: SANDY VALLEY State: NV Zip Code: 89019

Telephone (optional): 702-723-1054

E-mail (optional): alljoy@sandyvalley.net

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592 E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



Commentor No. 92: Fred K. Mangan

Response to Commentor No. 92

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

We need to continue funding on the Fast Flux Test Facility (FFTF). This is a research treasure that will allow the United States to be independent of foreign countries for various isotopes that are useful in the medical community.

Let's keep our ability to continue with the nuclear research that can be provided by FFTF.

92-1

92-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Fred K. Mangan

Organization: _____

Home/ Organization Address (circle one): 135 Orchard Way

City: Richland State: WA Zip Code: 99352

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-SG
 U.S. Department of Energy • 1901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

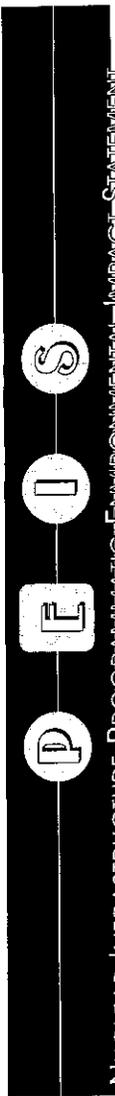


7/12/00

Commentor No. 93: K. M. Probasco

Response to Commentor No. 93

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

We need FFTF, please restart it. Use it for deep space probes INSTEAD of purchasing isotopes from Russia.

Do not throw away a valuable resource that can be used to make medical isotopes.

Do not be penny-wise AND pound foolish on this issue.

SAVE FFTF!

93-1

93-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): K. M. PROBASCO

Organization:

Home/Organization Address (circle one): 4711 MDSAVE DRIVE

City: PASCO State: WA Zip Code: 99301

Telephone (optional):

E-mail (optional): KM.PROBASCO@PNL.GOV

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50 U.S. Department of Energy • 19001 Germantown Road • Germantown, MD 20874 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



Commentor No. 94: Anonymous

Response to Commentor No. 94

Draft PEIS Comment Form

We need FFTF, please restart it.

94-1

94-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



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returning this comment form to the registration desk at the meeting or to the address below
calling toll-free and leaving your comments: 1-877-562-4593
faxing your comments toll-free to: 1-877-562-4592
commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional):

Organization:

Home/Organization Address (circle one):

City: State: Zip Code:

Telephone (optional):

E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Commentor No. 95: T. C. Probasco

Draft PEIS Comment Form

We need FFTF, please restart it

95-1

95-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): T.C. Probasco

Organization:

Home/Organization Address (circle one):

1315 Marshall Ave

City: Richland State: WA Zip Code: 99352-3235

Telephone (optional):

E-mail (optional):

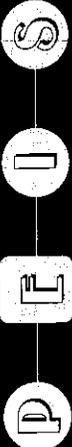
COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592 E-mail: Nuclear.Infrastructure-PBS@hq.doe.gov



7/12/00

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 96: Marsha Bell

Response to Commentor No. 96

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

FFTF should be operating to produce medical isotopes and power!

Why destroy or lose a national resource? We need FFTF to operate so not be dependent on other countries! Start plans to restart FFTF now

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4592
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): MARSHA A. BELL

Organization: _____

Home/Organization Address (circle one): 1532 Elliot Bay Dr.

City: Sage State: FD Zip Code: 83860

Telephone (optional): 208-265-8953

E-mail (optional): MBATLAK@TELEVAR.COM

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-60
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4592 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

96-1

96-1: DOE notes the commentor's support for Alternative 1, Restart FFTF. It should be noted that power production is not one of the missions for which FFTF would be restarted.

Commentor No. 97: Patrick B. O'Callaghan

Response to Commentor No. 97

Draft PEIS Comment Form

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



We Need Basic Scientific Research
That can be provided by the FFTF.
In addition the FFTF can help save
lives by producing rare isotopes.
Finally the life saving work the
FFTF can perform can help defray
operational costs.
It is a win win situation.

THANKS
Patrick B. O'Callaghan

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): PATRICK B. O'CALLAGHAN

Organization:

Home/Organization Address (circle one): 15611 SW PERIDOT WAY

City: BEAVERTON State: OR Zip Code: 97007

Telephone (optional): 503 579-8476

E-mail (optional): PBOC@AOL.COM

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

97-1

97-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 99: Bryan Coles

From: Bryan D Coles[SMTP:COLESBD@BOSSIG.COM]
 Sent: Friday, August 25, 2000 4:47:00 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Comments on Draft PEIS
 Auto forwarded by a Rule

Dear Collette E. Brown,

I am writing to provide my opinion on the draft PEIS for Expanded Nuclear Energy Research and Development and Isotope Production. It is quite obvious from the information provided that the restart of the FFTF is the best option for meeting all of the goals laid out in the statement.

Clearly, the most important reason for this is that the FFTF is already built, would not require a large investment in time and resources to restart and has a proven track record in meeting the mission objectives the Department of Energy is trying to accomplish. It is designed to meet NRC requirements and has been operated with excellence since being started up.

Other options such as an accelerator would not meet all of the mission objectives and would require a lengthy startup process and large budget expenditures. It would also require large amounts of power at a time when the electrical production in this country is becoming less able to meet current demands on a daily basis.

The PEIS speaks to the building of a new reactor as an option. I do not believe that all of the issues were addressed adequately in the PEIS. Scaling up a current design such as a TRIGA without an extensive re_licensing process would not be possible. Public reaction to a new reactor would most likely be as adverse as restarting FFTF. The cost for a new reactor would most likely be far in excess of the cost to restart FFTF. The Department of Energy would most likely suffer cost overruns and delays if this option were chosen.

99-1

99-1: DOE notes the commentor's support for Alternative 1, Restart FFTF, and opposition to Alternative 3, Construct New Accelerator(s), Alternative 4, Construct New Research Reactor, and the No Action Alternative.

99-2: See response to comment 99-1.

99-3: See response to comment 99-1.

99-2**99-3**

Commentor No. 99: Bryan Coles (Cont'd)

The option for maintaining the status quo is also untenable. It makes no sense to maintain the FFTF in standby for an indefinite time as this drains valuable resources from the Federal budget for no gain. If it is not restarted now, the odds of restart any time in the future will become even more improbable.

On a final note, the Department of Energy should look at the publicity that is being generated during this debate. It should be obvious there is an intensive propaganda campaign being conducted by anti_nuclear special interest groups with the full support of the media, to create hysteria and fear over risks that negligible. The Department should mount a rebuttal to these efforts to make sure that the truth is made available to the public so they may make an informed decision.

Thank you for the opportunity to comment on this important decision.

Bryan Coles
1970 S. 38th Ave.
West Richland WA 99353

99-4

99-5

Response to Commentor No. 99

99-4: See response to comment 99-1.

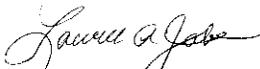
99-5: DOE notes the commentor's views including the need to keep the public accurately informed. In doing so, DOE has established reading rooms near DOE sites to provide easy access to information about DOE programs and encourages the use of this source of information. Further, DOE has numerous web sites, including one for NE (<http://www.nuclear.gov>), that provide up-to-date-information complete with fact sheets, news releases, and other materials. It is also DOE policy to encourage public input on matters of regional, national and international importance. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS DOE carefully considered comments received from the public.

**Commentor No. 100: Lowell A. Jobe
Coalition-21**

Comments on DOE NI-PEIS-0310D by Lowell A. Jobe, member Coalition-21, a volunteer organization of 80 people throughout Idaho, headquartered in Idaho Falls, dedicated to Supporting Tomorrow's Technologies with Facts, not Fears, focussing particularly on nuclear issues.

Although any EIS does not require a comparative cost evaluation of the alternatives, a complete systems analysis requires that this information is one of the key factors that needs to be used by DOE in their decision making to assure maximum cost effectiveness. The public also needs to have this information in order to make common sense decisions and comments on such documents. DOE should always strive to make this information publically available at the time the EIS is made available and before public hearings are held. Since this information is not currently available to us, our final comments will await its availability.

At this time we wish to express our support for the projects and our backing for the short term implementation of the ATR and FDPF/ CPP651 facilities as part of INEEL's designation as the DOE Lead Laboratory for Nuclear Energy Research & Development mission.



Lowell A. Jobe
14469 N. 55th E.
Idaho Falls, ID 83401

Response to Commentor No. 100

100-1

100-1: Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make decision documents such as the cost report available to the public before a decision is made. The cost report was made available to the public on August 24, 2000. The Record of Decision concerning enhancement of DOE's nuclear infrastructure is scheduled for January 2001. Comments from Coalition 21 and DOE's responses to those comments are given in comment number 1655 below.

100-2

100-2: DOE notes the commentor's support for Alternative 2, Use Only Existing Operational Facilities, Option 2, Irradiate at ATR and Process/Store at FDPF/ CPP651.

Commentor No. 101: Carolyn Gardner

Response to Commentor No. 101

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

My thought is that if we have this in Idaho and Ohio to us we will be in a better position to have a space port here. I have an M.S.T. even so often and am interested in the processing of the M.S.T. and its progression.

Also, I am a part of the Meater Hackner program and my interests there are in the development aspects of preparing or receiving prep for space flight of products going into space.

As an interest note, I wonder who helps get the astronauts ready for launch in their suits. I also am I.D.B. and the satellite work is of interest.

101-1

101-1: DOE notes the commentor's interest in opportunities related to space missions.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear-Infrastructure-PEIS@hq.doe.gov

Name (optional): Carolyn Gardner

Organization:

Home/Organization Address (circle one): 940 Jefferson Avenue

City: Idaho Falls State: ID Zip Code: 83402

Telephone (optional): 208-523-3472

E-mail (optional): rgardnr@usurf.net or berthway.net

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Collette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear-Infrastructure-PEIS@hq.doe.gov



Commentor No. 102: Ken and Nancy VanDyken

From: Ken (038) Nancy VanDyken
[SMTP:NVANDYKEN@PRODIGY.NET]
Sent: Friday, August 25, 2000 5:48:23 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF
Auto forwarded by a Rule

Please re_start FFTF for the production of medical isotopes. We should not lose this facility _it's a national treasure! Thank you!

_Ken & Nancy VanDyken

102-1

Response to Commentor No. 102

102-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 103: Gay Arpan

From: Karen Gay Arpan[SMTP:KGARPAN@MCN.NET]
 Sent: Friday, August 25, 2000 8:17:47 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: FFTF
 Auto forwarded by a Rule

I am sending this email to ask you to restart the Fast Flux Test Facility. I think it is a shame you have this facility closed when it is in good shape and will be for years to come. Why are we importing isotopes when they could be made right here and better than anything we could import from Russia.

I think we should use all of the resources we have at home instead of depending on importing everything all of time.

Sincerely yours,
 Gay Arpan
 P.O. Box 38
 Alzada, Montana 59311

103-1

Response to Commentor No. 103

103-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 104: Barbara J. French

From: Barbara J. French[SMTP:NTR@OWT.COM]
Sent: Friday, August 25, 2000 8:34:17 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF SUPPORT
Auto forwarded by a Rule

I support keeping the FFTF for Medical Isotope production.

104-1

Response to Commentor No. 104

104-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 105: Suzanne Zehms Heaston

From: suzanne[SMTP:SHEASTON@OWT.COM]
 Sent: Saturday, August 26, 2000 8:13:47 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Restart FFTF!!
 Auto forwarded by a Rule

Dear Secretary Richardson:

Over 1500 people die of cancer each day. The Fast Flux Test Facility is our nation's newest, most versatile reactor capable of producing large quantities of high quality medical isotopes for treating cancer, arthritis and other diseases.

We already face isotope shortages for research and treatment. Human clinical trials for breast cancer were cancelled due to a unavailability of Cu_67. Last year, the Seattle area faced shortages for the isotope "seed" treatment for prostate cancer.

The FFTF is desperately needed to produce isotopes for the treatment of bone pain associated with cancer. If you have ever witnessed a family member or a friend with terminal cancer with excruciating bone pain, you know what a God_send pain relief from medical isotopes are. This type of isotope cannot be produced in an accelerator__it must be produced in a reactor.

Restarting the FFTF will save lives and enable us to utilize cutting_edge technologies for the 21st century.

I implore you to make the right decision for the citizens of our nation. RESTART the FFTF!!! The life you save may be that of a family member, a friend, or your own.

Suzanne Zehms Heaston
 8983 Underwood Lane
 Maple Grove, Minnesota 55369

105-1

Response to Commentor No. 105

105-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 106: Neil Taylor

From: Neil Taylor[SMTP:NAT@3_CITIES.COM]
Sent: Sunday, August 27, 2000 12:31:00 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Restart FFTF
Auto forwarded by a Rule

Please re_start FFTF for the production of medical isotopes.

106-1

Response to Commentor No. 106

106-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 107: M. S. Bergez

From: MSBergez[SMTP:MSBERGEZ@MCIWORLD.COM]
Sent: Sunday, August 27, 2000 5:23:54 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: "Please re_start FFTF for the
Auto forwarded by a Rule

"Please re_start FFTF for the production of medical isotopes."

107-1

Response to Commentor No. 107

107-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 108: Judith A. Freeman

From: NPcaboose@aol.com%internet
[SMTP:NPCABOOSE@AOL.COM]
Sent: Sunday, August 27, 2000 5:28:33 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: I need medical isotopes. Please help!
Auto forwarded by a Rule

To Whom This May Concern:

I am a two year survivor of ovarian cancer with powerful odds against me for living beyond five years. The five year survival rate for ovarian cancer in this country is 14%, but the six year mortality rate in a study in England was only 10% with the use of "smart bullets" (medical isotopes), and this country needs our reactors and nuclear stockpiles to treat cancer patients.

I cannot urge you enough to please make the right decision. I need medical isotopes as do so many millions of other cancer patients. Some would call this is the "American Holocaust" with the death of so many from cancer who could have been treated with "smart bullets" but were not. It is a most frustrating situation.

Thank you for your help.

Sincerely,
Judith A. Freeman
4411 N. 37th Street
Tacoma, WA 98407_5615
NPcaboose@aol.com
(253) 752_3724

108-1

Response to Commentor No. 108

108-1: DOE notes the commentor's support for greater availability of medical isotopes. For nearly 50 years, DOE's use of its unique technologies and capabilities to develop isotopes for civilian purposes has enabled the widespread application of medical isotopes seen today. Under the proposed action, DOE would enhance its existing nuclear facility infrastructure to more effectively support production of radioisotopes for medical applications and research.

Commentor No. 109: D. F. Spellman

From: handle@owt.com%internet
 [SMTP:HANDLE@OWT.COM]
 Sent: Sunday, August 27, 2000 5:49:36 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: FFTF Restart
 Auto forwarded by a Rule

Please ensure the re_start of the Fast Flux Test Facility (FFTF) for the domestic production of medical isotopes. It would be a tragedy if ignorance and irrational fear were allowed to triumph over a unique, safe, and proven scientific/technical facility that offers hope for successful diagnosis and treatment of countless cancer patients in the United States and abroad.

D. F. Spellman
 1116 S. Highland Place
 Kennewick, WA 99337

109-1

Response to Commentor No. 109

109-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 110: Misty Esparza

From: Misty M. Esparza[SMTP:PLAYMISTY4ME@EARTHLINK.NET]
Sent: Monday, August 28, 2000 9:28:15 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF
Auto forwarded by a Rule

Please support the re_starting of FFTF. I feel it is very important in many areas, but especially in the field of medicine.

Thank You,
Misty Esparza

110-1

Response to Commentor No. 110

110-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 111: Floyd Ivy

NI PEIS Toll_Free Telephone

8/26/00

Floyd Ivy
Attorney in Kennewick, WA

I favor restarting FFTF for all the proposed applications including isotopes and Pu_238. Please restart FFTF. Thank you.

111-1

Response to Commentor No. 111

111-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 112: Elizabeth Roberts

NI PEIS Toll_Free Telephone

8/26/00

Elizabeth Roberts
360_479_6399

You need to stop holding public meetings and you need to follow what you need to do. You need to close down FFTF forever. It is horribly contaminated. We do not need it for medical isotopes; that is a diversion. The Department of Energy and the government wants it to produce tritium, and the only reason for that is for nuclear weapons which are illegal according to international law.

You need to stop wasting the taxpayers money and you need to use all the money you have right now for cleanup. I have been to at least three of these hearings in Seattle, and each time I have stated that you need to close it down. You need to start following the law and you need to do it now. Thank you.

112-1

112-2

112-3

112-4

Response to Commentor No. 112

112-1: Comment noted. DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and holding public hearings is an essential and required part of the NEPA process.

112-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. DOE also notes the commentor's concerns regarding the existing contamination at Hanford and the cleanup mission. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

112-3: DOE notes the commentor's views. However, the purpose of the NI PEIS is to evaluate the environmental impacts of reasonable alternatives to fulfill the requirements of the proposed actions, which include the production of medical and industrial radioisotopes, the production of plutonium-238 for future NASA space exploration missions, and civilian nuclear research and development. No component of the proposed action is for the purpose of producing tritium, nor is it for the purpose of supporting any other defense or weapons-related mission.

DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has

Commentor No. 112: Elizabeth Roberts (Cont'd)

Response to Commentor No. 112

tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

- 112-4:** See response to comment 112-2. Additionally, Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy agreed to a change in the Tri-Party Agreement to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on FFTF's future. Public meetings were held on this formal milestone change.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected. Therefore, the NI PEIS missions would not have an impact on Hanford cleanup activities.

Commentor No. 113: Brian Watson

NI PEIS Toll_Free Telephone

8/26/00

Brian Watson
360_479_6399
Bremerton, WA

I would like to offer a comment as to the plans to produce plutonium and radioactive isotopes at FFTF at Hanford. Why do I have to keep calling back, this is ridiculous. You all know that there are so many problems with radioactive and other toxic wastes at Hanford already that can't really be dealt with. To even be considering additional production of radioactive materials and toxic materials at Hanford is unconscionable. DOE, you guys really need to look at _ look at yourself, how can you sleep at night. Really ridiculous. As you can guess, I really strongly feel that this additional production of Pu_238 is not only dangerous and it is unnecessary, and I'd ask you to consider the relative merits of putting more spacecrafts up into the air up in space versus the health and safety of our family and children. Frankly, I would rather have health and safety of our children than another satellite. So please don't start FFTF, and focus all of the energy and resources at Hanford on mitigation, remediation, and cleanup efforts. That's where our responsibility lie. You guys made a big mess and your job is to clean up and it will be the children's job to clean it up. Quite a gift. The least we can do is not make the gift any worse then it already is for our descendants. Please do what you outta do. Thank you.

113-1

113-2

113-3

113-1

Response to Commentor No. 113

113-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Steady and consistent progress in restoring the Hanford Site is documented in annual reports, available to the public at www.hanford.gov. The Hanford Site has a comprehensive waste minimization and pollution prevention program in place as summarized in Volume 1, Section 3.4.11.8 that would govern any proposed site activities.

113-2: DOE notes the commentor's opposition to enhancing its existing nuclear facility infrastructure to support production of plutonium-238 for use in future NASA space exploration missions. Section 1.2.2 of Volume 1 was revised to clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed production of plutonium-238 are low and are discussed in detail in Chapter 4 of Volume 1 and appendixes H, I, and J of Volume 2 in the Final NI PEIS. Potential health and safety impacts associated with future launches of spacecraft are not within the scope of the NI PEIS analysis, but would be addressed in the specific NEPA documentation prepared by NASA in support of such missions.

113-3: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 114: Valerie Nichols

NI PEIS Toll_Free Telephone

8/27/00

Valerie Nichols
206_417_5082

I am calling to comment on the proposed reopening of the Hanford site and also the proposed use of that site as a low_level waste facility. I am appalled that you people are considering reopening Hanford and using it as a waste dump. I thought this black hole had been plugged for good but apparently not. So I am planning to do everything I can to counter this action, and I plan to tell everyone I know that I am a US citizen that is voting. I am a US citizen and I definitely plan to get the word out. So please, as far as I am concerned don't No, No, No reopen the Hanford site and use it as a waste disposal site as well. Thank you.

114-1

Response to Commentor No. 114

114-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF. DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

Section 1.2 of the NI PEIS provides information on the purpose and need for DOE's proposed expansion of the nuclear infrastructure to ensure the availability of isotopes for medical, industrial, and research applications; providing plutonium-238 for NASA, and undertaking research and development activities related to development of nuclear power for civilian use. Although one irradiation facility and several support facilities on the Hanford Site (i.e., Alternative 1, Restart FFTF) were evaluated for mission effectiveness, the scope of this PEIS does not include using the Hanford Site as a "waste dump."

Currently, both government and commercial waste disposal sites operate within the boundaries of the Hanford Site. These are permitted by Washington State.

Commentor No. 115: Donna Olsen

NI PEIS Toll_Free Telephone

8/27/00

Donna Olsen
503_222_2256

Simple statements Restart FFTF for medical isotopes, that is via someone who has educated me on the whole system. That is my simple statement restart FFTF.

115-1

Response to Commentor No. 115

115-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 116: Kathy Jex

From: Jex, Kathy[SMTP:KJEX@USWEST.COM]
Sent: Monday, August 28, 2000 10:35:42 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: PLEASE RESTART THE FFTF
Auto forwarded by a Rule

116-1***Response to Commentor No. 116***

116-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 117: Hanford Observer

From: Hanford Observer[SMTP:HANFORD_OBSERVER@HOTMAIL.COM]
Sent: Monday, August 28, 2000 3:47:14 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Cc: hanfordwatch@telelists.com%internet
Subject: My Comments on the Nuclear Infrastructure PEIS
Auto forwarded by a Rule

To: Nuclear.Infrastructure_PEIS@hq.doe.gov
CC: hanfordwatch@telelists.com
From: Hanford_Observer
Subject: Comments on the Nuclear Infrastructure PEIS.

Please excuse this form of providing comments on the Nuclear Infrastructure PEIS _ I dont wish to give my name and address, since I fear retaliation by the Dept. of Energy (otherwise called DoH! in the rest of this document). While DoH! talks a lot about a zero_tolerance policy for reprisals against whistleblowers, their actions show that in actuality, they have a zero_tolerance against whistleblowers themselves.

My comments are all general in nature and are as follows:

- 1) The environmental consequences of accidents are probably based on out_of_date accident analyses. Since the facility was last licensed to operate, DoH! has increased the safety requirements.
- 2) Because of 1) above, the conclusions based on this out_of_date analyses are suspect.
- 3) Because of the need to revisit the safety analysis, and modify the FFTF facility to meet the new tougher requirements, the costs and schedule for the FFTF restart are probably significantly underestimated.

117-1

117-2

Response to Commentor No. 117

- 117-1:** FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The accidents evaluated in the NI PEIS were based upon the latest facility safety analysis reports, recent analyses performed specifically in support of the NI PEIS and other pertinent information. The FFTF currently meets all safety and environmental requirements established by DOE. These DOE requirements are consistent with those established by regulatory agencies such as the Nuclear Regulatory Commission and the Environmental Protection Agency. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.
- 117-2:** DOE notes the commentor's opinion. DOE has confidence in the cost and schedule estimate for FFTF restart.
- 117-3:** The NI PEIS presents the incremental risk associated with each of the alternatives. Sections 4.2-4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected from implementation of the alternatives, including normal operations and a spectrum of accidents that included severe accidents. The accident review included internal events, external events, natural phenomena, common-cause events, and sabotage and terrorist activities. In the event of an earthquake, the FFTF could be safely shutdown, and nonessential personnel evacuated. The environmental analysis showed that radiological and nonradiological risks associated with an earthquake would be small.
- 117-4:** DOE notes the commentor's concerns. This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS. DOE made every effort to obtain, analyze, and disclose all required information to make a decision on expanding nuclear infrastructure. Further, DOE evaluated each environmental resource area in a consistent manner across all the alternatives to allow a fair comparison among the various alternatives. The costs of proposed

Commentor No. 117: Hanford Observer (Cont'd)

4) The FFTF facility sits on the Hanford site. There are several facilities that exist at the Hanford site that do not meet the increased safety requirements. In fact, these facilities provide an unacceptable risk from such common_cause accidents as seismic events, however these risks will not be reduced to acceptable level for years to come. If there were a seismic event and FFTF were operating, the consequences would be increased further, since a seismic event could reasonably be expected to affect not only FFTF, but other facilities such as the waste tanks, PFP, K_basins, and other facilities. How can you justify increasing environmental consequences of accidents further, when already they dont meet the current DoH! requirements?

117-3

5) DoH! always underestimates the costs and always underestimates the environmental consequences of their actions. Why should this PEIS be any different? The PEIS should be done by an independent organization, such as the EPA, or by the State of Washington, as it lacks credibility.

117-4

6) Restarting FFTF will increase the costs and scope for the Hanford cleanup mission. As a result funds will have to be used which could have been used to improve the environment and the cleanup schedule will probably have to be stretched out. How can we justify making a site that is already dirty even dirtier? You cant have it both ways _ either the site needs to be cleaned up or it doesnt. If it needs to be cleaned up, the first step needs to be stop activities which makes it dirtier.

117-5

7) In my view, there is no need to restart FFTF. There are cheaper ways to accomplish the proposed mission. This is simply a political payoff by the Klinton_Bore administration for the politically loyal _ it is a very expensive jobs program for the Tri_Cities area. Why not just pay everybody in the area a small sum of money a year and forget about restarting this dinosaur?

117-6

117-7

Response to Commentor No. 117

actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS.

117-5: The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected. Therefore, the missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

FFTF and the proposed support facilities at Hanford currently exist and will eventually be deactivated. The use of these facilities for this mission will not expand the scope of the Hanford cleanup. An increase in restoration costs should only result from postponing FFTF deactivation until after the Facility's contribution to the NI PEIS mission is completed.

117-6: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

117-7: DOE notes the commentor's concern. The purpose of the proposed action in the PEIS is not jobs, but to help meet the Nation's needs in isotope production and nuclear research.

**Commentor No. 118: Thomas Schaffer
Hanford Atomic Metal Trades Council**



August 23, 2000

Colette E. Brown, NE-50
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

Dear Ms. Brown:

FFTF already has a proven track record for safe and environmentally friendly operation, but the true benefits of this facility are yet to be realized. If you support restarting this reactor, it can produce high quality medical isotopes to treat numerous cancer patients, including some of our members, and possible other patients with other diseases. American production of isotopes will allow continued advancements in medical research, and provide jobs for American labor. This would keep American dollars in America, improving our economic as well as the well being of American families. As the new millennium progresses, alternatives to the use of petroleum fuels must also be identified. The research performed at the FFTF reactor will help scientists and engineers develop safe and economical sources of energy.

Therefore, on the behalf of the Hanford Atomic Metal Trades Council, we would like to express our support on the draft PEIS. We agree there is a need and that the Department of Energy should take immediate action in this area. It is also our opinion, that FFTF is a unique resource to implement a new path forward. This path forward would allow this country to advance technologically, medically, and economically in a totally safe manner.

Response to Commentor No. 118

118-1

118-1: DOE notes the Council's support for Alternative 1, Restart FFTF.

Commentor No. 118: Thomas Schaffer (Cont'd)
Hanford Atomic Metal Trades Council

The PEIS identified a number of alternatives to supply needed isotopes, and research opportunities that the Department of Energy is responsible for providing. We commend conducting an environmental review. We believe you will find FFTF is uniquely situated to address these needs and be cost effective. Our future is in our children, and we must leave them a legacy of sustainable health and sustainable energy. We have already built an outstanding facility capable of meeting these needs, and now it is time to recoup our investment by starting and operating this reactor. We must move forward. We look forward to your decision to restart FFTF.

Sincerely,

HANFORD ATOMIC METAL TRADES COUNCIL



Thomas Schaffer
President
H.A.M.T.C.

118-1
(Cont'd)

Response to Commentor No. 118

Commentor No. 119: Clarence A. Strand

File: ffteis01

262 Ada St.
Richland, WA 99352-3916
August 21, 2000

Ms. Colette Brown
DOE Office of Space & Defense Power Systems, NE-50
19901 Germantown Road
Germantown, MD 20874-1290

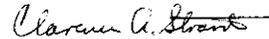
FFTF EIS Hearing on Isotopic Production

I attended the last information meeting on the subject here in Richland, but will be out of town and unable to attend the August 29 meeting. I recommend that the start up of the FFTF be expedited for the research and development of isotopes needed for medical, heat source and industrial purposes. Several isotopes needed are in short supply. Often we depend upon foreign and sometimes unreliable sources. The availability and quality of medical isotopes from foreign sources can be affected by the political climate in the supplying country and can cause delays in procurement of the needed materials.

Isotope production is admittedly expensive, but the use of medical isotopes would be beneficial to mankind. Isotopes have been used for the diagnosis, treatment, and extending life of patients with cancer and heart diseases well as other diseases. The FFTF could be a valuable research tool for breakthroughs in cancer treatment. This facility already exists and it would be a crime not to utilize it, especially for research, development and production of medical isotopes.

I recommend that the FFTF be made ready for research and the production of medical isotopes as soon as possible

Sincerely


Clarence A. Strand

Response to Commentor No. 119

119-1

119-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 120: Marcus Beck and Family

Response to Commentor No. 120

Draft PEIS Comment Form

We need FFTF - please Restart it.
It is unbelievable to us that this is even a point of contention. We will vote our conscience if this issue is not resolved soon and in a definite manner.

120-1

120-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Marcus Beck & family
 Organization: Cornwallis Educational Service District
 Home Organization Address (circle one): 340 NW 21st
 City: Cornwallis State: OR Zip Code: 97330
 Telephone (optional): _____
 E-mail (optional): beckm@ucs.orst.edu

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19001 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Commentor No. 121: Milton H. Campbell

Response to Commentor No. 121

Draft PEIS Comment Form

See attached comments

Multiple horizontal lines for writing comments.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
• returning this comment form to the registration desk at the meeting or to the address below
• calling toll-free and leaving your comments: 1-877-562-4593
• faxing your comments toll-free to: 1-877-562-4592
• commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Milton H. Campbell

Organization: refused

Home/Organization Address (circle one): 2119 Beech Ave

City: Richland State: WA Zip Code: 99352

Telephone (optional):

E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-SO
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20824
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 121: Milton H. Campbell (Cont'd)

Comments on the Draft PEIS on Isotope Production Missions DOE/EIS-0310D

Thank you for sending me the full text of the PEIS so that I could review it before making comment. I will avoid the public comment meetings for they are dominated by activists who care little for my supportive opinion and make it very uncomfortable for conscientious people to express themselves.

I was most dismayed the day after I received the full PEIS to read in the paper that Heart of America spokesman felt that cost-wise the accelerator option was less costly than operating FFTF. I read the report carefully and found no cost comparison charts on which to base such an opinion. The PEIS by definition does not make such comparisons and such comments should be ignored. An additional comment that the PEIS authors were biased toward the FFTF should also be ignored. After all when you want a brain surgeon, you don't go to the garbage collector for an opinion!

On the whole, I found that the treatment of the alternatives was acceptable. I feel that the FFTF provides the most immediate and viable avenue to producing medical isotopes and ²³⁸Plutonium. The target prep and target processing operation is common to all alternatives presents a common waste source and risk potential to the public and to the workers.

Negative comments on waste production should be anticipated. That every activity has a waste release cannot be denied, even in our breathing we exhale carbon dioxide. Recognition of the waste stream, and good engineering practices to minimize and contain it are the solution, not where it will be treated or ultimately go.

As far as the PEIS goes, I am concerned with one major omission. The accelerators would require a major power source, but I do not find an impact assessment for this requirement. Considering the limited state of our electrical generation industry throughout the nation, I believe that this requirement should be included in the constraints for this option.

In summary, I believe the FFTF should be selected to fulfill the needs cited in this PEIS.

Milton H. Campbell
Richland, WA 99352

Milton H. Campbell
2119 Beulah Ave
Richland, WA 99352

121-1

121-2

121-3

121-4

121-5

121-3

Response to Commentor No. 121

121-1: DOE notes the commentor's views. DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and to providing ample opportunity for public comment on those actions. The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. DOE mailed this document to about 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P in the Final NI PEIS.

121-2: DOE notes the commentor's opinion.

121-3: DOE notes the commentor's support for Alternative 1, Restart FFTF.

121-4: The waste generated from target processing and fabrication, regardless of which alternative is considered, are very common and in most cases the volumes are the same.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

121-5: The impact assessment of the electrical demands of Alternative 3 on the local electrical grid is a site specific assessment and will be evaluated during subsequent NEPA review if the Record of Decision selects Alternative 3. The annual cost of utilities for operation of the high-energy and low-energy accelerators are presented on pages A-3 and A-4 of the Cost Report. The Cost Report summary is provided in Appendix P.

Commentor No. 122: Lillie McDaniel

Response to Commentor No. 122

Draft PEIS Comment Form

*We need FFTF please restart it
lets save life, science & sanity
Please*

122-1

122-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): *Lillie McDaniel*

Organization: _____

Home/Organization Address (circle one): _____

City: *Waco* State: *TX* Zip Code: *76712*

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Collette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PDS@hq.doe.gov



7/12/00

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 123: Tom and Susan Crawford

Draft PEIS Comment Form

We need FFTF —
 please restart it!

123-1

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Tom + Susan Crawford

Organization: _____

Home Organization Address (circle one): _____

City: Richland State: WA Zip Code: 99352

Telephone (optional): _____

E-mail (optional): _____

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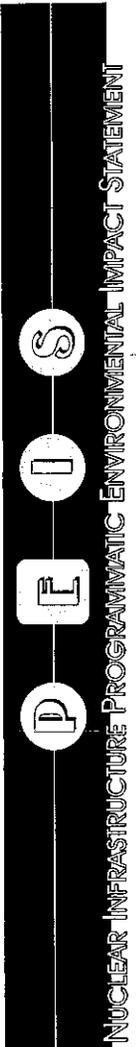
For more information contact: Celeste E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Response to Commentor No. 123

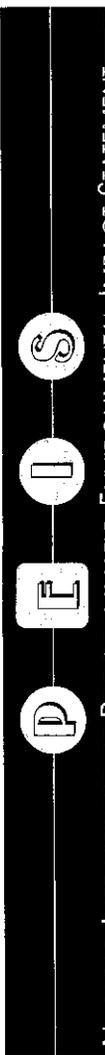
123-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.



Commentor No. 124: Vicki Buck

Response to Commentor No. 124

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

The operation of The FFTF plant is vital to our community

It produces a variety of isotopes that is helpful to the American people

Our community has accepted this plant and we hope you do not waste our tax dollars to build a new one.

Please restart FFTF for the good of the entire country.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): Vicki Buck

Organization:

Home/Organization Address (circle one): 1935 Pine

City: Richland State: WA Zip Code: 99352

Telephone (optional):

E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

124-1

124-1: DOE notes the commentor's support for Alternative 1, Restart FFTF and opposition to Alternative 4, Construct New Research Reactor.

Draft PEIS Comment Form

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



I am providing the following comments in support of future operation of the Fast Flux Test Facility (FFTF) at DOE's Hanford site in Washington state. The FFTF is DOE's newest nuclear reactor and numerous studies have demonstrated its unique characteristics and exceptional versatility.

For example, this facility has the capability to produce plutonium-238 for the Radioisotope Thermal Generators (RTGs) that NASA will need for future deep-space missions while simultaneously producing large quantities of medical isotopes for use in diagnosis and treatment of disease.

As always happens, there is vocal opposition to an activity that can in any way be called "nuclear", even though that activity would lead to the production of isotopes for treatment of serious medical conditions such as cancer, heart disease and arthritis. However, you will find strong support from those most directly affected by the decision on the future of the FFTF. Don't waste this valuable asset - put the FFTF back into useful operation.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): JAMES W. DAUGHTRY

Organization: _____

Home/Work/Other Address (circle one): _____

44401 SHANNON LANE

City: WEST RICHLAND State: WA Zip Code: 99353

Telephone (optional): (509) 967-3311

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Collette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

126-1

126-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 127: R. Maddox

Draft PEIS Comment Form

DEAR LADIES AND GENTLEMEN:

WE NEED FFTF, PLEASE RESTART IT. THE WELL-KNOWN AXIOM, "LEAD, FOLLOW, OR GET OUT OF THE WAY" HAS ALWAYS BEEN THE STANDARD BY WHICH SOCIAL, MEDICAL AND TECHNOLOGICAL ADVANCES HAVE BEEN MADE IN THE UNITED STATES. DISCONTINUING OPERATION OF FFTF WOULD NOT ONLY DO A DISERVICE TO THE MEN AND WOMEN WHO DEVELOPED AND WORKED AT THE SITE, BUT WOULD SEND AN EMBARRASSING MESSAGE TO THE REST OF THE WORLD WHO LOOK TO OUR COUNTRY FOR LEADERSHIP... "LEAD (US) BECAUSE WE HAVE TO FOLLOW YOU NOW, AND DON'T WANT TO GET IN YOUR WAY."

PLEASE BASE THE DECISION ON A VISION FOR THE FUTURE. MEDICAL RESEARCH, SPACE EXPLORATION, ETC. WILL ALL BE ADVERSELY AFFECTED BY THE CLOSURE OF FFTF. I, FOR ONE, DO NOT WANT TO SOMEDAY BE IN NEED OF LIFESAVING TREATMENTS THAT HAVE TO BE PURCHASED AT A FOREIGN GARAGE SALE, BECAUSE OUR COUNTRY NO LONGER PRODUCES THE NECESSARY MATERIALS.

LISTEN TO THE PEOPLE. BASE YOUR DECISION(S) ON THEIR NEEDS AND FUTURE NEEDS. THANK YOU.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): R. Maddox

Organization: _____

Home/Organization Address (circle one): _____

City: BEND State: OR Zip Code: _____

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Collette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



127-1

Response to Commentor No. 127

127-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

Ms. BROWN, 8/20/0
 The recent release of the National Research Council's study of U.S. Nuclear Waste Sites CALLS DOE'S CLEANUP APPROACH INADEQUATE (wall street journal 8/16) reaffirms what we know. It is paramount that we clean-up our wastes before we even consider creating more. The DOE has been mandated this responsibility.

It is our duty as adults to actualize what our parents taught us; Be kind to others, learn as much as we can, clean-up our mess. This is imperative to the health of future generations. Products from Nuclear Energy Sites are simply not worth the certain hazards of their by-products.

According to the report, "Today's SCIENTIFIC KNOWLEDGE and TECHNICAL and INSTITUTIONAL CAPABILITIES ARE INSUFFICIENT TO PROVIDE MUCH CONFIDENCE THAT SITES WITH RESIDUAL RISKS WILL CONTINUE TO FUNCTION AS EXPECTED FOR THE TIME PERIODS NECESSARY."

Sincerely, Paul Moyer
* PLEASE READ: UNDERTAIN HEARDS ENVIRONMENTAL ACTIVISTS and SCIENTIFIC PROOF by Julie Nobile Telford ©2000 CORNELL UNIVERSITY

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
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- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Paul Moyer PA-C, RN, MPH

Organization: (none) → U.S. CITIZEN, period.

Home/Organization Address (circle one): PO. Box 930

477 NE. Academy St.

City: White Salmon State: WA Zip Code: 98672

Telephone (optional): (509) 493-1029

E-mail (optional): essmoy@gorge.net

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 1901 Germantown Road • Germantown, MD 20874
 Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

128-1

128-1: DOE notes the commentor's concern for the adequacy of ongoing cleanup activities, although issues of waste cleanup activities are beyond the scope of this NI PEIS. As discussed in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.13, 4.3.2.1.13, 4.3.3.1.13), waste will be generated by all of the proposed alternatives, including the No Action Alternative. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. DOE activities associated with this program would not impact the schedule or available funding for existing cleanup activities at candidate sites for implementation of the nuclear infrastructure alternatives.

As DOE is mandated to do cleanup, it is also mandated to provide for certain needs under the Atomic Energy Act. Consistent with its mandates under the Atomic Energy Act, DOE is proposing this enhancement for the purposes of addressing three primary needs: 1) to support the increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238 a fuel source that is required for deep space missions and for which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear energy research and development in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio.

Commentor No. 129: Sandra Lewis



Aug 23, 2000

To Whom It Concerns,

We need to keep the project
FFTF.

Please consider the future
need of the people. If a job
is done properly & correctly
& overseen properly, this is a
good asset for all.

Thank you!
Sandra Lewis
3282 Aloneta Ln.
McKinney, Tex.
75069



Response to Commentor No. 129

129-1

129-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 130: Wayne H. Payzant

Aug 23, 2000

Ms. Colette E. Brown
U.S. Department of Energy
Office of Space and Defense Power Systems, NE-50
Germantown Road, Germantown, Maryland 20874-1290

Dear Ms. Brown:

Subject: Comments on Draft Nuclear Infrastructure PEIS (DOE/EIS-0310D, July 2000)

The alternatives listed in the referenced document are:

No Action

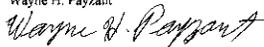
1. Restart FFTF at Hanford, Washington, to meet all isotope production and research requirements.
2. Use only existing operational facilities;
3. Construct one or two new accelerators;
4. Construct a new research reactor; or
5. Permanently deactivate FFTF (with no new missions).

Of these alternatives I strongly support Number 1, restart FFTF. The reasons are:

- A. We need the medical isotopes the FFTF can deliver. No other alternative can deliver the quantity and diversity of isotopes as economically as the FFTF. No patient should be denied life saving/enhancing treatment for lack of adequate medical isotopes. A large diversity of medical isotopes are needed to develop new and improved methodologies to treat diseases.
- B. The FFTF can produce adequate quantities of power generating isotopes to support NASA space missions.
- C. The FFTF has the flexibility to support other nuclear research and development that likely will be needed in the future.
- D. The FFTF is a Crown Jewel in the DOE reactor inventory, being the newest with an excellent operation history.
- E. Skilled nuclear workers are available in the communities near the FFTF reactor. This will minimize the time and cost to recruit and train additional personnel to restart and operate the FFTF.
- F. The local communities near the FFTF reactor strongly support restarting the FFTF.

In summary, restart of the FFTF appears to be the best economic and practical alternative to meet all the needs identified. The final decision should be made on "Sound Science and Long Term Economics" not the lies and fear tactics employed by the anti-nuclear movement.

Sincerely,
Wayne H. Payzant



1717 S. Lyle Street
Kennewick, WA 99337

Response to Commentor No. 130

130-1

130-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 131: Faustina Pakkianathan

Response to Commentor No. 131

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

I believe we need FFTF, please restart it.
 The nuclear policies of the government can only be described as completely nuclear hostile. These policies appear to be based on the opinions of uneducated and emotional environmentalists and on the opinion of media coverage-driven celebrities. The result of feeding the American public perceived discrimination with sensationalism is our leaving a legacy to our posterity that is arguably down-right criminal! Turning our back on nuclear technology and science is crippling our nation. The absence of funding has created an absence of nuclear research which has already put the United States behind other nations, and will eventually put us so far behind our best future will be endangered. It is high time that those who make our nuclear policies base their decisions not on people who irrationally fear it, or who want to profit by its demise, but on hard science and on the advice of engineers and scientists who actually work with and study it. I am asking that we please take this one small step to reverse the course of dementia: restart the FFTF!

131-1

131-2

131-1

131-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

131-2: DOE notes the views expressed in this comment. DOE remains committed to fulfilling its roles in technology development, energy security and environmental stewardship, while meeting the Nation's needs in the areas of medical and industrial isotopes, and nuclear research.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Faustina Pakkianathan

Organization: _____

Home/Organization Address (circle one): 924 Kimberly Ln

City: Ridgecrest State: CA Zip Code: 93555

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



Commentor No. 132: J. Hyatt

Please Restart FFTF for Medical Isotopes!
J. Hyatt - Las Vegas

WHY DO WE NEED THE FFTF FOR MEDICAL ISOTOPES?

June, 2000

Medical Isotopes Are Improving Cancer Treatment

New treatments for cancer using medical isotopes are showing great promise in human clinical trials. A new medical isotope treatment for non-Hodgkin's lymphoma is having remarkable results – impressive remission rates and few side effects. Medical isotope "seeds" for prostate cancer, now FDA approved, are equally as effective as surgery for localized cancer yet much cheaper and kinder. The list of possible treatments using medical isotopes is growing – leukemia, breast cancer, ovarian cancer, myeloma, neuroendocrine cancers to name a few.

Will there be a shortage of medical isotopes for treatment?

The threat of a medical isotope shortage for treating patients is real. The quantity of isotopes required for research (treating only a few patients) is much smaller than the quantity that will be required when the treatment becomes FDA approved. In the next several years, demand for certain medical isotopes may skyrocket as a result of their excellent performance in clinical trials. Will we be ready or will we have to turn patients down while we scramble for a good source of a large quantity of medical isotopes?

The Fast Flux Test Facility has the capacity to produce 2-3 times more medical isotopes than all other reactors in the nation combined. We need it to be ready to supply large quantities of medical isotopes to cancer centers around the nation.

Is there a shortage of medical isotopes for research?

There are many different kinds of isotopes, and each isotope has different qualities that make it ideal for one use, but less ideal for another. Currently cancer researchers are not able to select from every possible isotope because only certain ones are available. This means that the course of cancer research is influenced by market conditions, and not solely by what makes the most sense scientifically and medically.

How do you quantify lost potential? Some have been quoted as saying there is no medical isotope shortage. All the isotopes that could be developed for cancer treatment are clearly not available. If they're not available, they won't be developed. If they're not developed, we have not done all we can to fight cancer.

Have isotope shortages interrupted the progress of innovative cancer therapies?

Yes. Following are 3 specific examples.

Copper-67 Copper-67 is a beta isotope that has shown excellent promise for treating cancer with radioimmunotherapy (RIT). In RIT, isotopes are paired with an antibody that is engineered to seek out certain cells in the body. The isotopes ride along as the antibody flows through the blood. When it reaches the cancer, the isotope zaps the cancer cells. In 1997, Dr. Sally DeNardo & Dr. Gerald DeNardo of U-C Davis were forced to abort a promising clinical trial using Cu-67 on non-Hodgkin's lymphoma because they could not obtain enough of this isotope.

132-1

Response to Commentor No. 132

132-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 132: J. Hyatt (Cont'd)

The FFTF reactor could produce enough Copper-67 for worthy cancer research such as this.

Alpha emitters. Alpha emitting isotopes (alphas) have great potential for treating blood cancers (leukemia, lymphoma, multiple myeloma) and micrometastatic deposits of cancer (any type of cancer that has spread throughout the body in small clusters of cells). Because alpha emitters can kill a cancer cell in as few as 1 or 2 hits, they might be developed into very effective treatments for metastatic cancer. Alphas paired with pre-engineered antibodies become a "seek and destroy" missile for cancer cells.

Research and clinical trials with alpha emitters is bottlenecked by serious supply problems. Dr. Darrell Fisher of Pacific Northwest National Laboratory describes the alpha emitter supply as "tight or virtually non-existent." Dr. David Scheinberg of Memorial Sloan Kettering Cancer Center in New York began human clinical trials against leukemia with the alpha isotope Bismuth-213 attached to a monoclonal antibody. Unfortunately, limited isotope supply and current high costs have slowed expansion of alpha emitters into other trials.

Will the potential of alpha emitting isotopes be tapped to benefit patients? The FFTF reactor could produce large quantities of the needed alpha emitting isotopes.

High Specific Activity Iodine-131.

Iodine-131 is an isotope that has been utilized more than any other in developing new cancer treatments. When isotope treatment for thyroid cancer was developed 30 years ago, Iodine-131 was used because it naturally sought out thyroid tissue. It is now the standard of care for thyroid cancer treatment. Iodine-131 currently shows great promise in advanced clinical trials against b-cell non-hodgkin's lymphoma, with FDA approval expected soon. Many other beneficial diagnostic and treatment uses have been developed and are continuing to grow.

High specific activity Iodine-131 is completely unavailable in the United States. The high specific activity isotope is much purer and therefore more effective than the low specific activity product that is now so widely used. When used in radioimmunotherapy, low specific activity Iodine-131 actually wastes about 90% of the available antibodies. Patients treated with these isotope mixes receive only 10% or so of the right isotope at the cancer site. A high specific activity product would cut the waste down to only 30 or 40%, potentially making a great difference in the effectiveness of the treatment.

The only reactor in the Western Hemisphere capable of producing large quantities of several high specific activity isotopes is the FFTF. The PNNL medical isotope program receives calls from researchers waiting for such isotopes as high specific activity Iodine-131.

Is Research and Development Hampered by Isotope Supply Problems?

Research utilizing medical isotopes is stuck in a "chicken & the egg" situation. Research isotopes can be made available when their promise in medical treatments is demonstrated. Researchers cannot demonstrate their promise without a reliable supply. Dr. Darrell Fisher believes "the growth in market demand for medical isotopes will be forever directly linked to isotope availability, and the market will increase with our increasing ability to produce high quality isotopes for special-purpose applications."

Many innovative cancer treatments are developed by pharmaceutical companies. Developing a new drug requires a heavy up-front research and development investment. No company would ever put heavy financial investment into a potential treatment when the drug development could be aborted by shortages.

What are we waiting for? If we expect more effective, less debilitating cancer treatments for the future, we need to invest in isotope availability now. We need the FFTF for medical isotopes.

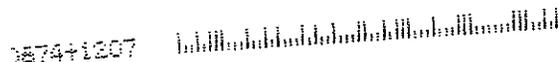
Response to Commentor No. 132

Commentor No. 133: Chris Hofgren

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290



Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

Dear Ms. Brown:

I am opposed to restart of the Fast Flux Test Facility reactor because:

- ① SIPHONS FUNDS AWAY FROM OVERALL HANFORD CLEANUP
- ② REACTOR VESSEL HAS SEVERE STRUCTURAL PROBLEMS - SHUT DOWN FFTF!
- ③ MIXED OXIDE FUELS CREATE GREATER WASTE STREAM PROBLEMS

Name Chris Hofgren
Address 2434 SE Ankeny #16
City, state Portland, OR Zip 97214

Response to Commentor No. 133

- 133-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 133-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected. Therefore, the missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

- 133-3: The NI PEIS has incorporated all relevant information from facility safety analysis reports regarding the condition of the FFTF. The entire facility, including the reactor vessel, is considered to be in excellent condition and can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1.
- 133-4: As stated in Section 4.3.4.1.13 of the NI PEIS, "...the waste generation would not be affected by the type of fuel used (i.e., mixed oxide or highly enriched uranium)..."

Commentor No. 138: Noella Wyatt
Career Development Services

From: Noella Wyatt[SMTP:NOELLA.WYATT@CWU.EDU]
 Sent: Monday, August 28, 2000 5:23:28 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Cc: Dick@tpqs.com%internet
 Subject: FFTF Restart
 Auto forwarded by a Rule

Ladies and Gentlemen,

I have limited knowledge about this program. The knowledge that I do have leads me to write this short missive. Fifteen and one_half years ago, I lost my mother to cancer. The disease, itself, was horrible, but the torture of undergoing chemo and radiation therapy was devastating. As she slowly wasted away, she lost her ability to even care for herself. Do you have any idea how humiliating it is to have your daughter wipe and clean you after going to the bathroom? Do you have any idea how sad it is to have to do that for your parent?

As a result of her chemo and radiation, she lost more than weight. She lost clear speech and thought. No longer was she the quick joker of the family, the one who digs out the catcher's mitt for Thanksgiving Dinner when we were throwing rolls acrossed the table. No longer was she the one with the trigger memory who could tell you all about uncle or aunt so_and_so and who their kids were and their kids' names. No longer was she the daredevil who put on her ice skates and skated down the city street in the winter or borrowed one of the neighbor kids' skateboards to run down the sidewalk. No longer did she have any appetite for her favorite foods _ food was disgusting to her. By the time she felt decent again following chemo, it was time for another dose. Long before my mother died of cancer, she started dying from the treatments intended to put that cancer into remission. My mother's last two+ years of life were years of pain, misery, and torture.

138-1

Response to Commentor No. 138

138-1: DOE notes the commentor's support for greater availability of medical isotopes. For nearly 50 years, DOE's use of its unique technologies and capabilities to develop isotopes for civilian purposes has enabled the widespread application of medical isotopes seen today. Consistent with the mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure to support production of radioisotopes for medical applications and research.

Commentor No. 138: Noella Wyatt (Cont'd)
Career Development Services

Would you like some imagery? How about seeing a woman who once had the most beautiful head of rich, lusturous red hair have one small (quarter_size) patch of stiff gray hair on her head? How about a woman who's cancer had advanced to the point that almost all of her teeth had fallen out? How about a woman who died at the weight of 73 pounds? Are any of the images coming into focus? How about a woman desperately trying to stay alive to just be able to see her first born grandchild (she died 4 months too early)? Can you imagine a woman with hands that resembled claws because there was no flesh left on them? Can you see my mother who was so emaciated and in so much pain that she couldn't stand to sleep in bed because rolling over was agony? Have you seen someone you love pulled up into a fetal position because their body is racked with pain?

If you can imagine any of this.....if you have experienced any of this....how can you NOT move Heaven and earth (even HELL) to make Medical Isotopes available to anyone who needs it? How can you deny the opportunity for a CURE? Not a remimsson. To hell with remission. I'm asking for a cure. And that cure is there _ it is available _ but not if it isn't made available. It makes me ill to think that people are still going through the barbaric practice of chemo therapy and radiation when medical isotopes could be used. WHY is this still being done? Why aren't the isotopes available? FAT_ASSED BEAUROCRATS AND PHYSICIANS!!! Who would sponsor the research? Where would the doctors get their money? If the cure came too quickly, how could they afford their Corvette or Bayliner? How could they send their kids to the best schools?

138-1
(Cont'd)

Response to Commentor No. 138

Commentor No. 138: Noella Wyatt (Cont'd)
Career Development Services

This may be unlady_like, but BULLSHIT! My mother suffered horribly. I do NOT want to watch someone else I love go through this living hell on earth. I thank you for your time in reading this. To remember the pain and agony our entire family went through brings back the old hurts and the tears. Please, help to make medical isotopes available for everyone so that no other person has to sit and watch their mother, father, sister, brother, husband, wife, son or daughter or friend go through this hell.

Noella Wyatt
Career Development Services
Barge 202
CWU _ MS/7499
963_2404

The Value of a smile
It costs nothing but creates much.
It enriches those who receive, without impoverishing those who give.
It happens in a flash and the memory of it sometimes lasts forever.
None are so rich that they can get along without it, and none
are so poor, but richer for a smile.

138-1
(Cont'd)

Response to Commentor No. 138

Commentor No. 139: Clark and Louise McKee

From: ClarkMcKee@aol.com%internet
[SMTP:CLARKMCKEE@AOL.COM]
Sent: Monday, August 28, 2000 8:10:40 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF
Auto forwarded by a Rule

Please re_start the FFTF for medical isotope production.

|| 139-1

Very truly yours,

Clark & Louise McKee

Response to Commentor No. 139

139-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 140: Kathryn L. Orren

From: Bhorren@aol.com%internet
[SMTP:BHORREN@AOL.COM]
Sent: Monday, August 28, 2000 9:17:04 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: (no subject)
Auto forwarded by a Rule

Please re_start FFTF for Medical Isotopes.

Thank you, Kathryn L. Orren

|| 140-1

Response to Commentor No. 140

140-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 141: Ann Minks

From: Ann Minks[SMTP:AMINKS@QUALDATA.COM]
 Sent: Monday, August 28, 2000 9:39:52 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: objection to restarting Hanford nuclear reactor
 Auto forwarded by a Rule

Dear Collette Brown/Secretary Richardson and committee members,

Please accept the following as public comments on the Draft Environmental Impact Statement on the Nuclear Infrastructure EIS.

As a citizen of the Pacific Northwest, I am deeply concerned about the United States Department of Energy's proposal to restart Hanford's Fast Flux Test Facility Nuclear Reactor. I wish to have my values incorporated into the formal administrative record and taken into consideration when adopting the final record of decision. I also want you to respond to my concerns before you make your record of decision.

Considering Hanford's overwhelming problems, including the crisis with tank waste treatment, as well as the damage caused by and radiation released from the Hanford wildfire, restarting FFTF is absolutely unacceptable. We must deal with the waste already at Hanford and focus on the clean_up mission. FFTF maintenance has already gobbled up \$100 million in clean_up money and distracted from desperately needed clean_up. Tank wastes are already seeping towards the Columbia River. More wastes must not be added to those tanks. Clean_up must be the only priority. We must save the Columbia River.

Also, I object to the fact that you are asking citizens to comment on an incomplete study. You have not told us how you will deal with non_proliferation issues or additional waste from FFTF. Should FFTF be restarted, that decision will be illegal under Federal law and will be overturned! Do the right thing, shut down FFTF now and save the future of the Columbia River!

Sincerely,
 Ann Minks

141-1

141-2

141-3

141-2

141-1

141-4

141-1

141-5

Response to Commentor No. 141

141-1: DOE notes the commentor's concerns. This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. DOE prepared a separate Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. DOE mailed this document to approximately 730 interested parties on September 8, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Nuclear Infrastructure Nonproliferation Impact Assessment in Appendix Q in the Final NI PEIS. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

141-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

DOE-RL, EPA, and Ecology agreed to a change in this agreement to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on FFTF's future. Public meetings were held on this formal milestone change.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the

Commentor No. 141: Ann Minks (Cont'd)

Response to Commentor No. 141

alternative(s) selected. Therefore, the NI PEIS missions would not have an impact on Hanford cleanup activities.

No waste would be added to Hanford's underground waste tanks if FFTF were restarted for this mission.

No radioactive materials were "released" in the Hanford Wildfires of 2000. Wildfires did resuspend some materials already in the environment. The resuspended materials were low, slightly above natural background levels. The low levels required several days of analysis to quantify.

- 141-3:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.
- 141-4:** Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.
- 141-5:** See response to comment 141-3. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Commentor No. 142: Brandon Juhl

From: Brandon Juhl[SMTP:BRANDONJUHL@HOTMAIL.COM]
Sent: Monday, August 28, 2000 8:49:32 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: don't re_start the Hanford tritium FFTF reactor!
Auto forwarded by a Rule

Dear Department of Energy:

What are you thinking? You already don't know what to do with the nuclear waste you HAVE, WHY on EARTH would you want to make MORE?

142-1

In the wake of a fire and a plutonium release, the firing of a contractor at Hanford for incompetence, delays, and other such madness and nonsense, you now have the gall to try to restart the FFTF reactor?

142-2

Plutonium 238__a speck of which, inhaled, will KILL YOU, is so deadly and dangerous I can't imagine why anyone would want to make it. Oh, so you want to use it to create medical isotopes to "cure cancer."

142-3

Maybe there wouldn't be so many cases of cancer if you would stop producing nuclear radioactive waste! Also, medical isotopes are widely available on the commercial market, at far cheaper costs than what the FFTF would ever produce.

142-4

Your justification for profitability (in restarting the reactor) assumed a steady 16% increase annually in the demand for medical isotopes, which means every person in the U.S. will need to have need for cancer treatment by the year 2030.

Response to Commentor No. 142

142-1: DOE notes the commentor's concern about waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and appropriate DOE orders.

142-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF. Direct effects of the referenced fire on the land and biota are addressed in this NI PEIS consistent with the scope of the affected environment descriptions for the Hanford Site provided in Section 3.4 of Volume 1. The secondary effects of the Hanford Wildfires of June 27-July 2, 2000 are beyond the scope of this NI PEIS. No radioactive materials were "released" in the Hanford Wildfires of 2000. Wildfires did resuspend some materials already in the environment. The resuspended materials were low, slightly above natural background levels. The low levels required several days of analysis to quantify.

FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. The analyses presented in this NI PEIS reflect the proposed changes to the reactor core (including fuel and irradiation targets) to perform the DOE missions. In the event that FFTF restart is selected in the Record of Decision, a new Safety Analysis Report, including a Probabilistic Risk Assessment (PRA), will be prepared and it will address any changes in plant configuration, operating conditions and procedures. The revised safety analyses will be subjected to a thorough independent review process. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

142-3: The commentor's concerns over the production of plutonium-238 are noted. As discussed in Section 1.2.2 of Volume 1, plutonium-238 produced under Alternatives 1 through 4 (described in Section 2.5) would be used to support NASA's deep space missions. NASA uses plutonium-238 sources when these sources enable their missions or

Commentor No. 142: Brandon Juhl (Cont'd)

The restart also undermines efforts (along with the Star Wars national missile defense program) to halt nuclear proliferation, and violates disarmament treaties!

142-5

In the last few months you've lied about how much plutonium was released into the air (during the June 27th fire) so why on Earth should we believe your assurances about the re_start of the FFTF that it is 'safe'?

142-6

Face it, DOE, your proposal to re_start the FFTF reactor at Hanford should be DOA. Kill it now, before it kills us all.

142-2

Sincerely,

Brandon Juhl
4638 90th Ave SE
Mercer Island, WA 98040

Response to Commentor No. 142

enhance mission capabilities. Prior to launch, NASA provides evaluations of the environmental impacts associated with their deep space missions in compliance with the National Environmental Policy Act.

Sections 4.2-4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from implementation of the alternatives, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with each alternative would be small.

142-4: The restart of FFTF would generate some additional wastes. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws, regulations, and applicable DOE orders.

DOE notes that private commercial vendors could produce a select set of isotopes that are economically attractive. It is not DOE's intent to enter into competition with the commercial sector in the production of isotopes. Rather, it is the intent of DOE to complement commercial sector capabilities to ensure that a reliable supply of isotopes is available in the United States to meet future demand, and to encourage the commercial sector to privatize the production of isotopes that have established applications to a level that would support commercial ventures.

DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope has tracked at levels consistent with the Expert Panel findings. Section 1.2.1

Commentor No. 142: Brandon Juhl (Cont'd)

Response to Commentor No. 142

of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

- 142-5:** The proposed action in the NI PEIS is consistent with and supports nuclear nonproliferation policy. Clearly, the evaluated alternatives do not violate any existing disarmament treaty. An assessment of the potential nonproliferation impacts of proposed isotope production and nuclear research missions, published in September 2000, confirms there are currently no U.S. nonproliferation policies, laws, regulations, or international agreements that preclude the use of any of the evaluated facilities in the manner described in the PEIS, including the potential restart of the FFTF. This nonproliferation impact assessment was managed and approved by the DOE Office of Arms Control and Nonproliferation.
- 142-6:** See comment 142-2.

Commentor No. 143: Alana LaRock

From: larock[SMTP:LAROCK@IN_TCH.COM]
Sent: Tuesday, August 29, 2000 9:33:48 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF
Auto forwarded by a Rule

Please restart the FFTF. This is so important to all of us.

Thank you. Alana LaRock

Real Estate Diva for the Butte and Canyon Ferry Areas
<<http://www.alanalarock.com>>
Member NAR, MAR, Butte Board of Realtors & MLS

143-1

Response to Commentor No. 143:

143-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 144: Cal Greer

From: jcgreer[SMTP:JGREER12@EMAIL.MSN.COM]
Sent: Monday, August 28, 2000 10:33:58 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF
Auto forwarded by a Rule

Please re_start FFTF for the production of medical isotopes.

Thank you
Cal Greer

|| 144-1

Response to Commentor No. 144

144-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 148: Karsten Hagen

From: Karsten Hagen[SMTP:KARSTEN@SUMMITPROJECTS.COM]
 Sent: Tuesday, August 29, 2000 11:50:20 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: No New Reactor
 Auto forwarded by a Rule

To Whom it May Concern,

The crumbling infrastructure at Hanford is no place to house a nuclear reactor of any sort. True, you spend millions of taxpayer dollars annually to maintain a mothballed facility, but at what potential cost to the Columbia Basin?

Please cease and desist any attempt at starting an antiquated and potentially deadly nuclear reactor on the third largest river drainage system in North America. Millions of people depend on it.

Karsten Hagen
 Hood River

148-1

148-2

Response to Commentor No. 148

- 148-1:** The commentor's opposition to the restart of FFTF is noted. FFTF was constructed and initiated operations in the early 1980s making it the DOE's newest reactor. It is in excellent condition and evaluations have been performed to show that it has sufficient life remaining to fully support the 35 year mission. Likewise, the proposed support facilities are either recently constructed or renovated facilities or would be upgraded for these missions.
- 148-2:** FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. Section 3.4.4 of Volume 1 of the NI PEIS describes the current condition of water resources potentially affected by the Hanford Site, with specific discussions of surface water and groundwater resources in the Hanford 400 Area, where FFTF is located, provided in Sections 3.4.4.1.2 and 3.4.4.2.2, respectively. This information indicates that the only impact that 400 Area operations have had on water resources to date is contamination of the unconfined aquifer system with nitrate from sanitary sewage disposal. The source of this contamination has since been removed resulting in nitrate levels diminishing over time. The effects of maintaining FFTF in its current standby mode for 35 years are described in Section 4.2.1.2.4 of Volume 1 and this analysis indicates that the impact on water resources would be negligible. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. The analyses presented in this NI PEIS reflect the proposed changes to the reactor core (including fuel and irradiation targets) to perform the DOE missions. In the event that FFTF restart is selected in the Record of Decision, a new Safety Analysis Report, including a Probabilistic Risk Assessment (PRA), will be prepared and it will address any changes in plant configuration, operating conditions and procedures. The revised safety analyses will be subjected to a thorough independent review process. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

Commentor No. 149: Ron Marcolini

NI PEIS Toll_Free Telephone

8/29/00

Ron Marcolini
202_685_5792

I called to say support the Fast Flux Test Facility for further project work and I believe it is adequately designed for safety.

149-1

Response to Commentor No. 149

149-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 150: Anonymous

NI PEIS Toll_Free Telephone

8/29/00

Yes, I am calling about the Public Hearing Evaluation Form. The 1st question is:

1. How could the public hearing format and materials be improved?

My answer is: Please listen and take the courage to do what the taxpayer wants, not what the government or businesses want.

2. Was the public hearing helpful to you?

My answer is: No. It is but another repeat of what the public has already expressed. No FFTF startup. Why can't the Secretary of Energy and others listen to us. Are you hoping to wear us down with apathy? That will not happen. People will humanly protest any FFTF startup at the Hanford factory. All isotopes can be purchased from Canada at new facilities. We do not need to make them, but what we need to do is clean up Hanford. All resources and all energy should go to that and nothing else.

150-1

150-2

150-1

150-3

150-4

Response to Commentor No. 150

- 150-1:** DOE policy encourages effective public participation in its decision making process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.
- 150-2:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 150-3:** The United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.
- 150-4:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram

Commentor No. 150: Anonymous (Cont'd)

Response to Commentor No. 150

budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to “ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use.” The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

Commentor No. 151: Denise Wages

NI PEIS Toll_Free Telephone

8/29/00

Denise Wages
662_842_3325

I would like to say please restart FFTF for medical isotopes.

151-1

Response to Commentor No. 151

151-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 152: Karen Gillis

NI PEIS Toll-Free Telephone

8/28/00
Karen Gillis
503_585_9139

I haven't read the EIS or anything, but I know about nuclear waste. OK. Thanks to the TAG program, when I was a kid, I learned about what I was interested in sparking off a nonstop environmental activism thing. I just want to make a comment that they have maps all around the Tri-Cities and actually all down the Columbia River showing incidences of thyroid cancer and cleft palate and all kinds of birth defects. The Columbia River way down in there with heavy water going through it, and it is radioactive and my brother was born with a cleft palate. He was born in Astoria and it was a huge mystery or nobody ever knew or guessed my mother never did drugs when she was pregnant. Just like, oh my God, oh my, this horrible thing. Through studying and not even looking for it, trying not to blame anything on it. I just know in my heart from instances of everybody else from the Tri-Cities and around Hanford that have cleft palates. This was nuclear contamination. I figured it was probably from fish that was canned in Astoria that my mom ate. I don't know, but all I know is that my brother has been through 13 incredibly painful operations. I have a friend that has cancer of the eye from the Rocky Mountain Arsenal, which is not nuclear I guess, but it leaked mustard gas and she has eye cancer and one of her sons has eye cancer. So, she doesn't have the cancer anymore because she is missing an eye; she has a glass one.

You know, don't reopen Hanford; it's just retarded. Please care about the people, animals, plants, and our earth. Ok we don't want nuclear power. We don't want nuclear energy. Put your energy into solar energy or something more useful than something that is going to contaminate the land forever. Thanks a lot. I guess that is about all that I have to say. It might not be very scientific, but you know you guys pooh _pooh it all you want, but nuclear radiation causes birth defects and it is not good for people. It causes cancer and everyone knows this. So, don't pretend like you don't know. Just shut it down. Give the American people a break. Please put your energy and money into something that is going to do good for the world, not something that is going to destroy the world. Don't sell out just for a paycheck. Thank you.

Response to Commentor No 152

- | | |
|--------------|--|
| 152-1 | 152-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF. |
| 152-2 | 152-2: The commentor's opposition to nuclear power and nuclear energy is noted. DOE recognizes that there are potentially harmful effects associated with radiation such as cancer and these are quantified for each alternative in Chapter 4 of the PEIS and the results of this analysis are presented in EIS Volume 1, Section 2.7.1. The purpose of this PEIS is to evaluate and present the environmental consequences of a variety of alternatives for the proposed action. |

Commentor No. 153: Thomas Marshall

From: Thomas Marshall[SMTP:THOMASM@AVENUEA.COM]
 Sent: Tuesday, August 29, 2000 11:46:19 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Opposed to restart of FFTF
 Auto forwarded by a Rule

Dear Collette Brown/Secretary Richardson,

Please accept the following as public comments on the Draft Environmental Impact Statement on the Nuclear Infrastructure EIS.

As a citizen of the Pacific Northwest, I am deeply concerned about the United States Department of Energy's proposal to restart Hanford's Fast Flux Test Facility Nuclear Reactor. I wish to have my values incorporated into the formal administrative record and taken into consideration when adopting the final record of decision. I also want you to respond to my concerns before you make your record of decision.

Considering Hanford's overwhelming problems, including the crisis with tank waste treatment, as well as the damage caused by and radiation released from the Hanford wildfire, restarting FFTF is absolutely unacceptable. We must deal with the waste already at Hanford and focus on the clean_up mission.

FFTF maintenance has already gobbled up \$100 million in clean_up money and distracted from desperately needed clean_up. Tank wastes are already seeping towards the Columbia River. More wastes must not be added to those tanks.

Clean_up must be the only priority. We must save the Columbia River.

153-1

153-2

153-3

153-2

Response to Commentor No. 153

153-1: DOE notes the commentor's concerns. This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. DOE prepared a separate Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. DOE mailed this document to approximately 730 interested parties on September 8, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Nuclear Infrastructure Nonproliferation Impact Assessment in Appendix Q in the Final NI PEIS. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

The associated Nuclear Infrastructure Nonproliferation Impact Assessment was made available to the public on September 8, 2000. The Record of Decision concerning enhancement of DOE's nuclear infrastructure is scheduled for January 2001.

153-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

DOE-RL, EPA, and Ecology agreed to a change in this agreement to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on FFTF's future. Public meetings were held on this formal milestone change.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the

Commentor No. 153: Thomas Marshall (Cont'd)

Also, I object to the fact that you are asking citizens to comment on an incomplete study. You have not told us how you will deal with non_proliferation issues or additional waste from FFTF. Should FFTF be restarted, that decision will be illegal under Federal law and will be overturned! Do the right thing, shut down FFTF now and save the future of the Columbia River!

153-1

And also please support Wild and Scenic status for the Hanford stretch of the mighty Columbia.

153-4**153-1****153-5**

Sincerely,

153-6

Tom Marshall
Media Engineer

avenue a
Know what works.

voice: 206.816.8357
fax: 206.816.8808
mailto:thomasm@avenuea.com
http://www.avenuea.com

Response to Commentor No 153

FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected. Therefore, the NI PEIS missions would not have an impact on Hanford cleanup activities.

No waste would be added to Hanford's underground waste tanks if FFTF were restarted for this mission.

No radioactive materials were "released" in the Hanford Wildfires of 2000. Wildfires did resuspend some materials already in the environment. The resuspended materials were low, slightly above natural background levels. The low levels required several days of analysis to quantify.

153-3: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

153-4: Management of wastes that would be generated under implementation of Alternative 1 (Restart FFTF) is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

153-5: See response to comment 153-3.

Commentor No. 153: Thomas Marshall (Cont'd)

Response to Commentor No 153

- 153-6:** On June 9, 2000, the President issued a proclamation establishing the Hanford Reach National Monument. The U.S. Fish and Wildlife Service will manage the monument under existing agreements with DOE and DOE will consult with the Secretary of the Interior on issues potentially affecting monument areas. DOE is committed to performing its missions in a manner that is compatible with the preservation of open space and protection of natural resources. Integrated land use planning is one means that DOE uses to accomplish mission and resource protection goals on its sites. However, these land use planning measures and specific resource protection initiatives and decisions are beyond the scope of this NI PEIS, and designation of the Hanford Reach as a Wild and Scenic River is not within DOE's authority. The Department of the Interior recommended that the Hanford Reach be designated a Wild and Scenic River and the entire Wahluke Slope a wildlife refuge in the ROD for the 1996 Hanford Reach EIS. Congress has not yet acted to implement the decisions contained in the ROD. DOE did prepare the Final Hanford Comprehensive Land-Use Plan Environmental Impact Statement (DOE EIS-0222-F) (issued in September 1999) in order to evaluate the implementation of a comprehensive land-use plan for the entire Hanford Site for the next 50 years. The Preferred Alternative for this EIS, as selected in the Record of Decision (64 FR 61615 et seq.), would designate the majority of the Columbia River Corridor including the Hanford Reach, nearly the entire Wahluke Slope, and nearly all of the Fitzner/Eberhardt Arid Lands Ecology Reserve as preservation use. This would include expansion of the Saddle Mountain National Wildlife Refuge to include all of the Wahluke Slope. In summary, the decisions contained in the ROD are consistent with those in the 1996 Department of the Interior Hanford Reach EIS ROD.

Commentor No. 154: Rob McCready

From: Rob McCready
 [SMTP:ROB@SUMMITPROJECTS.COM]
 Sent: Tuesday, August 29, 2000 12:00:50 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Hanford
 Auto forwarded by a Rule

To whom it may concern,

I am sure that you are getting your fair share of feedback from the Columbia Gorge community regarding the issues at hand, so I'll keep this short but to the point.

As an advocate for the natural beauty and limited resources of the Columbia River Gorge area, I would like to take a stand against any future development at the Hanford Nuclear Plant. Any future development is not acceptable to the people who care about and recreate in our environment, until proper cleanup and disposal of the current situation is done.

I think I speak on behalf of all Hood River residents when I say that any potential pollutants to our river system will severely destruct the attractiveness of our town and will, without a doubt, affect our economy and quality of life here.

Rob McCready
 Marketing
 Summit Projects
 PH 541_387_8883
 FX 541_387_8884
 rob@summitprojects.com
 www.summitprojects.com

154-1

154-2

Response to Commentor No. 154

154-1: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The proposed alternatives delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

The use of Hanford Facilities for the NI PEIS mission would not be a new or future development, but a utilization of existing facilities.

154-2: FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Commentor No. 155: Andreas Juen

From: Andreas[SMTP:ANDREAS@SUMMITPROJECTS.COM]
 Sent: Tuesday, August 29, 2000 2:20:05 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: FFTF restart MUST BE SHUTDOWN!
 Auto forwarded by a Rule

Colette,

Thank you for hearing me out. I am a community member in Hood River, Oregon, and I feel strongly that USDOE should choose Alternative_5_ SHUTDOWN FFTF, or Alternative_2_ Produce at existing sites with in conjunction with the SHUTDOWN of FFTF.

155-1

My message is clear I do not want to see the Nuclear facility at Hanford be reopened with any production capabilities.

155-2

HANFORD must remain closed and efforts to clean up the environmental, biological and ecological disaster must continue!

155-3

The EIS which has been submitted is misleading, inaccurate and false. Public comment is strongly in opposition to this plan and the need for an FFTF restart is unjustified. Financially it is a disaster and frankly I am tired of my taxes paying for your poor decision making. The money which you will waste on this effort alone would cover a healthy portion of the cleanup which should be taking place currently at the Hanford site.

155-4

155-2

I know you will heed your conscience at not allow, what is in my view, a criminal decision to restart FFTF.

155-5

Response to Commentor No 155

155-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, or Alternative 2, Use Only Existing Operational Facilities, and opposition to Alternative 1, Restart FFTF.

155-2: DOE notes the commentor's concerns regarding ongoing activities to remediate the existing contamination at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

155-3: This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS. DOE made every effort to obtain, analyze, and disclose all required information to make a decision on

Commentor No. 155: Andreas Juen (Cont'd)

I ask of you to SHUTDOWN FFTF PERMANENTLY. CLEAN UP HANFORD. And START POURING YOU TIME MONEY AND INTELLECTUAL RESOURCES INTO ALTERNATIVE, LOW IMPACT ENERGY SOURCES. There are 1000's out there and many we have not even begun to consider, please encourage your engineers, scientists, explorers and bureaucrat to think outside the box and I am sure they too would start to see the light and make the right decisions for themselves their families as well as the rest of the nation's.

I appreciate you time and effort, and look forward to your action and response.

Sincerely,

Andreas Juen
4035 Stonegate Dr
Hood River, OR 97031

PS: I would like to be added to any sort of mailing list you have established for this issue so I can continue to provide feedback and responses.

=====
Andreas V. Juen
Business Development
andreas@summitprojects.com
101.5 Oak St,
Hood River, OR 97031
P: 541_387_8883
F: 541_387_8884
=====

155-1

155-6

Response to Commentor No. 155

expanding nuclear infrastructure. Further, DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives.

155-4: DOE notes the commentor's opposition to restarting FFTF for maintaining and enhancing its existing nuclear facility infrastructure. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs:

1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;

2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and

3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Section 1.2 of Volume 1 has been revised to clarify the purpose and need of the proposed action.

155-5: See response to comment 155-1.

155-6: DOE notes the commentor's interest in alternative energy sources, although issues of research and development of alternative energy sources are beyond the scope of this NI PEIS. The DOE missions to be addressed in this EIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies.

Commentor No. 156: Gary Greene

From: Gary Greene[SMTP:G5GREENE@EMAIL.MSN.COM]
 Sent: Tuesday, August 29, 2000 3:59:18 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Support for the restart of FFTF _ comment on the
 draft PEIS
 Auto forwarded by a Rule

Of the various options, only the use of FFTF as the irradiation facility appears to fully meet the commitments of DOE and provide for the development of medical isotopes. I think that it is critical that the chosen option provide adequate opportunity for the development and production of isotopes for research and cancer treatment.

Thank you
 Gary Greene

1700 S Kellogg
 Kennewick, WA 99338

156-1

Response to Commentor No 156

156-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 157: Anonymous

NI PEIS Toll_Free Telephone

8/28/00

9010 NE 112th Avenue
Vancouver, WA 98662
360_896_1128

This message is for Bill Richardson. I am a citizen at Vancouver, Washington, and I would just like to ask that the FFTF reactor not be started up again.

Thanks a lot.

157-1

Response to Commentor No. 157

157-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

**Commentor No. 158: Members of Congress; U.S. Senator-
R. Wyden; Representatives-B. Baird, J. McDermott, D. Wu,
A. Smith, E. Blumenauer, P. DeFazio, D. Hooley**

AUG. 28. 2000 6:13PM SEN RON WYDEN

NO. 266 P. 2/5

Congress of the United States

Washington, DC 20510
August 28, 2000

The Honorable Bill Richardson
Secretary of Energy
U.S. Department of Energy
1000 Independence Avenue, S.W.
Washington, D.C. 20585

Dear Secretary Richardson:

We are growing increasingly concerned with the apparent bias of the Environmental Impact Statement (EIS) for Hanford's FFTF nuclear reactor, and the public participation process for this EIS. The Draft EIS fails to reflect the fact that claimed justifications for restart of this reactor, with all of its risks and costs, have either evaporated with formal decisions from other agencies (NASA) or been called into question by the Department's own blue ribbon advisory committee.

Restart of the FFTF Nuclear Reactor and resumption of Plutonium processing at Hanford would have potentially catastrophic impacts on the health of Northwest citizens and our environment. Our constituents are entitled to a fair and impartial process to consider all reasonably foreseeable impacts and reasonable alternatives.

The Department is preventing our constituents and ourselves from reviewing and commenting on the Department's assessment of many of those potential impacts and alternatives by separating them from the Draft Environmental Impact Statement (EIS) and only disclosing them in reports to be made available after the public hearings are over. Apart from the clear bias of such an approach, this seems to be a violation of the National Environmental Policy Act (NEPA). Major public concerns stated in our comments for the scoping of this EIS, including public concerns detailed in the Seattle City Council and Portland City Commission Resolutions opposing FFTF restart (and formally entered into the record at scoping hearings), are ignored in the Draft EIS.

It is not acceptable to have left out of the Draft EIS what the Department will do with the nuclear and toxic wastes from restarting FFTF and Plutonium operations at Hanford. It is also unacceptable to have left out of the Draft EIS the costs of restarting the FFTF reactor and each alternative (especially when the Department has target budgets that are not adequate to comply with the Hanford Clean-Up Agreement), the impacts on the nation's nuclear non-proliferation policies from restarting the reactor and use of Plutonium or High Enriched Uranium fuels, and the independent assessment of the need for particular medical isotopes and the suitability of the FFTF reactor to produce them. For each of these four critical areas, the Department has chosen to issue a report separate from the Draft EIS and not to release that report before the public hearings on the Draft EIS.

158-1
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Response to Commentor No. 158

- 158-1:** DOE notes the commentors' concerns. This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives.
- 158-2:** DOE policy encourages effective public participation in its decisionmaking process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.
- 158-3:** The content of recent correspondence between NASA and DOE regarding potential plutonium-238 requirements is discussed in response to Comment 158-15.
- 158-4:** DOE notes the commentors' concern regarding the suitability of FFTF in light of the NERAC subcommittee recommendations, as discussed in the response to Comment 158-13.
- 158-5:** The evaluation presented in the NI PEIS considered both normal operations and accidents and indicates that the environmental and human health impacts of these facilities would be low.
- 158-6:** See responses to Comments 158-1 and 158-2.
- 158-7:** The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS. DOE made every effort to obtain, analyze, and disclose all required information to make a decision on expanding nuclear infrastructure. The costs and nuclear nonproliferation impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make decision documents such as the cost report available

Commentor No. 158: Members of Congress; U.S. Senator- R. Wyden; Representatives-B. Baird, J. McDermott, D. Wu, A. Smith, E. Blumenauer, P. DeFazio, D. Hooley (Cont'd)

AUG. 28. 2000 6:14PM SEN RON WYDEN

NO. 265 P. 3/5

We are dismayed that the Draft EIS fails to disclose that the Department's own blue ribbon medical advisory committee recommended last April that *"the FFTF not be considered as a viable long-term source of research radioisotopes."* The NERAC Subcommittee for Isotope Research and Production Planning's findings regarding the suitability of the FFTF reactor for production of research medical isotopes¹, the claims of the contractors regarding FFTF's costs and projected revenues for producing isotopes, and "poor" rating of the manufacturing practices at Hanford are neither disclosed or referenced in the Draft EIS.

"The Subcommittee concludes that the FFTF will not be a viable source of research radioisotopes. Anticipated income from sales likely will not meet expectations thereby curtailing operations and reducing FFTF's capability to produce research radioisotopes in a timely and cost-efficient manner. ...

"The Subcommittee believes that the production needs of neutron-rich isotopes for research purposes can be met by existing reactors... Other neutron sources may also be available for research isotope production." Final Report at 31.

The Draft EIS should have considered the alternatives recommended by the Subcommittee, and fully disclosed its criticism of the claims made by the FFTF's contractors. Instead, the Draft EIS and DOE documents repeat the cost and isotope need claims that the Subcommittee found to be flawed and overly optimistic. The public deserved to have this fully disclosed in the Draft EIS instead of having it discovered by researchers from citizen groups.

The concerns of the City of Seattle (Resolution 30060 and Resolution 28848) regarding the import of Plutonium on board ships passing through inland waters (such as Puget Sound or the Columbia River to the Port of Portland), and transport of Plutonium through the crowded Puget Sound region, are entirely ignored in this EIS. A shipboard fire involving a shipment of Weapons Grade Plutonium fuel in inland waters poses horrific consequences. Exposure of our constituents to such risk is entirely unacceptable. Other major concerns raised in the Portland and Seattle resolutions, and by Members of Congress, are similarly ignored in the Draft EIS. The Department undermines all public confidence in its consideration of the restart of FFTF when it proposes such actions and ignores the formal input from elected officials and the region's major cities.

¹ The report notes that there are two major types of medical isotopes: large scale production quantities ("commercial" isotopes) and small quantity demand isotopes for clinical trials, research, etc... ("research" isotopes). The report urges that the Department focus on providing the research isotopes, and allowing market forces to provide commercial isotopes. Most of the claims for need for FFTF are based on research isotopes. The size of the reactor and its cost to restart, provide ancillary facilities and operate were negative factors in the committee's opinion.

Response to Commentor No. 158

to the public before a decision is made. DOE mailed these documents to approximately interested parties on August 24 and September 8, 2000, respectively. Both reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided summaries of the Cost Report and Nuclear Infrastructure Nonproliferation Impact assessment in Appendixes P and Q, respectively, in the Final NI PEIS.

- 158-8: DOE has read and considered the public concerns detailed in the Resolutions of the Seattle City Council and the Portland City Commission. Section 1.4 and the expanded discussion in Appendix N summarize the issues and concerns raised during the scoping process.
- 158-9: Management of wastes that would be generated under implementation of Alternative 1 (Restart FFTF) is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.
- 158-10: The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). Nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted fund designated for Hanford cleanup, regardless of the alternative(s) selected.

158-13

158-14

**Commentor No. 158: Members of Congress; U.S. Senator-
R. Wyden; Representatives-B. Baird, J. McDermott, D. Wu,
A. Smith, E. Blumenauer, P. DeFazio, D. Hooley (Cont'd)**

AUG. 28. 2000 6:14PM SEN RON WYDEN

NO. 266 P. 4/5

Although the major mission proposed for the FFTF reactor in this EIS is production of Plutonium 238 for NASA space reactors (Radioisotope Thermoelectric Generators), the Draft EIS fails to disclose that NASA informed the USDOE on May 22, 2000 that:

"NASA headquarters no longer has an identifiable planned requirement for Small Radioisotope Thermoelectric Generator (STRG) power systems."

Contrary to the DOE's assertion in the Draft EIS that "(W)ithout these power systems, these types of space exploration missions could not be performed by NASA."², NASA has determined that missions can utilize alternative technologies with lower costs and potentially much lower environmental impacts, which this Draft EIS should have disclosed.

The major claimed need for FFTF restart no longer exists, yet the Department continues to expend funds and undermine its credibility by continuing to propose the restart of the FFTF reactor to meet a need for Plutonium that NASA has informed you does not exist.

As the hearings on the Draft EIS approach, the Department is not providing for adequate notice of the hearings to our constituents. It also has not changed its plans for conduct of the hearings, which seem designed to repeat concerns over the bias of the process. And, the officials in charge of the EIS failed to live up to expectations for meaningful discussions regarding the substance of the EIS regarding its coverage of major areas of concern, including the need for medical isotopes, alternative market providers of medical isotopes, safety issues, waste streams from proposed activities, nonproliferation impacts and costs of FFTF restart and production.

We are also disturbed that the Department told facilities at which hearings are to be held that public interest groups are "opposition" and "protest" groups, and required them to pay for police in order to hold pre-hearing workshops. We must note that the Cities of Seattle and Portland are officially opposed to the restart of FFTF and, therefore, apparently, "opposition" groups that the Department feels pose a security threat if they seek to hold a pre-hearing workshop to assist citizens in preparing to comment at the hearing.

We urge you to have the Department immediately take the following steps to provide proper notice (designed to notify our constituents that these hearings are on an EIS regarding the possible restart of Hanford's FFTF Nuclear Reactor and Plutonium processing); establish unbiased procedures for the conduct of the hearings; apologize for any characterization of groups as "opposition" or "protest"; and ensure that there is no intimidation of public comment.

The claimed Plutonium and isotope needs, for which our region would be subjected to the risks of FFTF nuclear reactor restart, are now revealed to be illusory claims by the proponents of this dangerous project. The Draft EIS is deeply flawed by its failure to disclose information that is essential to informed decision making. Therefore, the most prudent course of action would be to remove restart of the FFTF reactor from consideration until these concerns are addressed.

² DEIS at S-5

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Response to Commentor No 158

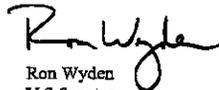
- 158-11:** DOE notes the commentors' concern that an independent assessment of the need for particular isotopes and the suitability of FFTF is not included in the NI PEIS. Section 1.2.1 of Volume 1 discusses the need for isotopes based on the Expert Panel and NERAC subcommittee recommendations. As further discussed in the response to Comment 158-13 and presented in Section 1.5 of Volume 1, the recommendations of these independent review groups were taken into consideration in developing the range of reasonable alternatives evaluated in the NI PEIS. The Expert Panel and NERAC are independent Federal advisory committees appointed by the Secretary of Energy to advise DOE on civilian nuclear energy research program as noted in Section 1.2 of Volume 1.
- 158-12:** The draft Waste Minimization and Management Plan for the Fast Flux Test Facility (May 2000) and the NERAC Isotope Subcommittee report (April 2000) were referenced in the NI PEIS and were available prior to the public hearings. The NI PEIS cost and Nonproliferation reports were made available on August 24 and September 8, 2000, respectively; immediately after they were completed, as discussed in response to Comment 158-7.
- 158-13:** DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel convened to forecast future demand for medical isotopes estimated that the expected growth rate of medical isotope use during the next 20 years will range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

**Commentor No. 158: Members of Congress; U.S. Senator-
R. Wyden; Representatives-B. Baird, J. McDermott, D. Wu,
A. Smith, E. Blumenauer, P. DeFazio, D. Hooley (Cont'd)**

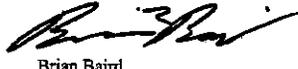
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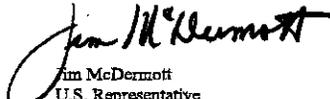
Sincerely,


Ron Wyden
U.S. Senator

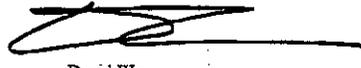

Adam Smith
U.S. Representative

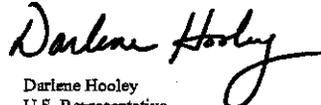

Brian Baird
U.S. Representative


Earl Blumenauer
U.S. Representative


Jim McDermott
U.S. Representative


Peter A. DeFazio
U.S. Representative


David Wu
U.S. Representative


Darlene Hooley
U.S. Representative

Response to Commentor No. 158

The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost-efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without disturbing the existing missions of these facilities. DOE has taken the Expert Panel and NERAC report recommendations under consideration in developing the range of alternatives evaluated in the NI PEIS. These reports were made available to the public at the NI PEIS public information centers and on the Internet at www.nuclear.gov.

- 158-14:** DOE notes the Commentors' concerns about the import of plutonium through the Portland or Seattle areas. None of the proposed alternatives (Section 2.5 of Volume 1) would involve the shipment of weapons-grade plutonium through ports in the United States. Under implementation of Alternative 1 (Restart FFTF), DOE might import mixed oxide (i.e., plutonium-uranium) fuel from Europe. If Alternative 1 were selected for implementation, and if DOE decides to import mixed oxide fuel from Europe, a separate NEPA review would be conducted to select a port to receive the mixed oxide fuel. This review would address all relevant potential impacts of overseas and inland water transportation, shipboard fires, package handling, land transportation, as well as safeguards and security associated with the import of SNR-300 mixed oxide fuel through a variety of specific candidate ports on the west and

Commentor No. 158: Members of Congress; U.S. Senator-R. Wyden; Representatives-B. Baird, J. McDermott, D. Wu, A. Smith, E. Blumenauer, P. DeFazio, D. Hooley (Cont'd)

Response to Commentor No 158

east coasts. It would consider all public comments, including local resolutions, concerning the desirability of bringing mixed oxide fuel into candidate ports.

In the event that DOE decides to enhance its nuclear infrastructure, it would not expose any population to high, unacceptable risks under any alternative. Any transportation activities that would be conducted by DOE would comply with U.S. Nuclear Regulatory Commission and U.S. Department of Transportation regulations. Associated transatlantic shipment would comply with International Atomic Energy Agency requirements. In Section J.6.2, DOE evaluated potential impacts that would result from the marine transportation of mixed oxide fuel from Europe to a representative military port, Charleston, South Carolina, and overland transportation to Hanford. Also in that section, a bounding analysis demonstrates that radiological risks to the surrounding public from mixed oxide fuel shipments would be extremely small (e.g., less than 1 chance in a trillion for a latent cancer fatality per shipment from severe accidents at docks and in channels and less than 1 chance in 50 billion for a latent cancer fatality per shipment from overland highway accidents).

- 158-15:** Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Under the No Action Alternative, DOE would continue to purchase plutonium-238 to meet the space mission needs for the 35-year evaluation period considered in the NI PEIS. However, DOE recognizes that any purchase beyond what is currently available to the United States through the existing contract would likely require negotiation of a new contract and may require additional NEPA review.

The May 22, 2000, correspondence from NASA to DOE identifies that NASA no longer has a planned requirement for small radioisotope

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Response to Commentor No 158

thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the SRTG development efforts were stopped in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires one-third less plutonium-238 as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000, letter to DOE that large RTGs be maintained as backup. Section 1.2.2 of Volume 1 was revised to clarify plutonium-238 mission needs. The major mission of FFTF would not be the production of plutonium-238. Rather, all three missions are of equal importance; no one mission is given priority in the NI PEIS.

- 158-16:** DOE provided notice of scheduled public hearings in accordance with the requirements of CEQ and DOE regulations (i.e., 40 CFR Parts 1503.1 and 1506.6 and 10 CFR Part 1021.313, respectively). This included announcement of the hearings in the Federal Register as well as in the local media. In addition, copies of the Draft NI PEIS and/or the Summary (including the public hearing schedule) were sent to each individual or group listed to receive it at the address on record. Additional notification to the public concerning meetings on the Draft PEIS were made by the Oregon Office of Energy to members of 20 focus groups in six Oregon communities and other Oregon interest groups.
- 158-17:** The public hearing format was designed to be fair and unbiased. The public hearing format used was based on stakeholder input and was presented in the Notice of Availability (65 FR 46443 et seq.) for the Draft NI PEIS. This format was intended to encourage public participation, regardless of the motivation for attending the hearing. It provided an opportunity for the participants to meet one another, exchange information, and share concerns with DOE personnel available throughout the course of each hearing to answer questions. The meetings were facilitated by an independent moderator to ensure that all persons wishing to speak had an opportunity to do so. Persons wishing to comment were selected at random from the audiences rather than according to the order in which they registered. This was accomplished by a random number drawing. In addition to the comment recorder stationed at the main hearing, a second recorder was available in an adjacent room to receive comments without the need to

***Commentor No. 158: Members of Congress; U.S. Senator-
R. Wyden; Representatives-B. Baird, J. McDermott, D. Wu,
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Response to Commentor No. 158

await selection at the main proceeding. The hearing format used promoted open and equal representation by all individuals and groups.

- 158-18:** The need for medical isotopes and alternate suppliers are discussed in Section 1.2.1 of Volume 1. Safety and health issues are discussed throughout Chapter 4 of Volume 1 with details given in Appendixes H through J of Volume 2. Waste generation and waste management for each of the alternatives are discussed throughout Chapter 4 of Volume 1. As discussed in the response to Comment Number 158-7, the cost report and nonproliferation report were made available to the public on August 24, 2000 and September 8, 2000, respectively.
- 158-19:** DOE does not engage in or condone the actions alleged in the comment. DOE did not and does not label organizations or individuals. Neither does it interfere with workshops held by an organization, nor exert any influence or authority in the matter of fees for security and law enforcement charged by the owners or managers of facilities in which public meetings are held. Such matters are determined by the rules and regulations adopted by or applied to these facilities, consistent with local laws and municipal requirements. For the record, DOE did not characterize public hearings participants as “opposition” or “protest” groups, and further, did not attempt to recommend or influence any meeting facility fees or security measures applicable to any group or individual.
- 158-20:** The commentors’ concern for proper notice of the public hearing process is addressed in response to Comment 158-16.
- 158-21:** The commentors’ request to establish procedures for unbiased hearings is addressed in response to Comment 158-17.
- 158-22:** The issue of opposition groups is addressed in response to Comment 158-19.
- 158-23:** DOE notes the commentors’ views.

**Commentor No. 159: Vera Katz, Mayor, City of Portland
(C. Hales, J. Francesconi, D. Saltzman, E. Sten)**



City of Portland
Vera Katz
Mayor

Honorable Bill Richardson,
Secretary of Energy
U.S. Department of Energy
1000 Independence Ave. SW
Washington, D.C. 20585

August 22, 2000

Dear Secretary Richardson:

We support your initiatives for discussions and use of independently facilitated, principled negotiations regarding the future of Hanford's FFTF Nuclear Reactor, which you put forward at the Washington State Democratic Convention on June 10th in a meeting with Washington Democrats. These commitments were innovative efforts at ensuring meaningful dialogue on an issue that has created deep opposition and undermined public confidence in Department commitments. We congratulate you for your willingness to make commitments to improve the EIS and engage in principled negotiations. We are growing increasingly concerned, however, with the apparent bias of the EIS, and the public participation process for the EIS. The Draft EIS appears to cover-up the fact that claimed justifications for restart of this reactor, with all of its risks and costs, have either evaporated with formal decisions from other agencies (NASA) or been called into question by the Department's own blue ribbon advisory committee.

Restart of the FFTF Nuclear Reactor and resumption of Plutonium processing at Hanford would have potentially catastrophic impacts on the health of Northwest citizens and our environment. Our constituents are entitled to a fair and impartial process to consider all reasonably foreseeable impacts and reasonable alternatives.

The Department is preventing our constituents and our selves from reviewing and commenting on the Department's assessment of many of those potential impacts and alternatives by separating them from the Draft Environmental Impact Statement (EIS) and only disclosing them in reports to be made available after the public hearings are over. Apart from the clear bias of such an approach, this seems to be a clear violation of the National Environmental Policy Act (NEPA). Major public concerns stated in our comments for the scoping of this EIS, including public concerns detailed in the Seattle City Council and Portland City Commission Resolutions opposing FFTF restart (and formally entered into the record at scoping hearings) are ignored in the Draft EIS.

It is not acceptable to have left out of the Draft EIS what the Department will do with the nuclear and toxic wastes from restarting FFTF and Plutonium operations at Hanford. It is also unacceptable to have left out of the Draft EIS the costs of restarting the FFTF reactor and each alternative (especially when the Department has target budgets that are not adequate to comply with the Hanford Clean-Up Agreement), the impacts on the nation's nuclear non-proliferation policies from restarting the reactor and use of Plutonium or High Enriched Uranium fuels, and the independent assessment of the need for particular medical isotopes and the suitability of the FFTF reactor to produce them.

For each of these four critical areas, the Department has chosen to issue a report separate from the Draft EIS and not to release that report before the public hearings on the Draft EIS. We must assume that these reports are not flattery to the Department's claims for the FFTF Nuclear Reactor, and that this is a deliberate strategy to avoid disclosures and public comment.

Response to Commentor No 159

- 159-1: DOE notes the commentors' concerns. This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives.
- 159-2: DOE policy encourages effective public participation in its decision making process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.
- 159-3: The content of recent correspondence between NASA and DOE regarding potential plutonium-238 requirements is discussed in response to Comment 159-15.
- 159-4: DOE notes the commentors' concern regarding the suitability of FFTF in light of the NERAC subcommittee recommendations, as discussed in the response to Comment 159-13.
- 159-5: The evaluation presented in the NI PEIS considered both normal operations and accidents and indicates that the environmental and human health impacts of these facilities would be low.
- 159-6: See responses to Comments 159-1 and 159-2.
- 159-7: The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS. DOE made every effort to obtain, analyze, and disclose all required information to make a decision on expanding nuclear infrastructure. The costs and nuclear nonproliferation impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Pursuant to CEQ regulations (40 CFR 15051(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. DOE mailed these documents to approximately 730

**Commentor No. 159: Vera Katz, Mayor, City of Portland
(Cont'd) (C. Hales, J. Francesconi, D. Saltzman E. Sten)**

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PAGE: 02

We are dismayed that the Draft EIS fails to disclose that the Department's own blue ribbon medical advisory committee recommended last April that *"the FFTF not be considered as a viable long-term source of research radioisotopes."* The NERAC Subcommittee for Isotope Research and Production Plannings' findings regarding the suitability of the FFTF reactor for production of research medical isotopes¹, the claims of the contractors regarding FFTF's costs and projected revenues for producing isotopes, and "poor" rating of the manufacturing practices at Hanford are neither disclosed or referenced in the Draft EIS.

"The Subcommittee concludes that the FFTF will not be a viable source of research radioisotopes. Anticipated income from sales likely will not meet expectations thereby curtailing operations and reducing FFTF's capability to produce research radioisotopes in a timely and cost-efficient manner. ...

*"The Subcommittee believes that the production needs of neutron-rich isotopes for research purposes can be met by existing reactors... Other neutron sources may also be available for research isotope production."
Final Report at 31.*

The Draft EIS should have considered the alternatives recommended by the Subcommittee, and fully disclosed its criticism of the claims made by the FFTF's contractors. Instead, the Draft EIS and DOE documents repeat the cost and isotope need claims that the Subcommittee found to be flawed and over optimistic. The public deserved to have this fully disclosed in the Draft EIS instead of having it discovered by researchers from citizen groups.

The concerns of the City of Seattle (Resolution 30060 and Resolution 28344) regarding the import of Plutonium on board ships passing through inland waters (such as Puget Sound or the Columbia River to the Port of Portland), and transport of Plutonium through the crowded Puget Sound region, are entirely ignored in this EIS. A shipboard fire involving a shipment of Weapons Grade Plutonium fuel in inland waters poses horrific consequences. Exposure of our constituents to such risk is entirely unacceptable. Other major concerns raised in the Portland and Seattle resolutions, and by Members of Congress, are similarly ignored in the Draft EIS. The Department undermines all public confidence in its consideration of the restart of FFTF when it proposes such actions and ignores the formal input from elected officials and the region's major cities.

Although the major mission proposed for the FFTF reactor in this EIS is production of Plutonium 238 for NASA space reactors (Radioisotope Thermoelectric Generators), the Draft EIS fails to disclose that NASA informed the USDOE on May 22, 2000 that:

"NASA headquarters no longer has an identifiable planned requirement for Small Radioisotope Thermoelectric Generator (STRG) power systems."

Contrary to the DOE's assertion in the Draft EIS that "(w)ithout these power systems, these types of space exploration missions could not be performed by NASA."², NASA has determined that missions can utilize alternative technologies with lower costs. (And, of course, potentially much lower environmental impacts, which this Draft EIS should have disclosed).

The major claimed need for FFTF restart no longer exists, yet the Department continues to expend funds and undermine its credibility by continuing to propose the restart of the FFTF reactor to meet a need for Plutonium that NASA has informed you does not exist.

As the hearings on the Draft Environmental Impact Statement (EIS) approach, the Department is not providing for adequate notice of the hearings to our constituents, has not changed its plans for conduct

¹ The report notes that there are two major types of medical isotopes: large-scale production quantities ("commercial" isotopes) and small quantity demand isotopes for clinical trials, research, etc... ("research" isotopes). The report urges that the Department focus on providing the research isotopes, and allowing market forces to provide commercial isotopes. Most of the claims for need for FFTF are based on research isotopes. The size of the reactor and its cost to restart, provide ancillary facilities and operate were negative factors in the committee's opinion.

² DEIS at S-5

Response to Commentor No. 159

interested parties on August 24 and September 8, 2000, respectively. Both reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided summaries of the Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment in Appendixes P and Q, respectively, in the Final NI PEIS.

- 159-8: DOE has read and considered the public concerns detailed in the Resolutions of the Seattle City Council and the Portland City Commission. Section 1.4 and the expanded discussion in Appendix N summarize the issues and concerns raised during the scoping process.
- 159-9: Management of wastes that would be generated under implementation of Alternative 1 (Restart FFTF) is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.
- 159-10: The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). Nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted fund designated for Hanford cleanup, regardless of the alternative(s) selected.

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**Commentor No. 159: Vera Katz, Mayor, City of Portland
(Cont'd) (C. Hales, J. Francesconi, D. Saltzman E. Sten)**

of the hearings, which seem designed to repeat concerns over the bias of the process; and, the bureaucracy in charge of the EIS failed to live up to expectations for meaningful discussions regarding the substance of the EIS regarding its coverage of major areas of concern, including the need for medical isotopes, alternative market providers of medical isotopes, safety issues, waste streams from proposed activities, nonproliferation impacts and costs of FFTF restart and production.

The notice for these hearings is woefully inadequate. The published newspaper ad is an example of how to waste funding to claim money was spent on an ad, while seeking to avoid publication of a notice that the public might take notice of. Of primary interest to the citizens of the Northwest is the proposed restart of the FFTF Nuclear Reactor and resumption of Plutonium and other processing operations at Hanford. The notice provided by the Department seems designed to ensure that our constituents would not have notice that this is the topic of the EIS and proposal. Nor did the Department agree to send a meaningful notice to our constituents who are on the normal Hanford issues notice list.

Last year, the conduct of the hearings was itself a major controversy because the Department refused to use a sign in list for determining the order of speakers. Again, the Department appears intent to allow the process to appear biased by allowing the Department's moderator to hand choose the order of speakers. Last year, this resulted in the spokespeople for the region's major public interest groups not being called on to speak until late in the night at hearing after hearing.

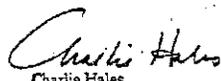
We are also disturbed that the Department told facilities at which hearings are to be held that public interest groups are "opposition" and "protest" groups, and required them to pay for police in order to hold pre-hearing workshops. We must note that the Cities of Seattle and Portland are officially opposed to the restart of FFTF and, therefore, apparently, "opposition" groups that the Department feels pose a security threat if they seek to hold a pre-hearing workshop to assist citizens in preparing to comment at the hearing.

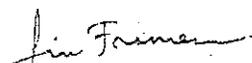
We urge you to have the Department take immediate steps to provide proper notice (designed to notify our constituents that these hearings are on an EIS regarding the possible restart of Hanford's FFTF Nuclear Reactor and Plutonium processing), unbiased procedures for the conduct of the hearings; apologize for any characterization of groups as "opposition" or "protest" and ensure that there is no intimidation of public comment.

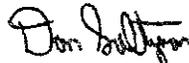
The claimed Plutonium and isotope needs, for which our region would be subjected to the risks of FFTF nuclear reactor restart, are now revealed to be illusory claims by the proponents of this dangerous project. The Draft EIS is so deeply flawed by its failure to disclose, and willful withholding of, information that is essential to informed decision making that the bias can only be overcome by removing the restart of the FFTF reactor from consideration.

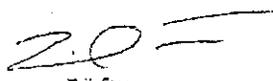
Sincerely,


Vera Katz
Mayor


Charlie Hales
Commissioner


Jim Francesconi


Dan Saltzman


E. Sten

Response to Commentor No. 159

The costs and nuclear nonproliferation impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report and Nuclear Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such ancillary documents need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed these documents to more than 730 interested parties on August 24, 2000 and September 8, 2000, respectively. The reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided the summary of the Cost Report and Nuclear Nonproliferation Impact Assessment in Appendixes P and Q in the Final NI PEIS.

- 159-11: DOE notes the commentors' concern that an independent assessment of the need for particular isotopes and the suitability of FFTF is not included in the NI PEIS. Section 1.2.1 of Volume 1 discusses the need for isotopes based on the Expert Panel and NERAC subcommittee recommendations. As further discussed in the response to Comment 159-13 and presented in Section 1.5 of Volume 1, the recommendations of these independent review groups were taken into consideration in developing the range of reasonable alternatives evaluated in the NI PEIS. NERAC is an independent Federal advisory committee appointed by the Secretary of Energy to advise DOE on civilian nuclear energy research program as noted in Section 1.2 of Volume 1.
- 159-12: The draft Waste Minimization and Management Plan for the Fast Flux Test Facility (May 2000) and the NERAC Isotope Subcommittee report (April 2000) were referenced in the NI PEIS and were available prior to the public hearings. The NI PEIS cost and Nonproliferation reports were made available on August 24 and September 8, 2000, respectively; immediately after they were completed, as discussed in response to Comment 158-7.
- 159-13: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel convened to forecast future demand for medical isotopes

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***Commentor No. 159: Vera Katz, Mayor, City of Portland
(Cont'd) (C. Hales, J. Francesconi, D. Saltzman E. Sten)***

Response to Commentor No. 159

estimated that the expected growth rate of medical isotope use during the next 20 years will range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost-efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production". In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without disturbing the existing missions of these facilities. DOE has taken the Expert Panel and NERAC report recommendations under consideration in developing the range of alternatives evaluated in

***Commentor No. 159: Vera Katz, Mayor, City of Portland
(Cont'd) (C. Hales, J. Francesconi, D. Saltzman E. Sten)***

Response to Commentor No. 159

the NI PEIS. These reports were made available to the public at the NI PEIS public information centers and on the Internet at <http://www.nuclear.gov>.

- 159-14:** The commentors appear to express the concern that DOE would expose constituents in the Seattle area to risks associated with the transport of weapons-grade plutonium. None of the proposed alternatives would involve the shipment of any weapons-grade plutonium to any port in the United States. Alternative 1 does postulate that DOE might decide at some point to import mixed oxide fuel from Europe to fuel FFTF. At this time, however, DOE has not proposed to import this fuel through any specific port. If DOE ultimately decides to import fuel from Europe, it would perform a separate NEPA analysis to select a port. This review would address all relevant potential impacts of overseas and inland water transportation, shipboard fires, package handling, land transportation, as well as safeguards and security associated with the import of SNR-300 mixed oxide fuel through a variety of specific candidate ports on the west and east coasts. It would consider all public comments, including local resolutions, concerning the desirability of bringing mixed oxide fuel into the proposed alternative ports.

In the event that DOE decides to enhance its nuclear infrastructure, it would not expose any population to high, unacceptable risks under any alternative. Any transportation activities that would be conducted by DOE would comply with U.S. Nuclear Regulatory Commission and U.S. Department of Transportation regulations. Associated transatlantic shipment would comply with International Atomic Energy Agency requirements. In Section J.6.2, DOE reviewed the potential maximum impacts from the marine transportation of mixed oxide fuel from Europe to a representative military port, Charleston, South Carolina, and overland transportation to Hanford. Also in that section, a bounding analysis demonstrates that the maximum potential radiological risks to the surrounding public from mixed oxide fuel shipments would be extremely small (e.g., less than 1 chance in a trillion for a latent cancer fatality per shipment from severe accidents at docks and in channels and less than 1 chance in 50 billion for a latent cancer fatality per shipment from overland highway accidents).

***Commentor No. 159: Vera Katz, Mayor, City of Portland
(Cont'd) (C. Hales, J. Francesconi, D. Saltzman E. Sten)***

Response to Commentor No. 159

159-15: Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Under the No Action Alternative, DOE would continue to purchase plutonium-238 to meet the space mission needs for the 35-year evaluation period considered in the NI PEIS. However, DOE recognizes that any purchase beyond what is currently available to the United States through the existing contract would likely require negotiation of a new contract and may require additional NEPA review.

The May 22, 2000, correspondence from NASA to DOE identifies that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the SRTG development efforts were stopped in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires one-third less plutonium-238 as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000, letter to DOE that large RTGs be maintained as backup. Section 1.2.2 of Volume 1 was revised to clarify plutonium-238 mission needs. The major mission of FFTF would not be the production of plutonium-238. Rather, all three missions are of equal importance; no one mission is given priority in the NI PEIS.

159-16: DOE provided notice of scheduled public hearings in accordance with the requirements of CEQ and DOE regulations (i.e., 40 CFR Parts 1503.1 and 1506.6 and 10 CFR Part 1021.313, respectively). This included announcement of the hearings in the Federal Register as well as in the

***Commentor No. 159: Vera Katz, Mayor, City of Portland
(Cont'd) (C. Hales, J. Francesconi, D. Saltzman E. Sten)***

Response to Commentor No. 159

local media. In addition, copies of the Draft NI PEIS and/or the Summary (including the public hearing schedule) were sent to each individual or group listed to receive it at the address on record. Additional notification to the public concerning meetings on the Draft PEIS were made by the Oregon Office of Energy to members of 20 focus groups in six Oregon communities and other Oregon interest groups.

- 159-17:** The public hearing format was designed to be fair and unbiased. The public hearing format used was based on stakeholder input and was presented in the Notice of Availability (65 FR 46443 et seq.) for the Draft NI PEIS. This format was intended to encourage public participation, regardless of the motivation for attending the hearing. It provided an opportunity for the participants to meet one another, exchange information, and share concerns with DOE personnel available throughout the course of each hearing to answer questions. The meetings were facilitated by an independent moderator to ensure that all persons wishing to speak had an opportunity to do so. Persons wishing to comment were selected at random from the audiences rather than according to the order in which they registered. This was accomplished by a random number drawing. In addition to the comment recorder stationed at the main hearing, a second recorder was available in an adjacent room to receive comments without the need to await selection at the main proceeding. The hearing format used promoted open and equal representation by all individuals and groups.
- 159-18:** The need for medical isotopes and alternate suppliers are discussed in Section 1.2.1 of Volume 1. Safety and health issues are discussed throughout Chapter 4 of Volume 1 with details given in Appendixes H through J of Volume 2. Waste generation and waste management for each of the alternatives are discussed throughout Chapter 4 of Volume 1. As discussed in the response to Comment Number 158-7, the cost report and nonproliferation report were made available to the public on August 24, 2000 and September 8, 2000, respectively.
- 159-19:** DOE does not engage in or condone the actions alleged in the comment. DOE did not and does not label organizations or individuals. Neither does it interfere with workshops held by an organization, nor exert any influence or authority in the matter of fees for security and law enforcement charged by the owners or managers of facilities in which public meetings are held. Such matters are determined by the rules and

***Commentor No. 159: Vera Katz, Mayor, City of Portland
(Cont'd) (C. Hales, J. Francesconi, D. Saltzman E. Sten)***

Response to Commentor No. 159

regulations adopted by or applied to these facilities, consistent with local laws and municipal requirements. For the record, DOE did not characterize public hearings participants as “opposition” or “protest” groups, and further, did not attempt to recommend or influence any meeting facility fees or security measures applicable to any group or individual.

- 159-20:** The commentors’ concern for proper notice of the public hearing process is addressed in response to Comment 159-16.
- 159-21:** The commentors’ request to establish procedures for unbiased hearings is addressed in response to Comment 159-17
- 159-22:** The issue of opposition groups is addressed in response to Comment 159-19.
- 159-23:** DOE notes the commentors’ views.

Commentor No. 160: John Paul Mansfield

Response to Commentor No. 160

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

5 MINUTES

I JOHN PAUL MANSFIELD TOOK PART IN A CLINICAL STUDY OF COMPARISONS BETWEEN ANGLICAN-JAPANESE NON-PREGNANT WOMEN - WE STUDIED AT THE IMPERIAL CANCER RESEARCH FUND LABORATORIES IN LINCOLN'S INN FIELDS, LONDON IN 1973. THE STUDY WAS FOCUSED ON THE ANDROGENS AND OESTROGENS UNDER DR. BURBROOK. THE QUEEN IS THE PATRON OF THIS FUND WHICH WAS ENTIRELY SUPPORTED BY CHARITY - WE HAD \$20+ MILLION BOLLARDS AND DIDN'T FIND A CURE. THERE WAS NO CORRELATION BETWEEN RESULTS - WHY - ? DO YOU SUPPOSE IT HAD NOTHING TO DO WITH DIET - BUT AS A RESULT OF THE BOMBS OF HIROSHIMA + NAGASAKI ?

AS A PARAMEDIC IN SAN DIEGO COUNTY UCSD - SAN DIEGO (GRADUATED IN 1979). IN LA JOLLA TOLLERY PINES RAD. SOURCE. AS A PARAMEDIC ON UNIT NUMBER 9 OUT OF FIRE STATION I CONDUCTED A RADIOACTIVE SPILL DRILL WITH VERY LITTLE NOTICE AND RECEIVED A COMMENDATION FOR OUR RESPONSE FROM THAT FACILITY. LET ME SAY IT WAS ONLY A DRILL. - LIVERPOOL 95 - BK

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

THAT SETTER
GRANDMA/ALANAPA
FRIENDS, MENTORS
OF MAN

Name (optional): JOHN PAUL MANSFIELD
Organization: ESPERANTO COM @ MSN
Home/Organization Address (circle one): 4800 NW HARNEY VANCOUVER WA 98663-1374

City: _____ State: _____ Zip Code: _____
Telephone (optional): 503-740-1524 cell #
E-mail (optional): SAA

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Collette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

160-1

160-1: Comment noted.

**Commentor No. 161: David Skakel
Columbia Gorge Audubon Society**

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

ON BEHALF OF COLUMBIA GORGE AUDUBON SOCIETY, WE EMPHATICALLY OPPOSE ANY PROPOSAL TO RE-START THE FFTF AT THE HANFORD FACILITY. REPRESENTING A MEMBERSHIP OF APPROXIMATELY 300 RESIDENTS OF THE MID-COLUMBIA GORGE REGION IN WASHINGTON AND OREGON, THE COLUMBIA GORGE AUDUBON SOCIETY PRIMARILY INSISTS THAT THE D.O.E. FOCUS ALL AVAILABLE RESOURCES ON HAZARDOUS WASTE CLEAN-UP AT HANFORD PRIOR TO ANY NEW ACTIVITIES THERE.

AS A VOLUNTEER FOR HEART OF AMERICA NORTHWEST DURING 1992, I FEEL CONFIDENT THAT THE D.O.E. (AND ITS CONTRACTORS) ARE NOT REMOTELY UPHOLDING THEIR PROMISE TO SUBSTANTIALLY CLEAN UP HANFORD.

REGARDING THE D.O.E. ARGUMENT FOR THE BENEFIT OF CREATING LARGE VOLUMES OF MEDICAL ISOTOPES, WE FEEL THAT A MAJOR MEDICAL HAZARD CONTINUES TO EXIST BECAUSE OF THE HAZARDOUS WASTE CLEAN-UP WHICH HAS NOT BEEN ACCOMPLISHED.

PLEASE SUBSTANTIALLY COMPLETE THE HANFORD CLEAN-UP (VIA VITRIFICATION) OR WHATEVER MEANS DEEMED BEST, BEFORE PURSUING ANY NEW USES AT HANFORD.

I VOTE TO SHUT DOWN FFTF PERMANENTLY. There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): DAVID SKAKEL

Organization: COLUMBIA GORGE AUDUBON SOCIETY

Home/Organization Address (circle one): _____

City: White Salmon State: WA Zip Code: 98672

Telephone (optional): 509-493-3891

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 1990 Germantown Road • Germantown, MD 20874
Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Response to Commentor No. 161

161-1

161-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

161-2

161-2: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

161-3

DOE notes the commentor's and concerns regarding the existing cleanup at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

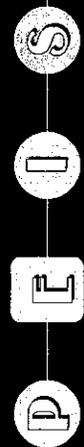
The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected. Therefore, restart of FFTF would not impact current cleanup schedules.

161-3: See response to comment 161-1.

Commentor No. 162: Anonymous

Response to Commentor No. 162

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

continue the cleanup!

Do NOT START FFTF again!!!

Alternative 5 is the only solution

162-1

162-2

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- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): _____

Organization: _____

Home/Organization Address (circle one): _____

City: _____ State: _____ Zip Code: _____

Telephone (optional): _____

E-mail (optional): _____

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Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

- 162-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 162-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Chapter 2—Written Comments and DOE Responses

Commentor No. 163: Catherine Zangar

Draft PEIS Comment Form

I oppose alternative #1 adamantly, I support Alt. #5 - shut down the FFTF.
 - I see that the draft EIS does NOT address impact broadly or thoroughly. The waste stream is discussed vaguely and in elusive terms - 'plan' vs 'preference' & commercial disposal (what specifically) - nor do they address - the trenches are inadequate and illegal. - impacts (negative) to ecosystems including creatures besides humans.
 - impacts besides cancer
 - impacts from accidents, error, sabotage, vandalism, greed/dishonesty, etc.
 (worst case scenarios are possible + catastrophic)
 - your ARROGANCE in asking any citizens at this plant to accept MORE nuclear risk + waste is so offensive.
 - the selfishness of any person/group/agency in requesting to restart the FFTF for any, but especially such non-compelling reasons, is outrageous.
 - CLEAN UP HANFORD, make NO MORE NUCLEAR WASTE, NOR STORE IT THERE. The safe lands are NOT nuclear dumps.

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- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Catherine Zangar

Organization: _____

Home/Organization Address (circle one): 721 Pine Ave.

City: Wood River State: OR Zip Code: 97031

Telephone (optional): 541 386 9228

E-mail (optional): _____

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NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Response to Commentor No. 163

- 163-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.
- 163-2: See response to comment 163-1.
- 163-3: Management of wastes that would be generated under implementation of Alternative 1 (Restart FFTF) is discussed in Section 4.3 of Volume 1 (e.g. see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.
- 163-4: _____
- 163-5: _____
- 163-6: _____
- 163-7: _____

The trenches (i.e., Hanford Site's 200 Area's Low-Level Waste Burial Ground) are regulated by DOE under the Atomic Energy Act of 1954, as amended, and under DOE Order 435.1, Radioactive Waste Management. The 200 Area's Low-Level Burial Ground also contain the following three active permitted mixed waste trenches whereby mixed low-level waste is both stored and disposed of: (1) Trench 31 is a permitted, lined Subtitle C disposal trench that is currently utilized for greater than 90-day storage of mixed low-level radioactive waste; (2) Trench 34 is permitted, lined Subtitle C disposal trench currently utilized for the disposal of mixed low-level radioactive waste that has been treated and is compliant with Land Disposal restrictions; and (3) Trench 94 is a permitted, unlined disposal trench utilized for the disposal of decommissioned naval reactor components. Use of Trench 94 for naval reactor compartments is authorized under a special exemption from the State of Washington Department of Ecology (Ecology). Currently, the Low-Level Burial Ground has a Part A Permit approved by Ecology under the State of Washington Dangerous Waste Regulations, State of Washington

Commentor No. 163: Catherine Zangar (Cont'd)

Response to Commentor No. 163

Administrative Code (WAC) 173-303, and, as such, is an interim status treatment, storage, and disposal (TSD) unit under the Resource Conservation and Recovery Act (RCRA). The permitted active and future mixed waste units of the Low-Level Burial Ground meet all regulatory requirements of WAC 173-303 and RCRA and will be incorporated into the Hanford Site RCRA Facility Part B Permit and will operate under final status regulations. In early June 2000, a working draft of the Hanford Site RCRA Facility Part B Permit application was submitted to Ecology.

- 163-4:** The NI PEIS identifies (in Chapter 3 of Volume 1) endangered species that live on or near all of the candidate sites, as well as aquatic and wetlands areas that may be impacted by operations at candidate locations. According to an International Atomic Energy Agency (IAEA) publication (IAEA Technical Report Series No. 332, Effects of Ionizing Radiation on Plants and Animals at Levels Implied by Current Radiation Protection Standards), a dose rate of 100 millirem per year to the most exposed human will lead to dose rates to plants and animals of less than 0.1 rad per day. The IAEA concluded that a dose rate of 0.1 rad per day or less for animals and 1 rad per day or less for plants would not affect these populations. The largest individual dose for any of the nuclear infrastructures alternatives under normal operations would be less than 0.1 millirem, which is three orders of magnitude less than the IAEA threshold for adverse effects. Therefore, implementation of any of the range of reasonable nuclear infrastructure alternatives would not be expected to result in adverse impacts on plants and animals living in potentially affected areas around the candidate sites.

Appendix H provides information on potential health effects other than fatal cancers. Of the three health impacts from low levels of radiation exposure (non-fatal cancers, hereditary effects, and fatal cancers), fatal cancers have the highest probability of occurrence, roughly 500 excess cancer fatalities per million person-rem. Non-fatal cancers and hereditary effects appear at rates of approximately 20 and 26 per cent of this number. Using a single number for human health impacts provides a simple direct means to compare impacts and risks among the alternatives. Cancer fatalities, being the largest impact, were selected for presentation throughout the NI PEIS.

- 163-5:** The NI PEIS presents the incremental risk associated with each of the alternatives. Sections 4.2-4.6 of Volume 1 provide the results of the

Commentor No. 163: Catherine Zangar (Cont'd)

Response to Commentor No. 163

evaluation of potential health impacts that would be expected from implementation of the alternatives, including normal operations and a spectrum of accidents that included severe accidents. The accident review included internal events, external events, natural phenomena, common-cause events, and sabotage and terrorist activities. The environmental analysis showed that radiological and nonradiological risks associated with each alternative would be small.

163-6: Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs:

1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;

2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and

3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Section 1.2 of Volume 1 has been revised to clarify the purpose and need of the proposed action.

163-7: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 164: Anonymous

Response to Commentor No. 164

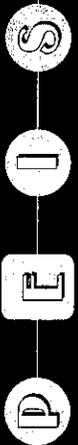
Draft PEIS Comment Form

THE D.O.E SHOULD CONSIDER A WIDER VIEW OF ENERGY SOURCES AND BURY THE DEAD TECHNOLOGIES OF THE PAST. LOOK INTO ALTERNATIVES AND SHOW THE PUBLIC OF INTEREST IN ALTERNATIVES.

164-1

164-1: DOE notes the commentor's interest in alternative energy sources, although issues of research and development of alternative energy sources are beyond the scope of this Nuclear Infrastructure PEIS. The DOE missions to be addressed in this EIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): _____

Organization: _____

Home/Organization Address (circle one): _____

City: _____ State: _____ Zip Code: _____

Telephone (optional): _____

E-mail (optional): _____

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Toll-free telephone: 1-877-562-4593 • toll-free fax: 1-877-562-4592
Email: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

Commentor No. 165: Ann McKinney

Draft PEIS Comment Form

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

It is clear we need to rewrite or abolish the atomic energy act of 1954. There have been no new reactor orders in the US since the 1970's. The people of the US do not want nuclear energy. Safety is not as important as the continued use of toxins that stay for generations. Space exploration does not depend on the use of plutonium any longer. How the funds that were used to build FTF to clean up the present unforgivable mess at Hanford.

It is hard to trust the draft without proper documentation of the studies. How much is really disclosed - how much hidden in the name of national security? Why was the cost to the environment (birds, animals, fish) not discussed. How about Goddard - down wind - down river. And department of energy forget about solar energy? Why isn't this developed. I approve of # 5 - Shut it down & clean it up.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Ann M McKinney

Organization: _____

Home/Organization Address (circle one): 13138 S New Era Rd

City: Ore City State: OR Zip Code: 97045

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colleen E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Response to Commentor No. 165

- 165-1: The commentor's opposition to nuclear energy is noted. DOE, however, is committed to its charge to meet the national needs for isotope production and nuclear energy research, as directed by the U.S. Congress, under the Atomic Energy Act, as amended. The alternatives evaluated in the PEIS address these needs. The PEIS, along with other reports and information, will help DOE reach a decision on its nuclear infrastructure that will not only meet future needs, including nuclear isotopes and energy, but also provide good long-term stewardship of the environment.
- 165-2: Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.
- 165-3: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Commentor No. 165: Ann McKinney (Cont'd)

Response to Commentor No. 165

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

- 165-4:** DOE made every effort to obtain, analyze, and disclose all required information to make a decision on expanding nuclear infrastructure. All references used in preparing the NI PEIS are cited in the reference section of each chapter and appendix. DOE has made these references and other material relevant to review of the NI PEIS available to the public in the designated public reading rooms. No material has been withheld for national security reasons as the facilities under consideration would be operated to support civilian missions only, which will be affirmed in the Record of Decision for this NI PEIS, when issued. Subsequent proposals to operate the selected facilities to support missions other than those selected in the Record of Decision, such as for defense related missions with national security implications, would require the preparation of subsequent NEPA documentation along with the opportunity for public comment in accordance with NEPA.
- 165-5:** The NI PEIS does address impacts to ecological resources for each of the proposed alternatives and options, including the No Action alternative. Specifically, impacts to terrestrial resources, wetlands, aquatic resources, and threatened and endangered species were addressed. Potential impacts to down wind and down river resources are discussed under air quality and water resources sections. The impacts associated with the FFTF Restart Alternative are given in Section 4.3.1.1.3, "Air Quality"; Section 4.3.1.1.4, "Water Resources"; and Section 4.3.1.1.6, "Ecological Resources" of the NI PEIS. Impacts are shown to be small.
- 165-6:** DOE notes the commentor's interest in alternative energy sources, although issues of research and development of alternative energy sources are beyond the scope of this Nuclear Infrastructure PEIS. The DOE missions to be addressed in this EIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies.

Commentor No. 165: Ann McKinney (Cont'd)

Response to Commentor No. 165

- 165-7:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. DOE also notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site.

Commentor No. 166: Kathy Sneider

Response to Commentor No. 166

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

These meetings are a waste of taxpayers dollars! We have told you we are opposed to the restart of the FFTF reactor.
You need to listen to the public

166-1
166-2
166-1

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure.PEIS@hq.doe.gov

Name (optional): Kathy Sneider
 Organization: _____
 Home Organization Address (circle one): BK. 153
 City: Husum State: Wa Zip Code: 98623
 Telephone (optional): (509) 387-3786
 E-mail (optional): _____

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 E-mail: Nuclear.Infrastructure.PEIS@hq.doe.gov



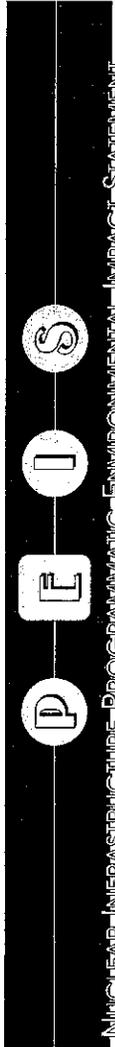
7/12/00

- 166-1:** DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and holding public hearings is an essential and required part of the NEPA process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS DOE carefully considered comments received from the public.
- 166-2:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Chapter 2—Written Comments and DOE Responses

Commentor No. 167: Ruth Olin

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

Dear Collette

Please don't do this. ^{quality of the} ~~Their lives of our~~ children depends on it. ~~the fact that~~ ^{very lives} ~~the Columbia River~~ ^{is precious} via precious.

Re: Cleanup - where are you gonna put it? ^{in New York?} No one wants it! ~~to FFTF.~~

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): Ruth Olin

Organization: _____

Home/Organization Address (circle one): _____

City: Hood River State: OR Zip Code: 97031

Telephone (optional): _____

E-mail (optional): _____

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 E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

Response to Commentor No. 167

167-1

167-2

167-3

167-1

- 167-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 167-2: Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.
- 167-3: The restart of FFTF or any of the other proposed alternative facilities would not have an impact on the cleanup missions at Hanford, INEEL, or ORR. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and appropriate DOE orders.

Commentor No. 168: Jerry Gabay

Response to Commentor No. 168

Draft PEIS Comment Form

It seems to me that 2 years ago you had similar hearings in the NW. It seems to me that the voice of the public was loud at that time, and exquisitely clear: NO MORE PRODUCTION AT HANFORD.

Now you are having hearings on the same subject again. That tells me you either did not hear the public, or you don't care.

Whichever, whether you don't listen or don't care, why not stop the charade, and say you are adding to the economic interests that want a start-up.

You have poisoned our environment for too long. We don't want you - go home and defoul your own backyard.

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- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Jerry Gabay
 Organization: Concerned private citizen
 Home/Organization Address (circle one): PO Box 151
 City: Mosier State: OR Zip Code: 97040
 Telephone (optional): _____
 E-mail (optional): sjsg@pacifi.com

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 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



168-1

168-2

168-1

168-1: The public meetings referenced by the commentor concerned the October 1997 tentative agreement among the U.S. EPA, Washington State Department of Ecology, and DOE Richland Operations Office DOE-RL) to delete the FFTF's M-81 milestones (for both standby and transition activities) from the Tri-Party Agreement (TPA). This followed the January 1997 decision to place FFTF in standby. This Class I TPA modification was the specific focus of the TPA-required public review and comment period, which ran from November 24, 1997, to February 20, 1998. As a result of comments from the public, the milestones were placed in abeyance (temporary suspension), as opposed to being deleted, until such time as a decision is made by DOE regarding the future of FFTF. In August 1999, DOE-RL, Washington State Department of Ecology, and the U.S. EPA signed Tri-Party Agreement Change No. M-81-98-01 agreeing to the abeyance of FFTF's M-81-00 series milestones. Should the Secretary of Energy decide to return FFTF to operation, the TPA signatories have agreed that the aforementioned milestones will be considered deleted. Should the Secretary of Energy decide to permanently shut down FFTF, the signatories have agreed to either negotiate a new FFTF TPA transition milestone series within 120 days of receipt of DOE-RL's proposed changes or allow reinstatement of the M-81 milestones if the 120-day timeframe is not met. At this time, the extent of any TPA-required public involvement, if at all required, will be determined. It should be noted that the TPA and its associated public involvement process and NEPA, under which this NI PEIS is being prepared, are legally and functionally independent of each other. Specifically, the TPA's public involvement process, as per the TPA's Community Relations Plan, is not required for NEPA reviews and public involvement, including public scoping meetings and Draft NI PEIS public hearings.

168-2: DOE notes the commentor's opposition to any production mission at the Hanford Site.

Section 1.2 of the NI PEIS provides information on the purpose and need for DOE's proposed expansion of the nuclear infrastructure to ensure the availability of isotopes for medical, industrial, and research applications; providing plutonium-238 for NASA, and undertaking research and development activities related to development of nuclear power for civilian use. With respect to plutonium processing, no weapons material will be produced within the stated mission. All missions are for civilian purposes.

Chapter 2—Written Comments and DOE Responses

Commentor No. 169: Concerned ex Tri Citian

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

until April 2000 I lived directly west of Hanford in the farming community by Matthews Corner. I was born in the area and lived there most of my life. I went through Radiation Training at WPPSS (now Energy NIS) and have worked for many years on the Hanford Reach as a Fishery Biologist. I do not belong to any ecoterrorist group or any other organization. However, until you show a very strong need to start the reactor for the benefit of our society it should remain closed. We do not need to start it as a government waste machine to pump more taxpayer money into the Tri-Cities. It needs to contribute for the continued containment of radioactive wastes. We all know that "cleanup" is not reality but we need to continue down that path until we figure out a better way to contain and recycle radioactive material.

Keep FFTF closed until a compelling reason arises!

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): Concerned ex Tri Citian

Organization: none

Home/Organization Address (circle one): _____

City: Underwood State: WA Zip Code: 98651

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colene E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

Response to Commentor No. 169

169-1: DOE notes the commentor's opposition to restarting FFTF for enhancing its existing nuclear facility infrastructure. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs:

1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;

169-1

2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and

169-2

3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action. As discussed in Section 4.3 of Volume 1, implementation of Alternative 1 would have no significant impact on jobs in the Hanford Area.

169-1

169-2: Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Waste management activities are safely conducted in compliance with applicable state and federal requirements and appropriate DOE Orders.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Commentor No. 170: Don Anderson

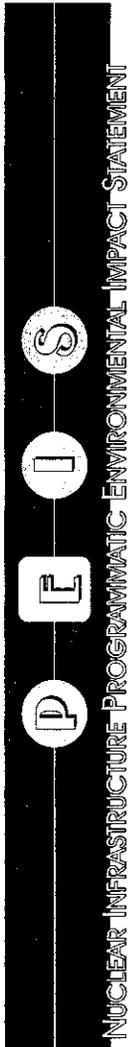
Response to Commentor No. 170

Draft PEIS Comment Form

I would prefer you NOT Do it!

170-1

170-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.



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faxing your comments toll-free to: 1-877-562-4592
commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Don Anderson

Organization:

Home/Organization Address (circle one): 406 W. 8th St.

City: The Dalles State: OR Zip Code: 97158

Telephone (optional): 541-506-5518

E-mail (optional):

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7/12/00

Commentor No. 171: Leon Swenson

Response to Commentor No. 171

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

SEE ATTACHED

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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• commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): LEON SWENSON

Organization: N.A.

Home/Organization Address (circle one): 336 SNYDER

City: Richland State: WA Zip Code: 99352

Telephone (optional): 509-375-6063

E-mail (optional): lswenson@out.com

COMMENTS MUST BE POSTMARKED BY September 18, 2000

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U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
Email: Nuclear.Infrastructure-PEIS@hq.doe.gov



Commentor No. 171: Leon Swenson (Cont'd)

08/28/00

My name is Leon Swenson. I am a resident of Richland Wa, where I have lived since 1975. I am a former worker at the Hanford site, with over 30 years experience in nuclear technology and waste disposal. For the past five years I have worked on the staff of First Presbyterian Church, Kennewick, WA.

I have two basic concerns which I wish to share at this hearing this evening. In 1993 I lost my seven year old grandson to a malignant brain tumor. That was one of the hardest things that I have ever gone through. While various techniques were used to combat his tumor, the technology was not sufficiently advanced to save him. And now, as I work on the staff of our church, I have many occasions to just "be there" for a number of my friends as they are going through various stages of cancer diagnosis, treatment, and in many cases, death. Life is an interesting process, and none of us is going to get out of this alive. But to die of cancer can be a particularly difficult way to spend your last days. And the appropriate use of medical isotopes offers great promise in dealing with the ravages of cancer.

I believe that it is time for the Department of Energy and our government to truly lead, and get out of the mode of merely reacting to various kinds of lobbying and other input. I believe the current NI PEIS process is a good example of where strong leadership is needed. On Page S-4 of the Summary of the NI PEIS, it points out that "in the area of therapeutic medical isotopes, several ... are currently unavailable or are available only in limited quantities." That, ladies and gentleman, seems to me to be the crux of the issue, and should be the focus of the PEIS.

While the other two major concerns of the PEIS are indeed important, the tremendous impact on the health, and on the health care costs of this country, could alone justify going forward with a vigorous program to produce medical isotopes. In the grand scheme of things, national health care is a major concern of our country. And the use of medical isotopes offers a huge potential for impacting that health care. As also noted on Page S-4, "Currently, more than 12 million nuclear medicine procedures are performed each year in the United States, and approximately one-third of all patients admitted to U.S. hospitals undergo at least one medical procedure that employs the use of medical isotopes." Those are staggering figures. And the potential for significantly greater application is enormous.

During my career as a nuclear engineer, I spent nearly 15 years on the design, construction and operation of FFTF. I know the plant, its capabilities, and its potential. I also live just a few miles down the road from FFTF in North Richland. Do I want to see FFTF restarted and used for isotope production? You better believe it. I do not buy the rhetoric that insists that restart of FFTF will cripple the clean-up efforts at the Hanford site.

While I am qualified and could spend considerable time critiquing the technical merits of the PEIS, I have chosen not to do that. I believe the PEIS process is adequately addressing the issues that should be considered in restarting FFTF, or in choosing one of the other alternatives. I personally believe that restart of FFTF makes the most sense both technically and financially. But I am willing to let the process move forward to completion. In the final analysis, however, I believe the Department of Energy should provide strong leadership to assure that an adequate supply of medical isotopes will be

Response to Commentor No. 171

171-1

171-1: DOE notes the commentor's support for greater availability of medical isotopes. For nearly 50 years, DOE's use of its unique technologies and capabilities to develop isotopes for civilian purposes has enabled the widespread application of medical isotopes seen today. Consistent with the mandates under the Atomic Energy Act, DOE seeks to to maintain and enhance its infrastructure to support production of radioisotopes for medical applications and research.

171-2: DOE notes the commentor's support for Alternative 1, Restart FFTF.

171-2

Commentor No. 171: Leon Swenson (Cont'd)

08/28/00

available, both for current needs, and for the emerging needs of this life-saving technology.

Finally, I must note that I take exception to the idea that these hearings are to be treated as an informal plebiscite to determine the future course of action. Hearings of this type lend themselves to being "stacked" by those that have passionate feelings about the spoken and unspoken issues. For the broad mass of our population, that do not even understand the implications of this decision, silence is interpreted as "don't care." I contend that if they really understood the implications of the decisions about to be made, in terms of the impact on the health care of them and their loved ones, the flavor of these hearing would be very different. That is why I feel it is so important for the Department of Energy to lead, not follow, as the country sets priorities for meeting the needs for medical isotope production for the next 35 years.

Thank you.

Leon D. Swenson, PE
336 Snyder
Richland, WA 99352
509-375-6063
lswenson@owt.com

171-2
(Cont'd)

171-3

Response to Commentor No. 171

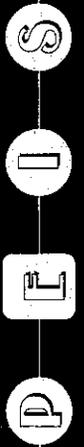
171-3: DOE policy encourages effective public participation in its decision making process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

Commentor No. 172: Tina Cameron
Fluor Hanford Solid Waste Mgmt./Treatment

Response to Commentor No. 172

Draft PEIS Comment Form

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



We do need and want FFTF as an asset to this state and the US. It should be restarted and used to its fullest potential.

172-1

172-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Tina Cameron
 Organization: Fluor Hanford Solid Waste Management/Treatment
 Home/Organization Address (circle one): Hm: 102204 Vaca Rd
 City: Kennewick State: WA Zip Code: 99338
 Telephone (optional): 509-628-8248
 E-mail (optional): Swiftred@email.msn.com

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7/12/00

Commentor No. 173: Lawrence J. Wolf

Draft PEIS Comment Form

THE FAST FLUX TEST FACILITY AT HANFORD MUST BE SAVED. IT IS EXCEEDINGLY VALUABLE FOR THE MANUFACTURE OF ISOTOPES. IT WOULD BE A TERRIBLE WASTE TO DECOMMISSION THIS FACILITY WHICH COST SO MUCH TO COMPLETE.

173-1

Response to Commentor No. 173

173-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT
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There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): LAWRENCE J. WOLF

Organization: OREGON INSTITUTE OF TECHNOLOGY

Home/Organization Address (circle one):
7726 SE HARMONY RD.

City: PORTLAND State: OR Zip Code: 97222

Telephone (optional): 503 725 9775

E-mail (optional): WOLF@OIT.EDU

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 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



Draft PEIS Comment Form

We need FFTF for many reasons, one important one being to develop and test isotopes for medical use. We can't depend on other countries to supply them for us. Why waste 30 years of work to develop the facility by abandoning it. Please restart FFTF!!

174-1

174-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): *Glenda Hawley*

Organization: _____

Home/Organization Address (circle one): *740 S. Logan*

Moscow, ID 83875

City: _____ State: _____ Zip Code: _____

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PDS@hq.doe.gov



7/12/00

Commentor No. 175: Marle Sullivan

Response to Commentor No 175

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

Just a quick note to add my encouragement to putting FFTF back on line and to a useful purpose. This is the newest and most versatile of reactors, its history for safety is unparalleled. Its potential has been proven time & time again.

I believe it would be a tragedy to finally close this plant. For the past 10 years it has been in limbo - while the potential is untapped and other nations supply the U.S. with valuable radioisotopes that could be produced in FFTF.

We heard many of the economic reasons for not doing medical isotopes and liken them to those that face an entrepreneur on startup company. Take the chance! Produce the isotopes & watch the market grow. It will pay back - maybe the ROI won't be immediate, but it is certain. This is the now & future of medicine and science. Don't lose this national asset - preserve it & put it back

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear Infrastructure-PEIS@hq.doe.gov

Name (optional): Marle Sullivan

Organization:

Home Organization Address (circle one): 1007 Rogers St NW

City: Olympia State: WA Zip Code: 98502

Telephone (optional): (360) 754-4945

E-mail (optional): mntsullivan@earthlink.net

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Collette E. Brown, NE-50 U.S. Department of Energy • 19501 Germantown Road • Germantown, MD 20874 Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592 E-mail: Nuclear Infrastructure-PEIS@hq.doe.gov



7/12/00

175-1

175-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 176: Donna McParlan

Response to Commentor No. 176

Draft PEIS Comment Form

PLEASE RESTART THE FFTF.
 WE WILL BE BETTER PREPARED FOR OUR
 FUTURE.

Donna McParlan
 8/24/00

176-1

176-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): Donna McParlan

Organization: _____

(Home/Organization Address (circle one)): 1751 BRANDON

City: ROCKFORD State: IL Zip Code: 61107

Telephone (optional): _____

E-mail (optional): dmparlan@aol.com

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Collette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Gaithersburg, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

Commentor No. 177: Virginia Knapp

Response to Commentor No 177

Draft PEIS Comment Form

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



08/24/2000

Dear Ms. Brown

I FEEL WE NEED TO KEEP THE
FFTF REACTOR IN RICHLAND, WA
RUNNING

PLEASE RESTART AND MAINTAIN FFTF
REACTOR

THANK YOU,

Virginia Knapp
Seattle, WA

177-1

177-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): Virginia Knapp

Organization:

Home/Organization Address (circle one): PO Box 33026

City: Seattle State: WA Zip Code: 98133

Telephone (optional):

E-mail (optional): VKnapp8356@aol.com

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-SO
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



PEIS Comment Form

US DEPARTMENT OF ENERGY,
 MY NAME IS TERRI MORSE AND I AM AN ELECTRICAL
 ENGINEERING SENIOR MANAGER AT THE BOEING COMPANY. I AM
 WRITING TO EXPRESS MY CONCERN OVER THE UNNECESSARY
 CLOSURE OF THE FAST FLUX TEST FACILITY. THERE IS NO
 TECHNICAL RATIONAL INVOLVED IN THIS DECISION, BUT THE
 RESULTS ARE A THROW-AWAY OF OUR TAX INVESTED DOLLARS
 IN AN ENVIRONMENT WHERE WE ARE SO HEAVILY DEPENDANT
 ON FOREIGN SOURCES TO PROVIDE ISOTOPES FOR MEDICAL
 NEEDS - WHY ARE WE EVEN CONSIDERING THE CLOSURE OF A
 FACILITY THAT CAN SATISFY THOSE DEMANDS, WITH THE
 CONTINUED EMPHASIS ON SPACE EXPLORATION AND REQUIREMENTS
 FOR POWER SOURCES THAT CAN BE PROVIDED - WHY ARE WE
 ALLOWING UNIFORMED POLITICAL RHETORIC TO MAKE COSTLY
 TECHNICAL DECISIONS ON THEIR AVAILABILITY. PLEASE DRAW ON
 YOUR EXISTING TECHNICAL EXPERTS TO DETERMINE WHEN THE
 LIFE SPAN OF THE FFTF IS OVER. IN THE MEANTIME - LET'S
 GET OUR MONEY'S WORTH OUT OF OUR INVESTMENT. KEEP
 IT OPEN!

178-1

178-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): TERRI F. MORSE

Organization: _____

Home Organization Address (circle one): 2236 56 8TH PL

City: RENTON State: WA Zip Code: 98055

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Collette E. Brown, NE-50
 U.S. Department of Energy • 19801 Germantown Road • Germantown, MD 20874
 Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

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 NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT

Commentor No. 179: K. Burk

Draft PEIS Comment Form

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



He need FFTE. Please restart it.

179-1

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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returning this comment form to the registration desk at the meeting or to the address below
calling toll-free and leaving your comments: 1-877-562-4593
faxing your comments toll-free to: 1-877-562-4592
commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): K Burk
Organization:
Home/Organization Address (circle one): 27 Beasts
City: Peralta State: NM Zip Code: 87042
Telephone (optional):
E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Collette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Response to Commentor No. 179

179-1: DOE notes the commentor's support for Alternative 1, Restart FFTE.

Commentor No. 180: John G. Ward

Response to Commentor No. 180

Draft PEIS Comment Form

Dear Madam,
The FFTF should be returned to
Operational Status ASAP
This is a fine machine and should not
be scrapped.
The Department should be proud of the
outstanding operating record. FFTF has made
and will make great the choice.
What are the options? We not heard of any
that are cost effective.

180-1

180-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): JOHN G WARD

Organization: _____

Home/Organization Address (circle one): _____

P.O. Box 1048

City: Joseph State: OR Zip Code: 97846

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact:曹Lette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00



Commentor No. 181: Dianna L. Stone

August 23, 2000

Colette E. Brown, NE-50
U.S Department of Energy
19901 Germantown Road
Germantown, MD 20874

Dear Ms. Brown,

Please support restarting the Fast Flux Test Facility.

And please encourage others to consider the magnitude of the benefit this facility is capable of providing. Cures for cancers and the long reaching benefits of interplanetary exploration are highly complex technologies that every basic citizen does not understand, nor should they be obligated to in order for all of us to benefit from related research. We have advanced technologies because a precious handful of people make their life work about exploring such issues. To turn our backs on the benefits of their accomplishments in a knee-jerk reaction to highly publicized fears is a sad mistake. And to allow the shut down of FFTF would be to abandon our self-reliance in such crucial matters and place them in the hands of others who may not always be our friends and allies. Please restart the Fast Flux Test Facility.

Thank you, in advance, for your effort in this matter.

Sincerely,



Dianna L. Stone
1701 121st St. SE Apt. M103
Everett, WA. 98208

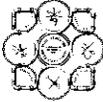
Home – 425-357-6102 Work – 425-485-5668
E-mail: duxiana@prodigy.net

Response to Commentor No. 181

181-1

181-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 183: Gary R. Barcom
UA Local Union: 598



UNITED ASSOCIATION
of Journeymen and Apprentices of the
Plumbing and Pipe Fitting Industry of
the United States and Canada

Founded 1889

Letters should
be confined to
our subject

UA Local Union:

598 1328 Road 28, Pasco, Washington 99301

Subject:

FFTF RESTART SUPPORT

August 24, 2000

COLETTE E. BROWN, NE-50
US DEPARTMENT OF ENERGY
19901 GERMANTOWN RD
GERMANTOWN MD 20874

Dear Ms. Brown:

I appreciate being given the opportunity to comment on the Department of Energy's Draft PEIS concerning the future plans for the nation's nuclear infrastructure, specifically the potential restart of the Fast Flux Test Facility (FFTF) located at the DOE Hanford Site.

The PEIS states, "Of particular need over the longer term are dependable sources of research isotopes and reactor facilities providing high volume flux irradiation for nuclear fuels and materials testing." I agree the nation must move forward in clinical medicine, scientific research, and industrial endeavors, and this already-existing facility has a proven track record in reliable and safe conduct of these operations.

Previous studies have noted inhibited growth in the use of radioisotopes to provide a better life for our citizens. We have drifted towards a reliance on foreign suppliers, which is detrimental to the best interests of our country. First, we place our country in the position of having to rely on a foreign entity, but more important we are funding jobs outside this country. We need to assure we take steps to sustain our loyal workers.

I fully support the intent of the NI PEIS in trying to determine the best answer to filling the gaps in the DOE infrastructure. The decision that the DOE has to make is not an easy one. There are many complex issues that need to be addressed. Choosing an already proven operating facility with a replacement value of almost \$2 billion makes the most sense to me. For the reasons mentioned above, I urge you to consider restart of the FFTF as the best alternative.

Fraternally,

GRB/mh

opeiu #11
afl-cio

Gary R. Barcom
Business Manager

Response to Commentor No. 183

183-1

183-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

183-2

183-2: DOE notes the commentor's view. If DOE decides to expand its nuclear infrastructure this will reduce our reliance on foreign suppliers. However, it is not the intention of the DOE to become the sole supplier of domestic medical isotopes.

183-1

Commentor No. 186: Fred Monette

From: Monette, Frederick A.[SMTP:FMONETTE@ANL.GOV]
 Sent: Thursday, August 24, 2000 10:13:27 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Comment on the PEIS; Appendix J
 Auto forwarded by a Rule

To Whom It May Concern:

I thought that Appendix J, "Evaluation of Human Health Effects of Transportation," was extremely well written. Perhaps that is because I wrote most of it. The original source of much of the text in Appendix J was a submittal that I provided in April, 1994 in support of the Final Environmental Impact Statement on a Proposed Nuclear Weapons Nonproliferation Policy Concerning Foreign Research Reactor Spent Nuclear Fuel. Although it is flattering that SAIC gets so much use out of the material, it is generally customary to reference or otherwise acknowledge the work of others. Again, I thought that the writing was excellent.

Name: Fred Monette
 Organization: Self
 Home Address: 229 S. Linden St.
 Westmont, IL 60559
 Phone: 630_271_0988

186-1

Response to Commentor No. 186

186-1: Preparation of the Final Environmental Impact Statement on a Proposed Nuclear Weapons Nonproliferation Policy Concerning Foreign Research Reactor Spent Nuclear Fuel (FRR SNF EIS) was directed and funded by DOE. Portions of the FRR SNF EIS, such as general description of the transportation of radioactive materials, descriptions of the codes used and the analytic approach, are directly applicable to this PEIS, and were used with minimal modifications. This is common practice in the preparation of government documents, and causes a significant cost saving to the government. The references cited in Appendix J are to the original source of information, rather than to the source of the language, which was sometimes the FRR SNF EIS. The FRR SNF EIS is frequently referenced in Appendix J.

Commentor No. 187: Donna Smollen Rockwell

DONNA SMOLLEN ROCKWELL

Fax : 509-493-4373

Aug 30 '00 16:46 P.01

AUGUST 28, 2000

TO WHOM IT MAY CONCERN,

MY NAME IS DONNA SMOLLEN ROCKWELL. I LIVE AT 503 N.E. SPRING STREET, WHITE SALMON, WASHINGTON. I AM A RESIDENT, A BUSINESS OWNER AND MOST IMPORTANTLY A MOTHER.

TWO AND ONE HALF YEARS AGO, SOME OF US WERE HERE IN THIS ROOM TO EXPRESS OUR FEELINGS TOWARDS THE RESTART OF THE FFTF. THE MISSION AS EXPLAINED BY THE D.O.E. AT THAT TIME WAS AN URGENCY TO PRODUCE TRITIUM SO THAT OUR NATIONS NUCLEAR ARSENAL WOULD BE KEPT IN TACT. SECONDARY TO THAT WAS THE PRODUCTION OF MEDICAL ISOTOPE.

TODAY YOU COME HERE ONCE AGAIN TO HEAR PUBLIC COMMENT ON THE POSSIBLE RESTART OF THE FFTF. THIS TIME AROUND MEDICAL ISOTOPE ARE IN THE STARRING ROLE AND FUEL FOR POSSIBLE, NOT YET FUNDED NASA MISSIONS IS THE BACK UP REASON.

MEDICAL ISOTOPE ARE CURRENTLY BEING MANUFACTURED IN CANADA AND ARE PURCHASED BY THE UNITED STATES. SO IN EFFECT, THE D.O.E. IS ASKING THE CITIZENS OF OREGON AND WASHINGTON, THE DOWN RIVER PEOPLE, TO INCUR A NEW WASTE STREAM AT HANFORD AND JEOPARDIZE OUR HEALTH, OUR ENVIRONMENT, OUR HOME FOR FUEL FOR SPACE EXPLORATION.

SURELY YOU ARE JOKING.

IT'S OBVIOUS THAT D.O.E. IS DESPARATE TO CREATE A FUNCTION FOR THIS BUILDING THAT DRAWS SUSPICION.

UNTIL THE D.O.E. CAN IDENTIFY AND CLEAN UP THE WASTE AT HANFORD, DON'T EVEN CONSIDER CREATING NEW WASTES. I AM THOROUGHLY OPPOSED TO THE RESART FOR ANY REASON OF THE FFTF.

Response to Commentor No. 187

187-1: DOE notes the commentor's views. DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information.

The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA

187-1

187-2

187-1

187-3

187-4

Commentor No. 187: Donna Smollen Rockwell (Cont'd)

Response to Commentor No. 187

space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Under the No Action Alternative, DOE would continue to purchase plutonium-238 to meet the space mission needs for the 35-year evaluation period considered in the NI PEIS. However, DOE recognizes that any purchase beyond what is currently available to the United States through the existing contract would likely require negotiation of a new contract and may require additional NEPA review. Section 1.2.2 of Volume 1 has been revised to clarify the need for domestic plutonium-238 production to support future NASA space missions.

- 187-2:** DOE notes the commentor's concerns regarding the migration of contaminants to the Columbia River. Ongoing activities to remediate existing contamination at Hanford are of high priority to DOE. The Hanford Site has a comprehensive waste minimization and pollution prevention program in place as summarized in Section 3.4.11.8 of Volume 1 that would govern any proposed site activities.

More specific to the alternatives presented in the NI PEIS, FFTF is located approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to the groundwater. Analyses presented in Chapter 4 of the NI PEIS (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4) indicate that there would be no discernible impacts to groundwater or surface water quality at Hanford from normal operation of the existing Hanford facilities in support of the stated missions. Also, no water quality impacts would be expected as a result of permanent deactivation of FFTF (Section 4.4.1.2.4).

- 187-3:** DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

Commentor No. 187: Donna Smollen Rockwell (Cont'd)

Response to Commentor No. 187

The environmental impacts associated with operation of the FFTF and support facilities at Hanford during normal operations and from postulated accidents are presented and discussed in Section 4.3 of the NI PEIS. All impacts to human health and to ecological resources would be small in the immediate area of the Hanford Site and negligible at all distant locations.

187-4: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 188: C. David Cook

NI PEIS Toll_Free Telephone

8/28/00

C. David Cook
206_725_6886

I am strenuously opposed to any restarting of the FFTF. I think it is a very unwise idea and I don't think it is necessary. I am very concerned about the storage of the waste that we already have at that facility, let alone adding more waste to it.

188-1

188-2

Response to Commentor No. 188

188-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

188-2: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to wastes generated by other Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposal) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

Commentor No. 189: Nancy Jones

NI PEIS Toll_Free Telephone

8/30/00

Nancy Jones
3037 NW Market Street
Apartment 314
Seattle, WA 98107

I am calling to register our position to the restarting of the reactor. It is totally, totally irresponsible. For God's sake, clean up the mess there. We don't need any more nuclear waste to take care of and the medical establishment doesn't need this either, they said so. So, I don't know who you are pandering to, but I hope you won't start it up. Thank you.

189-1

Response to Commentor No. 189

189-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF. The NI PEIS addresses environmental impacts due to the treatment, storage, and disposition (prior to final disposition) of waste generated for all alternatives, including Alternative 1, Restart FFTF. It also addresses cumulative impacts related to waste generation. However, environmental impacts associated with existing waste storage, site contamination, and cleanup programs at candidate sites are not within the scope of the NI PEIS and, therefore, are not addressed.

With regard to the need for medical isotopes, an Expert Panel convened by DOE recently reviewed several industry projections for growth in demand for medical isotopes and concluded that the growth rate will be significant over the next 20 years. Further discussion on the need for medical isotopes is presented in Volume 1, Section 1.2.1 of the NI PEIS.

Commentor No. 190: Jeff Luke

NI PEIS Toll_Free Telephone

8/30/00

Jeff Luke

I am a registered voter in Benton County in Washington State. I am calling to say that I would very much like to see FFTF continue operation. I'd like to see it continue operation either for the production of medical isotopes. I am not adverse to seeing FFTF continue operations for other missions as well, including the production of tritium, should that be necessary in order to preclude the possibility of running out of tritium and being dependent upon an external source for the maintenance of a bare minimum number of weapons. So with that in mind, those are my thoughts. Thanks very much for listening.

190-1

190-2

Response to Commentor No. 190

190-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

190-2: DOE notes the commentor's support for the expanded use of FFTF. Under the proposed action and consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its existing nuclear facility infrastructure to support production of isotopes for medical research, and industrial uses; production of plutonium-238 for use in future NASA space exploration missions; and U.S. nuclear research and development needs for civilian application. However, no component of the proposed action is for the purpose of producing tritium, nor is it for the purpose of supporting any other defense or weapons-related mission.

Commentor No. 191: Tony Mitzle

NI PEIS Toll_Free Telephone

8/30/00

Tony Mitzle

I am in favor of FFTF for medical isotope production. || 191-1

Response to Commentor No. 191

191-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 192: Dan Melkonian

From: Dan Melkonian[SMTP:MELKONIAN@LVSCAP.COM]
 Sent: Tuesday, August 29, 2000 5:17:15 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Cc: 'cruwa(a)gorge.net'
 Subject: FFTF restart
 Auto forwarded by a Rule

Colette Brown,
 NE_50, USDOE,
 19901 Germantown Rd.,
 Germantown, MD 20874

Dear Colette:

Obviously listening comprehension is not high on the list of skills necessary for employment with USDOE. I don't believe I heard anyone at any meeting in Hood River seriously intimate support for use of FFTF and FMEF for plutonium 238 production. Why are you going on these listening exercises if you cannot hear. Shut it down, clean it up, and forget about producing plutonium the USA does not need.

* Your compilations of prior public comment are grossly incorrect and show your failure to listen to the public. You state that only 320 comments were submitted on Hanford and yet Columbia River United sent in 420 written comments opposing restart not including comments from Seattle, Portland or Richland. You erroneously state that there were "roughly equal numbers" supporting and opposing use of FFTF and FMEF for plutonium 238 production. You also failed to mention the 5 City Council Resolutions opposing FFTF restart which means you have representatives of entire cities opposing it and their numbers should be included. Appendix N_4.

192-1

Response to Commentor No. 192

192-1: While all comments received during the scoping periods for both the Plutonium-238 Production EIS and the NI PEIS are part of the Administrative Record for the NI PEIS, Section 1.4 of Volume 1 and Appendix N are intended to provide a summary of the issues and associated trends identified during the scoping process rather than a tabulation of comments by specific issue. It should be noted, however, that NEPA and CEQ regulations do not require an agency to include and respond to each scoping comment as is required for public comments on a Draft EIS. In preparing the NI PEIS, DOE carefully considered scoping comments received from the public. Any perceived discrepancy in the grouping of comments raising any one particular issue or set of issues is attributable to the manner in which they were originally categorized and counted. For example, a number of statements, letters, or resolutions signed by multiple persons, such as city council resolutions mentioned by the commentor, were received by DOE (both for and against FFTF restart) in response to the request for scoping comments. Each such comment document was considered and counted as a single comment in the NI PEIS comment tracking system.

DOE did not receive 420 written comments opposing FFTF restart from Columbia River United as claimed by the commentor. The number of comments to which the commentor refers to on page N-4 of Section N.1.1 of the Draft NI PEIS is related only to the Plutonium-238 Production EIS scoping meetings which were held in November 1998, not the NI PEIS. The NI PEIS scoping comments are summarized beginning on page N-5. Nevertheless, the Plutonium-238 Production EIS scoping meetings were held in November 1998 in Idaho Falls, Idaho; Oak Ridge, Tennessee; and Richland, Washington. The scoping period was specifically focused on the production of plutonium-238 using one or more DOE research reactors and facilities. DOE received a letter from the Columbia River United. The NI PEIS scoping meetings were held in October 1999 in Oak Ridge, Tennessee; Idaho Falls, Idaho; Seattle, Washington; Portland, Oregon; Hood River, Oregon; Richland, Washington; and Washington, D.C. The scoping period focused on the enhancement of the existing nuclear infrastructure, including production of plutonium-238. DOE received a campaign from the Columbia River United that focused on the shutdown of FFTF, not the production of plutonium-238. This campaign represented about

Commentor No. 192: Dan Melkonian (Cont'd)

* You've failed to demonstrate a compelling need for the production of 1) plutonium for space, 2) medical or research isotopes or 3) nuclear energy research. Neither is there adequate justification for the need to produce all of them at one site. Neither is there justification for the need to produce them domestically (other than reference to some DOE policy) which makes no sense when we would continue to buy foreign nuclear fuel to run FFTF.

192-2

* You must include the recommendations of your own blue ribbon panel (Subcommittee for Isotope Research and Production Planning) that advised against the use of FFTF for medical isotope production. Furthermore, EIS Isotope demand projections are outdated and inadequate. They also fail to take into account possible cancer cures like gene therapy that could make medical isotopes unnecessary. In addition, medical isotopes can be adequately produced at other DOE sites if they are a high priority as implied. Current isotope production levels for DOE reactors are misstated in the EIS at near capacity when most are only at around 50%.

192-3

* You must include the current demand estimates from NASA for Plutonium 238 which are considerably lower than your need projections and could easily be met under the current contract with Russia. A discussion of alternatives to plutonium fuel must be included. A renegotiated contract with Russia (at double the current cost) could meet future NASA needs at 1/3 the cost of FFTF restart.

192-4

* It is improper to release the draft EIS for public comment without the critical information requested by the public in the scoping meetings including:

192-5

* cost analysis of restart and all alternatives with reasonable review time (FFTF will be much more expensive than reasonable alternatives by at least \$2 Billion.)

192-6

* studies on treatment of wastes at all proposed sites and

192-7

* nonproliferation impacts from FFTF and the importation of its necessary radioactive fuel from Europe. (Violation of the Nonproliferation Agreement by use of Highly Enriched Uranium fuel alone is reason enough to stop restart of FFTF!)

192-5**192-8****Response to Commentor No. 192**

250 comments and all were counted. Attached to the campaign was a signed petition.

192-2: DOE notes the commentor's opposition to restarting FFTF for enhancing its existing nuclear facility infrastructure. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

There is no requirement to conduct all of these missions at one site. In the Record of Decision process, DOE could choose to combine components of several alternatives in selecting the most appropriate strategy. For example, DOE could select a low-energy accelerator to produce certain medical, research, and industrial isotopes, and an existing operating reactor to produce plutonium-238 and conduct nuclear research and development. Should FFTF be selected for restart in support of these missions, DOE expects it could utilize a 15-year supply of mixed-oxide fuel that would be available from Germany under favorable economic terms (i.e., no charge for the fuel.)

192-3: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and

Commentor No. 192: Dan Melkonian (Cont'd)

* You have failed to adequately characterize environmental impacts from FFTF restart. An example is the statement, "Environmental impacts associated with the existing inventory of spent fuel at Hanford site are minimal." To imply that the existing spent nuclear fuel inventory poses no problems is massively incorrect. More than 2100 tons of corroding spent fuel sites in aging water-filled basins near the Columbia River posing one of the largest problems for cleanup and an expected cost of more than \$1.6 billion. You must address all impacts on waste management and the environment at Hanford not dismiss them with erroneous statements.

192-9

* You must include the cost of FFTF and all companion facilities decommissioning in the restart not just every other alternative.

192-10

* You have failed to assess all existing contaminant sources at Hanford and all other sites before adding additional waste. You must assess current waste inventories and then assess the addition of any new waste to existing waste sources.

192-11

* You fail to consider use of the Advanced Test Reactor (ATR) in Idaho and the High Flux Isotope Reactor (HFIR) in Oakridge for medical isotopes and acquiring Plutonium 238 from another source. You also fail to analyze lower cost alternatives such as subsidizing university reactors or buying time from private accelerators or reactors.

192-12

* The No Action Alternative must include the shutdown of FFTF not maintaining it on stand-by based on prior commitments of Secretaries O'Leary and Watkins and TPA milestones.

* You failed to address the conflict of interest of using PNNL's evaluations when they are a proponent of restart and stands to gain financially.

192-13

* You failed to include the standby costs of FFTF which are estimated to be \$360 million.

192-14

Response to Commentor No. 192

endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost-efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

DOE does not believe that isotope production levels were misstated in the Draft NI PEIS. Section 1.2.1 of Volume 1 identifies that approximately 50 percent of DOE's isotope production capability is being used.

Commentor No. 192: Dan Melkonian (Cont'd)

* You fail to assess the legality of introducing new programs and wastes into the highly contaminated 306 e or 325 buildings at Hanford that would be used with FFTF.

192-15

* You must admit that the real reasons to restart FFTF are in a hidden agenda that includes preserving jobs and starting new weapons research or other classified missions.

192-16

* The draft EIS must state the preferred alternative for adequate public review.

192-17

USDOE should choose Alternative 5_ SHUT DOWN FFTF, or Alternative 2_ Produce at existing sites with shutdown of FFTF.

192-18

Name: Dan Melkonian
Address: 210 Dogwood Lane
White Salmon, WA 98672

Additional Comments:

Response to Commentor No. 192

192-4: A May 22, 2000, correspondence from NASA to DOE identified that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the SRTG development efforts were stopped in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

192-5: The costs and nuclear nonproliferation impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Pursuant to CEQ regulations (40 CFR 505.1(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. DOE mailed these documents to approximately 730 interested parties on August 24 and September 8, 2000, respectively. Both reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided summaries of the Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment in Appendixes P and Q, respectively, in the Final NI PEIS.

192-6: DOE notes the commentor's opinion.

192-7: The NI PEIS addressed the environmental impacts due to the treatment storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste

Commentor No. 192: Dan Melkonian (Cont'd)

Response to Commentor No. 192

minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposal) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

- 192-8:** If restarted, the FFTF would be fueled with Hanford MOX fuel for about 6 years. During that time, use of German MOX fuel would be explored, which would fuel the FFTF for an additional 15 years. Also during this initial period, in compliance with nonproliferation policy, the use of low-enriched uranium (LEU) fuel would be analyzed under the Reduced Enrichment Research and Test Reactor (RERTR) program. If this analysis were to establish the infeasibility of using LEU fuel in the FFTF to meet mission needs, only then would HEU fuel be used. Such use of HEU fuel would then have met, under RERTR, nonproliferation and HEU-use policy requirements, and would not violate U.S. nonproliferation agreements. This is discussed in PEIS Volume 1, Section 2.3.1.1.3.
- 192-9:** The discussion in the Summary and Section 4.8.3.5 of Volume 1 on the cumulative impacts for spent nuclear fuel management at Hanford was revised to clarify that the management of the existing spent nuclear fuel at Hanford results in a dose of less than 0.1 millirem per year of the maximally exposed member of the public. This dose is well within the DOE limits given in DOE Order 5400.5. As discussed in that Order, the dose limit from airborne emissions is 10 millirem per year, as required by the Clean Air Act; drinking water is 4 millirem per year, as required by the Safe Drinking Water Act; and the dose limit from all pathways combined is 100 millirem per year. DOE has committed to remove the spent nuclear fuel at Hanford for ultimate disposition in a geologic repository.
- 192-10:** DOE assumes that the commentor is referring to deactivation, not decommission. Decommission costs were not included for any alternative. Deactivation of FFTF is not part of implementing Alternative 1, Restart FFTF. Deactivation of FFTF is part of implementing Alternatives 2, 3, 4, and 5 and including the cost of FFTF deactivation in the implementation costs for these alternatives is appropriate. The Cost Report was structured to identify the

Commentor No. 192: Dan Melkonian (Cont'd)

Response to Commentor No. 192

implementation costs of the various alternatives so the Secretary of Energy would have this information along with other data for consideration.

- 192-11:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The current inventory of wastes managed at the Hanford Site are identified in Section 3.4.11.1 of Volume 1. In addition, the generation rates of wastes associated with the NI PEIS options that use Hanford facilities are compared with the current waste generation rates at the site in Section 4.3 of Volume 1. As stated in Sections 4.3.1.1.13, 4.3.3.1.13, and 4.4.3.1.13, the generation rates of wastes at Hanford associated with the options that utilize either FFTF, FMEF and/or RPL/306-E would be much smaller than the current waste generation rates at the site. These volumes would also be small in comparison to the existing inventory at the site Section 3.4.11.1, Volume 1). These comparisons were also made for the other options which involved INEEL and ORR facilities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram funds designated for Hanford cleanup, regardless of the alternative(s) selected.

- 192-12:** Both ATR and HFIR are currently producing medical isotopes and under the No Action Alternative both would continue to do so. Further, under this alternative DOE would not establish a domestic source of polonium-238 production but could instead continue to purchase it from Russia to meet the needs of future U.S. space missions. Thus, the No Action alternative addresses the commentor's concern.

With regard to the commentor's second concern, DOE did consider the use of irradiation facilities other than those addressed under

Commentor No. 192: Dan Melkonian (Cont'd)

Response to Commentor No. 192

Alternatives 2 through 5. However, their use was dismissed for a variety of reasons as discussed in Volume 1, Section 2.6.1.

The No Action alternative is required under Council on Environmental Quality regulations (40 CFR 1502.14(d)). It provides a point of comparison for the action alternatives. The No Action Alternative generally represents the status quo; that is, it includes those actions that would normally take place without the proposed action. Since the status quo involves maintaining FFTF in standby and not its deactivation, it is not appropriate to include its deactivation as part of the No Action Alternative. Deactivation of FFTF is included as Alternative 5, Permanently Deactivate FFTF, and as part of Alternative 2, Use Only Existing Operational Facilities, Alternative 3, Construct New Accelerator(s), and Alternative 4, Construct New Research Reactor.

- 192-13:** PNNL is not preparing this PEIS, although it has offered technical comments on it. These comments have been evaluated by DOE and the contractor preparing the PEIS. PNNL has also previously provided technical and cost analyses on matters related to the FFTF, which have undergone independent scrutiny, and have helped confirm the need for the environmental review now being independently developed. PNNL's work does not present a conflict of interest. Ultimately, DOE has full control over the contents of the PEIS.
- 192-14:** The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. The costs already incurred by the DOE, e.g., the FFTF Standby Costs, are not a part of the financial evaluation of the funding that is required for future actions. Consequently, they are not included.
- 192-15:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). DOE is fully committed to honoring this agreement.

Commentor No. 192: Dan Melkonian (Cont'd)

Response to Commentor No. 192

DOE-RL, EPA, and Ecology agreed to a change in the Tri-Party Agreement to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on FFTF's future. Public meetings were held on this formal milestone change. The NI PEIS missions would not have an impact on Hanford cleanup activities.

FFTF and any associated facilities remain subject to compliance with environmental laws regardless of its future operational status. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

The 306-E facility is not contaminated and is being proposed as a location to conduct activities that do not involve radioactive materials. While the 325 Building has a large inventory of radionuclides associated with ongoing activities at the facility, the building is not contaminated in worker accessible areas. Operations at the 325 Building are conducted in accordance with applicable federal and state regulations and appropriate DOE Orders.

The 300 Area Revitalization Plan (DOE 1999) provides for continued multi-program R&D operations in the 300 Area, including operation of various laboratories, office facilities, and services. It also provides for consolidation (but not complete elimination) of radiological operations, with support for Hanford Site facility transition and environmental restoration efforts. The plan does not require closure of the 325 and 306-E buildings as long as they are needed for active research projects. Operation of these facilities would not violate any existing agreements between DOE and stakeholders or other legal obligations, nor would it affect ongoing or planned environmental restoration and facility transition activities.

- 192-16:** DOE notes the commentor's concern relating to job creation at the Hanford site. The socioeconomic impacts of restarting FFTF and for all of the other alternatives are presented in Chapter 4 of the NI PEIS. The economic welfare of Hanford and all DOE sites is important to DOE. However, any economic impact is secondary to the proper expenditure of taxpayer dollars.

Commentor No. 192: Dan Melkonian (Cont'd)

Response to Commentor No. 192

As discussed in Section 1.2 of Volume 1, plutonium-238 would be produced to support NASA's deep space missions. Plutonium-238 is not used to produce nuclear weapons. All missions considered in the NI PEIS are for civilian purposes. If changes in policy are required the public will be informed and the appropriate NEPA reviews would be conducted.

- 192-17:** At the time the Draft NI PEIS was completed and published, DOE did not have a preferred alternative. DOE used the environmental evaluation in the Draft NI PEIS, and also other reports on cost and nonproliferation impacts, as well as input from the public to develop its preferred alternative. Council on Environmental Quality regulations (40 CFR 1502.14(e)) do not require the inclusion of a preferred alternative in a draft EIS if one has not been identified at that time. However, the regulations do require identification of a preferred alternative in the final document. DOE has identified a preferred alternative in Section 2.8 of the Final NI PEIS.
- 192-18:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, or Alternative 2, Use Only Existing Operational Facilities.

Commentor No. 193: Kathryn Roberg

From: Kathy Roberg[SMTP:KROBERG@HSCIS.NET]
Sent: Tuesday, August 29, 2000 7:20:59 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF_restart
Auto forwarded by a Rule

I am sending my comments in regards to the proposal of restarting the FFTF (Fast Flux Testing Facility) in Hanford, WA. These are my concerns: Already in this world, we are experiencing a drastic global warming, as evidenced by the draught, lack of vegetation and harvests, horrible forests fires this summer. I am afraid that a restart of the FFTF will send more gases into the Universe, whether in the air, water or soil and add to this horrendous problem we are faced with.

Rivers, watersheds, lakes are becoming highly contaminated, we are loosing fish, foliage and water creatures. Isn't a restart of FFTF another way to add to this contamination that is globally being seen?

DOE promised to shut down FFTF in 1995, and use the resulting additional source of funding for clean_up at Hanford Nuclear Reservation. \$100 million designated for waste clean_up has instead been used to keep FFTF on hot standly. Isn't this a highly dishonest misuse of allocated funds?

Is plutonium really needed for the medical system?

If plutonium is produced, what are the SAFEST MEANS OF TRANSPORTING this material to Hanford? We already have had problems with the transporting of unwanted waste. Do we want a disaster to happen through transportation?

The deadly radioactive waste of Hanford will, if not contained properly and thoroughly, for thousands of years and countless generations, contaminate the Northwestern US and beyond. What are we sending on to our children and their children...a contaminated and hazardous world???

Response to Commentor No. 193

193-1: DOE notes the commentor's concerns on the potential for environmental impacts of FFTF operation. FFTF operation would result in a small impact to the environment and would not contribute to global warming. Section 4.3 of the NI PEIS includes an evaluation of potential environmental impacts due to air emissions and wastewater discharges associated with the proposed operation of FFTF and existing Hanford support facilities. All air emissions and wastewater discharges would be in accordance with applicable permit and regulatory requirements. The release of criteria air pollutants would result in concentrations well below Federal and state air standards (Table 4-13); impacts from emissions of hazardous chemicals would have a negligible effect on human health or the environment (Table 4-19); and there would be no discernible impacts to groundwater or surface water quality (Section 4.3.1.1.4).

193-2: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

DOE-RL, EPA, and Ecology agreed to a change in the Tri-Party Agreement to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on FFTF's future. Public meetings were held on this formal milestone change. The NI PEIS missions would not have an impact on Hanford cleanup activities.

193-1

193-2

193-3

193-4

193-2

Commentor No. 193: Kathryn Roberg (Cont'd)

177 massive, underground high_level nuclear waste tanks, some explosive, dozens leaking are the reality at Hanford, WA. The Department of Energy wants to RESTART the dangerous FFTF Nuclear Reactor and add even more waste to these tanks. What are we doing to this world???

DESTRUCTION!!!

Almost every day I am hearing more and more cases of CANCER...My question is could this air, water, food we are taking into our systems, that are in part being contaminated, be the root of this cancer. Are we going to allow it to grow... OUT OF HAND????

Thank you for hearing my concerns. I live in Walla Walla, WA, just about 75 miles south of Hanford, WA and the Hanford Nuclear Reservation.

Kathryn Roberg, a very concerned citizen

**193-2
(Cont'd)**

193-5

Response to Commentor No. 193

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

FFTF can be operated safely to accomplish the stated missions. There have been no serious safety-related accidents or accidental releases of hazardous or radioactive materials causing significant injury or harm to workers, or posing any threat or harm to the offsite public at FFTF during its lifetime. Also, no waste would be added to the underground waste tanks at Hanford from operation of FFTF.

Wastes are treated, stored, and disposed in a safe manner in compliance with state and federal regulations and appropriate DOE Orders.

- 193-3:** The plutonium that would be produced under the proposed action would not be intended for medical applications. Rather, it is intended for use in NASA space exploration missions.
- 193-4:** DOE notes the commentor's concern regarding the safety of nuclear materials transportation. DOE is committed to safety and safeguards for its facilities and the transport of materials. As discussed in Appendix J of the NI PEIS, all transportation activities conducted by DOE (including SST/SGT operations discussed in section J.3.4) would take place in accordance with U.S Nuclear Regulatory Commission (NRC) and U.S. Department of Transportation (DOT) regulations. Transatlantic shipments would also be in accordance with the International Atomic Energy Agency (IAEA) regulations which are consistent with DOT and NRC regulations (see Section J.3.1). Type B shipping casks, which are designed to protect and retain their contents under transport accident conditions, and purpose-built ships, which are specifically designed to safely transport casks containing radioactive materials, would be used to transport most nuclear materials covered in the NI PEIS. Type B shipping casks have been used for thousands of shipments by road, rail, and water and there have been no cases of a major release of radioactive materials (see Section J.3.2.1). As shown

Commentor No. 193: Kathryn Roberg (Cont'd)

Response to Commentor No. 193

in Volume 1, Section 2.7, the transportation impacts would be small for any of the NI PEIS alternatives. Transportation risks are summarized in Section 2.7.1.6 of Volume 1 and are discussed in more detail throughout Chapter 4 and Appendix J.

- 193-5:** The commentor's concern about increasing cancer rates is noted. Chapter 4 of Volume 1 and Appendixes H through J discuss radiological exposures to the public that would be expected to result from implementation of the nuclear infrastructure alternatives. The analysis in Chapter 4 shows that under normal operating conditions and for severe accidents, implementation of the nuclear infrastructure alternatives would pose a low radiological risk to human health; the most likely impacts are no additional cancer fatalities. See, for example, Sections 4.3.1.1.9, 4.3.2.1.9, and 4.3.3.1.9 in Chapter 4 and the Summary Tables in Chapter 2 of Volume 1 of the NI PEIS.

Commentor No. 194: Peter Giese

From: PETERG4@aol.com%internet
 [SMTP:PETERG4@AOL.COM]
 Sent: Tuesday, August 29, 2000 11:24:09 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Hanford
 Auto forwarded by a Rule

Dear Sirs:

It appears Hanford is a nation unto itself, acting without regard for anyone but itself. My question to you is: what will you do with the nuclear waste at Hanford?

Peter Giese
 PO Box 16303
 Seattle, WA 98116

194-1

Response to Commentor No. 194

194-1: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "- ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

Chapter 3, Affected Environment, addresses waste produced for each alternative evaluated in the NI PEIS. The Hanford Site has a comprehensive waste minimization and pollution prevention program in place as summarized in Volume 1, Section 3.4.11.8, that would control any new site activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 195: Lois Jewell

From: Loisjew@aol.com%internet
[SMTP:LOISJEW@AOL.COM]
Sent: Wednesday, August 30, 2000 1:15:55 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: (no subject)
Auto forwarded by a Rule

PLEASE RESTART THE FFTF

Thank you,
Lois Jewell

195-1

Response to Commentor No. 195

195-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 196: Robin Pichahchy

From: Robin/Alice Pichahchy[SMTP:ROBALI@HCTC.COM]
Sent: Wednesday, August 30, 2000 12:47:45 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: No More Nukes!
Auto forwarded by a Rule

Please do not start that thing again. We have enough nuclear damage to the environment as it is. There are natural ways to treat diseases that do not impact the earth.

Robin Pichahchy

196-1**196-2****Response to Commentor No. 196**

196-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

196-2: Comment noted.

Commentor No. 197: Dawnegoll@aol.com

From: DAWNEGOLL@aol.com%internet
[SMTP:DAWNEGOLL@AOL.COM]
Sent: Wednesday, August 30, 2000 12:54:47 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF.....
Auto forwarded by a Rule

I am in support of FFTF for medical isotopes. Please
re_start FFTF for medical isotopes.

Thank you.

197-1

Response to Commentor No. 197

197-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 198: John E. Tanner, Jr.

From: facts(a)coalition21.org[SMTP:FACTS@SNAKE.SRV.NET]
 Sent: Wednesday, August 30, 2000 1:13:27 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Cc: pust@srv.net%internet
 Subject: Comments on above
 Auto forwarded by a Rule

Restart of FFTF to meet as many as possible of the needs for medical isotopes, plutonium_238, and general nuclear research seems to be the most reasonable of the alternatives presented, for the following reasons:

- 1) We already have FFTF and are paying maintenance on it. No new irradiation facility would be needed.
- 2) FFTF is the last fast neutron reactor left in the US. We should be doing research on the disposition of TRU from spent fuel in preparation for the inevitable resumption of reprocessing.

I would encourage use of INEEL facilities for target fabrication and processing for the plutonium_238 production.

John E. Tanner, Jr., Idaho Falls, home address pust@srv.net

198-1**198-2****198-1****Response to Commentor No. 198**

- 198-1:** DOE notes the commentor's support for Alternative 1, Restart FFTF, and specifically Option 2, whereby INEEL facilities would be used to fabricate and process plutonium-237 targets for plutonium-238 production.
- 198-2:** Spent nuclear fuel is not reprocessed in the United States. Reiterating President Clinton's September 1993 statement on Nonproliferation and Export Control Policy, "the United States does not encourage the civil use of plutonium and, accordingly, does not itself engage in plutonium reprocessing for either nuclear power or nuclear explosive purposes."

Commentor No. 199: E. Louis Towne

From: Louis Towne[SMTP:LTOWNE@OWT.COM]
Sent: Wednesday, August 30, 2000 12:19:24 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Fast Flux Test Facility, Richland, WA
Auto forwarded by a Rule

I am strongly in favor of restarting the FFTF located in the Hanford Reservation near Richland, Washington.

This facility is located in an isolated area some distance from any populated area. It is in an area which pioneered much of the Nuclear work. Adequate staff is available to restart the facility.

Much discussion concerning nuclear activities fails to recognize that this location does not change the fact that other nuclear facilities are here. Also this plant has operated. It can be used for significant benefits to humanity in its present location.

We have been hearing of significant research in nuclear medicine, much of it being done here. My wife, Irene, had heart problems in the recent past. The hospital put her through examination which involved the use of nuclear medicine. We were shocked to find that for her to complete the tests, the only nuclear medicine available came either from Canada or France.

It seems strange that the country which has led in nuclear development must go to other sources to find nuclear medicines. We lead in development and it seems we should be able to utilize this facility to provided these needed medicines.

E. Louis Towne
6335 W. Willamette Ave.
Kennewick, WA 99336

Response to Commentor No. 199

199-1 **199-1:** DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 200: Julie Rogers

From: Julie Rogers[SMTP:JULIEROGERS@HOTMAIL.COM]
Sent: Wednesday, August 30, 2000 1:24:33 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Auto forwarded by a Rule

I strongly support restart of the FFTF. It's a more flexible solution to the alternative.

200-1***Response to Commentor No. 200***

200-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 201: Dennis Bod

From: Dennis Bod[SMTP:BODD@GTE.NET]
Sent: Wednesday, August 30, 2000 2:02:41 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Restart the FFTF
Auto forwarded by a Rule

Please Restart the FFTF. Thank you

|| 201-1

Response to Commentor No. 201

201-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 202: Louise M. Durrant

From: LOUISE M DURRANT
[SMTP:LMDURRANT@YAHOO.COM]
Sent: Wednesday, August 30, 2000 3:02:34 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Hanford FFTF
Auto forwarded by a Rule

I support the restart of the FFTF Reactor Facility at Hanford to meet the national needs for medical isotopes and other peaceful nuclear materials. The FFTF is the most economical, safe, and environmental friendly method available to meet these standards.

202-1***Response to Commentor No. 202***

202-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 206: Christopher Derez

Hanford Watch
 2285 SE Cypress
 Portland, Oregon 97214



Ms. Colette Brown
 U.S. Department of Energy
 Office of Space and Defense Power Systems
 NE-50
 19901 Germantown Road
 Germantown, Maryland 20874-1290

20874+1207

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

- #1 THE COLD WAR IS OVER!
- #2 THERE IS NO SAFE WAY TO DISPOSE OF WASTE
- #3 EMPHASIS MUST BE PLACED ON CLEANING UP HANFORD BEFORE THE LEAKING WASTE REACHES THE COLUMBIA RIVER!!!

Name CHRISTOPHER DEREZ
 Address 1969 SE WALNUT
 City, state HILLSBORO, OR Zip 97123

Response to Commentor No. 206

- 206-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 206-2: Comment noted. The DOE missions to be addressed in this EIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, are not national defense missions.
- 206-3: It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.
- 206-4: DOE notes the commentor's concerns regarding the existing cleanup mission and migration of contaminants to the Columbia River. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Commentor No. 207: Carlos Romano

Response to Commentor No. 207

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

To Whomever may concern

FFTF is a great opportunity for
 Research, Production and Development of
 Nuclear Technology that our Nation
 needs. Stopping it would be short-sighted
 and counter productive.

Please Restart the FFTF program
 for all our benefits.

Thanks

207-1

207-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Carlos Romano

Organization: _____

Home/Organization Address (circle one): 2373 NW 185th Ave #649

City: Hillsboro State: OR Zip Code: 97124

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 1901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



Commentor No. 208: Richard E. Rust

Richard E. Rust, MD
18747 Ridgely Rd. NW
Shoreline, Wa. 98177

Collette E. Brown
U.S. Department of Energy
NE-50
19901 Germantown road Germantown MD 20874-1290

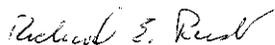
Dear Collette E. Brown:

Please add my voice to those of the multitude of Washington State Physicians- Washington State Medical Society, Washington Academy of Family Physicians, and Washington Physicians For Social Responsibility- in urging the prompt shut-down of the Hanford Fast Flux Test Facility. The proposed reasons to restart the reactor are all suspect in their true need, and the reasons to proceed with shut-down are cogent to public health and essential to the future safety of our Northwest environment.

While radio-active isotopes are important for their treatment of malignant disease and in testing for disease, there is no need for production of these materials at Hanford. Power for space exploration will continue to be a need in the future, but NASA has stated that production of Plutonium-238 at Hanford is not necessary for their program. The FFTF reactor was designed to produce weapons grade material, and not for research. In the new century, the world depends on reduction of further weapons production. Continuing the capacity for such production is not desirable or necessary, and will be counterproductive to furtherance of a peaceful world.

As one of many, I urge shut-down of the Fast Flux Test Facility as soon as possible. More, I urge expeditious progress on the Hanford cleanup, which has been far too long delayed.

Sincerely,



Richard E. Rust

Response to Commentor No. 208

- 208-1:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 208-2:** DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.
- A May 22, 2000, correspondence from NASA to DOE identified that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires one-third less plutonium-238 as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000, letter to DOE that large RTGs be maintained as backup. Section 1.2.2 was revised to clarify plutonium-238 mission needs.
- 208-3:** FFTF was built for research as described in Volume 1, Section 2.3.1.1, not for weapons production. FFTF has never been used for weapons production, although it is capable of being used for tritium production and

208-1

208-2

208-3

208-4

Commentor No. 208: Richard E. Rust (Cont'd)

Response to Commentor No. 208

very limited production of plutonium-239. DOE is not considering restart of FFTF with the intent of preserving a weapons production capability. The DOE missions to be addressed in this EIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, are not national defense missions.

- 208-4:** See response to comment 208-1. DOE notes the commentor's concerns regarding the existing cleanup mission and migration of contaminants to the Columbia River. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Commentor No. 209: Derek D. Jones

August 28, 2000

Attn: Colette E. Brown
U.S. Department of Energy, NE-50
19901 Germantown Road,
Germantown, MD 20874-1290

Ladies and Gentlemen,

Now that we have the draft PIES in hand, there are plenty of facts available to prove what restart supporters have known for years, that FFTF is safest, lowest cost option to produce the isotopes that are needed for future generations.

This year one million people will hear from their doctor that their worst fear is now a reality. They will be told that they have cancer. Many will know that they face surgery, chemotherapy or both. This person could be you, a friend, or a close family member. If you know a cancer survivor you know that there is no cure for cancer. You know that they face several years of treatment and suffering to hopefully be able to go into remission. What most people don't want to admit is that these people now face the very likely possibility that this or another form of cancerous growth will return again later in their life. Often the treatment that was used before will not work the second time around. These people need options. We as a society need those options now. They do not need sympathy. They need a new form of treatment. We do need medical isotopes and we need them now!

Last year over one half million real men, women and children died from cancer. We can't change that statistic, but the eventual restart of FFTF can give our children options that are not available today. We can turn the tide on cancer. We can make a difference. We must put aside antiquated environmental phobias and see the restart of FFTF for what it is, it is hope for the future.

Response to Commentor No. 209

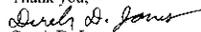
209-1

209-1: DOE notes the commentor's support for Alternative 1, Restart FFTF, and opposition to the No Action Alternative and Alternative 2, Use Only Existing Operational Facilities.

Commentor No. 209: Derek D. Jones (Cont'd)

The no action option^{and Alternative 2 are} is totally unacceptable. The no action option is a death sentence for untold millions of people. I realize that by law the report had to include this option, but it should not be seen as a viable option. While it might be popular to some very vocal environmentalists, it is no less than medical malpractice followed by euthanasia. Cancer means suffering! Some Medical isotope treatments reduce pain and suffering. Some provide life extensions, time for a mother to help finish the rearing of a child. One is even used to help patients with Heart Disease a better chance of surviving bypass surgery.

Let's stop wasting time and money studying cancer, it is time to start truly winning the war against cancer. It is time to start saving lives. It is time to restart the Fast Flux Test Facility!

Thank you,

 Derek D. Jones
 1106 W. 29th Ave.
 Kennewick, WA 99337-4315
 (509) 582-5077

209-1
 (Cont'd)

Response to Commentor No. 209

Commentor No. 210: U.S. Representative Earl Blumenauer

EARL BLUMENAUER
Third District, Oregon
COMMITTEE:
TRANSPORTATION AND
INFRASTRUCTURE
SUBCOMMITTEES:
GROUND TRANSPORTATION
WATER RESOURCES AND
ENVIRONMENT



Congress of the United States
House of Representatives
Washington, DC 20515-3703

WASHINGTON OFFICE:
1406 LONGWORTH BUILDING
WASHINGTON, DC 20515-3702
(202) 225-4911
FAX: (202) 225-8941
OFFICE OFFICE:
THE WEAVERLY BUILDING
516 S.E. MORRISON STREET
SUITE 250
PORTLAND, OR 97214
(503) 231-1200
FAX: (503) 236-5413
email: write.earl@mail.house.gov
website: <http://www.house.gov/blumenauer>

COMMENTS OF U.S. CONGRESSMAN EARL BLUMENAUER FAST FLUX TEST FACILITY PUBLIC HEARING Portland, Oregon August 29, 2000

- As a citizen of the Northwest, and an elected official, I think nuclear contamination at Hanford is our most serious threat facing citizens and our environment today.
- Hanford is one of the most polluted sites in the country. Clean-up must be our Number 1, long term priority. Every action we take must be viewed through the prism of protecting citizens and the environment from further contamination.
- Restarting the FFTF reactor would increase contamination by creating **6,000 cubic meters of new radioactive waste**. It would also contaminate new facilities that have never been contaminated.
- DOE states FFTF start-up will facilitate manufacturing of medical isotopes. Yet private markets and other facilities could be explored to meet demand.
- This remains “a reactor in search of a mission.”
- Extending the life of the reactor will only increase costs of eventual decommissioning and extend period of time for clean-up.

210-1

210-2

210-3

210-4

PRINTED ON RECYCLED PAPER

Response to Commentor No. 210

210-1: DOE notes the commentor’s concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM). Congress also funds FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram funds designated for Hanford cleanup, regardless of the alternative(s) selected.

210-2: As identified in Sections 4.3.1.1.13 and 4.3.3.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (i.e., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. High-level radioactive waste would not be generated from merely operating FFTF. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE’s policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

***Commentor No. 210: U.S. Representative Earl Blumenauer
(Cont'd)***

- With regard to Hanford, we should in no way undertake any project that would divert resources or attention away from the overall goal: complete toxic clean-up, and improved public safety and environmental conditions. This proposal to restart FFTF fails to meet those criteria in every way.

210-5

Response to Commentor No. 210

The decision on the use of FMEF will take into account that it is currently not a contaminated facility.

- 210-3:** Although other private manufacturers produce medical isotopes, DOE remains the key provider for a large number of isotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially experimental, these isotopes are not generally purchased in large-enough quantities to make their production financially attractive to private industry. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure to support the production of radioisotopes for medical applications and research. DOE's intent is to fulfill its responsibility to ensure that there is a reliable supply of isotopes in the United States to meet future demand. DOE encourages the commercial sector to privatize the production of medical isotopes in certain instances. DOE does this by turning over production of certain isotopes to commercial entities once DOE has established that commercial production is economically viable. Section 1.2.1 of Volume 1 has been revised to clarify DOE's role and other producers' capabilities in fulfilling U.S. research and commercial isotope needs.

DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of the PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

- 210-4:** Decommissioning FFTF, including associated costs and cleanup, is not within the scope of the NI PEIS. Before decommission activities were undertaken, DOE would prepare the appropriate environmental documentation to address the associated environmental impacts. Cost assessments would also be prepared.

DOE remains committed to cleaning up the Hanford Site independent of ultimate decisions on FFTF. The amounts of wastes associated with

***Commentor No. 210: U.S. Representative Earl Blumenauer
(Cont'd)***

Response to Commentor No. 210

decommissioning FFTF would be small. The schedule for cleaning up these other wastes would not be affected if FFTF were restarted and its lifetime thereby extended.

- 210-5:** The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure mission described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected. Evaluations performed in Chapter 4 of the PEIS demonstrate that restart and operation of FFTF would have a very small impact on public safety or the environment.

Commentor No. 211: Chris Kerchum

Response to Commentor No. 211

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

The Hanford Reach has not been cleaned and leaking tanks full of plumbic radio active wastes. The fees should strongly take into account and not just to FTF

As a Portland area resident I worry that Hanford threatens not only my property value but my life.

FFTF is 20 years old. Decommission the plant. The DOE needs to fulfill an earlier promise to clean up Hanford Reach.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Chris Kerchum

Organization: _____

Home/Organization Address (circle one): 343 SE 30th AV SUITE

City: Portland State: OR Zip Code: 97217

Telephone (optional): 503-230-7759

E-mail (optional): ckerschum@spiritone.com

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

211-1

211-1: DOE notes the commentor's concerns regarding the existing cleanup mission and migration of contaminants to the Columbia River. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

211-2

No DOE waste tanks are located within the Hanford Reach. The underground waste tanks are located on the 200 Area Plateau of the Hanford Site, several kilometers from the Columbia River.

211-1

211-2: DOE notes the commentor's opposition to Alternative 1, Restart FTF, and support for Alternative 5, Permanently Deactivate FTF.

211-3

211-3: See response to comment 211-2. The FTF reactor was constructed and initiated operation in the mid 1980s, making it DOE's newest reactor. It has no structural flaws that would prevent safe operations. As stated in Volume 1, Section 2.3.1.1.2, several upgrades would be implemented if a decision to restart FTF was made by DOE. These upgrades would improve efficiency and reliability, minimize waste, and conform to current industry standards. Throughout the life of FTF, the FSAR has been maintained via approved change control and engineering change notices. All updates and revisions have had the required reviews and approvals. No deficiencies in the FTF design, analysis, facility condition, or operations have been identified or recognized that would prevent FTF from meeting the safety objectives and intent of commercial nuclear safety regulations for equivalent facilities. If the Record of Decision concludes that FTF should be restarted, a Probabilistic Risk Assessment would be completed and a new FSAR would be prepared in accordance with applicable regulations. With planned plant upgrades, FTF would be able to operate safely for the 35 year time period being considered in the NI PEIS.

211-1

WE the undersigned
want the DOE to
NOT restart the FFF
Nudra 2 Reader ^{Re PEIS}

211-2

① Chris Kerchum ^{7355 25th Ave}
^{PO Box 9724}

② Nancy Powell 7006 NE Prescott
97218

③ Jill Allen 96 NW Maywood Dr

④ Helen Worrall 12604 SW Barrow Rd.
97229

⑤ Bill Wilson 4936 NE 25th Ave
port 97211

⑥ Craig R Barber 7300 NE 16th Ave apt 4
Vancouver wa 98665

⑦ RT Thomas PO Box 8163 PDX 97207-8163

⑧ Christina Lindstrom 1731 NE 25th Ave #3 97212

⑨ Alth. Fryman 2511 S.E. 52nd Ave Port. OR, 97206

⑩ Keith R. Schopf 3210 N.E. 17th Dr #3 Gresham 97030

⑪ FC Poundstone 4264 SE 122 #6
PORTLAND, OR. 97236

Response to Commentor No. 211

Commentor No. 211: Chris Kerchum (Cont'd)

- ⑫ ~~Chris L...~~ 5928 SE Holgat
Test land, OR 97206
Farm & drive
- ⑬ 2618 SE 112TH DR
PORT OR 97266
~~Chris L...~~
Chris L. Williams 5928 SE Holgat

Commentor No. 212: Don Stephens

Response to Commentor No. 212

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

My government has a strong moral obligation to clean up Hanford, and at a pace that is as rapid as possible consistent with safety. Already, much of the project is already behind schedule.

The restart of the FFTF should not be done. It will impede the cleanup, and, in addition, generate additional wastes. Further, the need for radioisotopes is overstated. I work in the biomedical research area at OHSU and am familiar with these needs.

To conclude, Hanford should be cleaned up on time and the FFTF should not be implemented.

212-1
212-2
212-1
212-3
212-4
212-1
212-2

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Don Stephens

Organization: _____

Home/Organization Address (circle one): 905 SE Cona

City: Portland State: OR Zip Code: 97207

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free telephone: 1-877-562-4593 • Toll-free fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

212-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected. Therefore, no evaluated alternative would impact the schedule or available funding for existing Hanford cleanup activities.

212-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

212-3: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is very small when compared to wastes generated by other Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposal) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

Chapter 2—Written Comments and DOE Responses

Commentor No. 212: Don Stephens (Cont'd)

Response to Commentor No. 212

212-4: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

Commentor No. 213: Sandra J. Gray

The Department of Energy has issued a Draft Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Mission in the United States, Including the Role of the Fast Flux Test Facility.

My name is Sandra Gray, and I am a resident of Richland, Washington. I claim the right to offer an opinion on the Draft PEIS from several points of view. I have lived in Richland since 1978 and take pride in the quality of life I enjoy in that community. As is true for many of you, cancer and other debilitating diseases that have the potential to be identified and treated with radioactive isotopes have cruelly touched my life. I have completed all requirements except the thesis towards a Masters degree in environmental science, so my position on environmental issues comes from knowledge as well as emotion. From personal, academic and professional perspectives I have concluded that the best option presented in the Draft PEIS is that which would restart the FFTF.

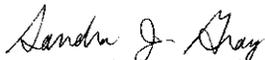
Detractors state that Hanford already has too much waste to clean up, and restarting the FFTF would increase that burden. I say that the FFTF has generated very small amounts of waste during its ten years of operation and contributed no unacceptable discharges to the environment in that time and this clean mode of operation will not change.

Detractors state that Hanford clean-up monies will be diverted from those valid efforts in order to fund the FFTF operation. I say that, by law, the operating funds for the FFTF cannot come from clean-up funds and this argument is not based in fact.

Detractors state that the other options proposed by the Draft PEIS are as effective as the FFTF would be. I say that those options cannot match the range, quality or quantity of isotopes that can be produced by the FFTF. This fact is documented in the PEIS and supporting documentation.

Detractors argue that the medical community has available all the medical isotopes that it needs for the uses currently understood. I say that numerous affidavits contradict that statement. Reputable doctors and scientists have written these affidavits from reputable institutions both in the United States and abroad.

I say that the Fast Flux Test Facility should be restarted and finish out her lifetime in offering life and hope for people who now have only unacceptable options available to them. Detractors say that the cost of restarting the FFTF is too high. I ask them, what is the cost to our society if we don't? My mind is clear; the right option is the restart of the FFTF.



Respectfully submitted by Sandra J. Gray,
Richland, Washington,
August 29, 2000

213-1

213-2

213-3

213-1

213-4

213-1

Response to Commentor No. 213

213-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

213-2: DOE notes the comment regarding waste generation.

213-3: The commentor is correct concerning the difference in funding sources from the different congressional subcommittees. In addition, the U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

213-4: For nearly 50 years, DOE's use of its unique technologies and capabilities to develop isotopes for civilian purposes has enabled the widespread application of medical isotopes seen today. While its market share is a small fraction of total world isotope production, DOE remains the key provider for a large number of isotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially experimental, these isotopes are not generally purchased in large-enough quantities to make their production financially attractive to private industry.

The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's role and other producer's capabilities to fulfill U.S. isotope needs.

Commentor No. 214: Tom Cropper

Draft PEIS Comment Form

I can see a problem. The FFTF will produce a new generation of plutonium production facilities. The current plans will for space exploration programs with perhaps ten or five percent output geared to a supposed production of medical isotopes.

However the facilities will outlast the current plans. What would keep the dangerous plutonium from being used for war or supposed enemies?

How could this dangerous nuclear material be kept out of the hands of blackmarket and other criminals?

The Hanford area is already the site of the largest dump of nuclear wastes in the world. Our people suffer excessive rates of cancers and we have a large cancer hospital in Portland which seems to prove my point.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): Tom Cropper

Organization: Multnomah Activists Arts

Home/Organization Address (circle one): P.O. Box 18025

City: Portland State: OR Zip Code: 97218

Telephone (optional): 503-281-2024 fax

E-mail (optional): tcropper@uswest.net

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Collette E. Brown, NE-50
U.S. Department of Energy • 10901 Greenbelt Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Response to Commentor No. 214

214-1

214-1: In the event that a decision is made to restart FFTF, the isotope of plutonium that would be produced is plutonium-238. Plutonium-238 is not used in nuclear weapons because its neutron physics properties are not suitable for this application. The FFTF core will not be designed to produce weapons grade plutonium. All spent nuclear fuel, including the separated non-weapons grade plutonium-238 as well as medical or industrial radioisotopes would be stored, handled, and transported in accordance with safety practices and procedures commensurate with their toxicity and quantities. All nuclear material at DOE facilities, including FFTF, are subject to safeguards and security controls for the specific intent of preventing any diversion of the material.

214-2

214-2: DOE notes the commentor's views. As discussed in Section 3.4.9.3 of Volume 1, the question of whether the population surrounding the Hanford Site is subject to elevated rates of cancer incidence or cancer mortality is unresolved. Existing studies and data suggest that cancer mortality and cancer incidence rates in the Hanford area are not elevated. A National Cancer Institute survey published in the Journal of the American Medical Association in 1991 showed no general increased risk of death for people living near nuclear facilities, including the Hanford Site (Jablon et al. 1991:1403-1408). Cancers are believed to be caused by a combination of hereditary and environmental factors, including radiological and chemical agents. In ongoing clinical testing, therapeutic radioisotopes have proven effective in treating cancers and other illnesses while minimizing adverse side effects, making their use an attractive alternative to traditional chemotherapy and radiation treatments.

Radiological impacts on the Portland area that would result from implementation of the Alternatives described in Section 2.5 of Volume 1 would be smaller than the radiological impacts described in Section 4.3 for the area immediately surrounding the Hanford Site. Radiological risks to the Portland area that would result from implementation of the alternatives would be essentially zero.

Commentor No. 215: Art Lewellan

My work is in TRANSPORTATION & URBAN PLANNING. IN MY FIELD, ENERGY consumption is greater than any other use of energy. Aluminum, oil refining, steel production, coal & other ores, plastic, glass, road & bridge construction, all contribute the greatest demand for energy. THIS SYSTEM OF TRANSPORTATION/DISTRIBUTION IS NOT SUSTAINABLE. IN THE NEAR FUTURE, PETROLEUM SUPPLIES ALONE WILL DWINDLE TO THE POINT WHERE THE SYSTEMS' ENERGY DEMAND WILL ALSO DWINDLE. SHOULD WE NEGLECT TO TAKE STEPS TOWARD AN ENERGY FUTURE THAT IS LESS THAN WE NOW REQUIRE, A DRASTIC "IMPLOSION" OF SHORTAGES WILL DEVASTATE WORLD ECONOMIES & LIVING STANDARDS.

I SHOULD STATE THAT INCREASED NUCLEAR POWER PRODUCTION WILL NOT PROVIDE AN ANSWER; FOR AN INDUSTRIAL TRANSPORTATION SYSTEM THAT HAS A "BUILT-IN" INCREASE OF ENERGY DEMAND. I AM NOT A Luddite, HOWEVER THERE ARE FUNDAMENTAL LIMITS, WE MUST FACE. IF WE MUST CONSERVE, ENERGY, WE MUST CUT OUT WASTE, NOT SEARCH FOR MORE SOURCES.

ART LEWELLAN
3205 SE 85 #9
PORTLAND, OR. 97202

215-1

Response to Commentor No. 215

215-1: DOE notes the commentor's interest in energy conservation, although issues of energy efficiency and supply are beyond the scope of this Nuclear Infrastructure PEIS. The DOE missions to be addressed in this PEIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies.

Commentor No. 216: Rose M. Rummel-Eury

Draft PEIS Comment Form

FFTF restart would add more radioactive waste to what's ~~already~~ already here. I talked to my retired nuclear physicist father last night & told him the DOE was considering reopening Hanford. The risks to the public are too great now, he said. He believes this country can't continue making more waste until we perfect the method for getting the old stuff disposed of safely. That takes more energy than it took to create it! When I asked him what we should do for power in the future - he said WIND POWER!

NO on FFTF.

Thanks for listening!

Rose Rummel-Eury

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- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Rose M. Rummel-Eury

Organization: _____

(Home/Organization Address (circle one)): 1500 NE 15th Ave., #551

City: Portland State: OR Zip Code: 97232

Telephone (optional): 503/528-2452

E-mail (optional): rummel_eury@hotmail.com

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For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Response to Commentor No. 216

216-1

216-1: Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

216-2

216-2: DOE notes the commentor's interest in wind power, although issues of research and development of alternative energy sources are beyond the scope of this Nuclear Infrastructure PEIS. The DOE missions to be addressed in this EIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies.

216-3

216-3: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.



Commentor No. 217: Anonymous

Response to Commentor No. 217

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

I am completely opposed to the restart of the FFTF facility. I am demanding the permanent shut down of the FFTF reactor. I cannot believe that after years of consistent public opposition that DOE did not reflect the will of the public. I cannot believe that the DOE is trying to fabricate a "compelling need" through medical isotopes and public relations (smoke-screen). I cannot believe the PEIS does not include adequate evaluations of existing contaminant sources at Hanford. I cannot believe that the PEIS doesn't address the potential of waterborne accidents (which are likely) on the earth and public health. I cannot believe the PEIS does not include a shut down (permanent) option. I cannot believe that DOE is trying to waste more public money on this Northwest's most dangerous public safety threat - SHUT DOWN FFTF NOW! ALL MONEY, EFFORTS, STUDIES, ETC. SHOULD BE ORIENTED TOWARDS SHUT-DOWN and CLEAN-UP.

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- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): _____
 Organization: _____
 Home/Organization Address (circle one): 2227 SE MADISON
 City: PORTLAND State: OR Zip Code: 97214
 Telephone (optional): _____
 E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

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217-4
217-5
217-1
217-2

I just add to the proposed alternatives that demand a new PEIS.

- 217-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF. DOE also notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site.
- 217-2:** DOE notes the commentor's position. DOE policy encourages effective public participation in its decisionmaking process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.
- No fundamental factors relating to purpose and need, the alternatives under consideration, or the associated environmental impact evaluations have changed since the Draft NI PEIS was published.
- 217-3:** DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to

Chapter 2—Written Comments and DOE Responses

Commentor No. 217: Anonymous (Cont'd)

Response to Commentor No. 217

clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

- 217-4:** DOE notes the commentor's concerns on NI PEIS evaluations of existing contaminant sources at Hanford. Section 4.8.3 of the NI PEIS, "Cumulative Impacts at Hanford," includes the impacts associated with existing contaminant sources. Specifically, the information presented in the tables of this section in the entry "Existing Site Activities" includes environmental impacts associated with past and present Hanford activities thus reflecting existing contamination impacts at the site.
- 217-5:** Sections 4.2-4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from implementation of the alternatives, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with each alternative would be small.

Commentor No. 218: John Gunn

Response to Commentor No. 218

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

- ① I am opposed to the ^{existing} (FFTF) ^{reactor} at Hanford.
- ② The Department of Energy has not demonstrated a need for the medical isotopes.
- ③ The Department of Energy (DOE) has not demonstrated a need for the Plutonium 238 for NASA.
- ④ The PEIS does not adequately address the additional wastes created by the FFTF in the existing wastes at Hanford.
- ⑤ The PEIS inadequately covers the cost of disposal and decommission.
- ⑥ I support alternative 5.

218-1
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218-4
218-5

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- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): John Gunn

Organization: _____

Home/Organization Address (circle one): 1424 SW Freeman St.

City: Portland State: OR Zip Code: 97219

Telephone (optional): 245-9580 (502)

E-mail (optional): Shragunn@teleport.com

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For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free telephone: 1-877-562-4893 • Toll-free fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

218-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

218-2: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost. Section 1.2.2 of Volume 1 was revised to further

Commentor No. 218: John Gunn (Cont'd)

Response to Commentor No. 218

clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

218-3: The current inventory of wastes managed at the Hanford Site are identified in Volume 1, Section 3.4.11.1 of the NI PEIS. In addition, the generation rates of wastes associated with the NI PEIS options that use Hanford facilities are compared with the current waste generation rates at the site in Section 4.3. As stated in Sections 4.3.1.1.13, 4.3.3.1.13, and 4.4.3.1.13, the generation rates of wastes at Hanford associated with the options that utilize either FFTF, FMEF and/or RPL/306-E would be much smaller than the current waste generation rates at the site. These volumes would also be small in comparison to the existing inventory at the site (Section 3.4.11.1). These comparisons were also made for the other options which involved INEEL and ORR facilities.

218-4: The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such an ancillary document need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). DOE mailed this document to approximately 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix Pin the Final NI PEIS.

Decommissioning FFTF, including associated costs and cleanup, is not within the scope of the NI PEIS. Before decommission activities were undertaken, DOE would prepare the appropriate environmental documentation to address the associated environmental impacts. Cost assessments would also be prepared.

218-5: See response to comment 218-1.

Commentor No. 219: Nancy Matela

Response to Commentor No. 219

Draft PEIS Comment Form

I support Alternative 5.
 35 years is only 1 1/2 generations! We need
 to consider "several generations"
 The cleanup funds must not be diverted.
 Accidents will happen!

219-1

219-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

The NI PEIS addresses the impacts from postulated accidents associated with the restart of FFTF in Section 4.3 of Volume 1.

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Nancy Matela

Organization: _____

Home/Organization Address (circle one): 2171 NE Schuyler #3

City: Portland State: OR Zip Code: 97212

Telephone (optional): _____

E-mail (optional): nmatela@pacifiex.com

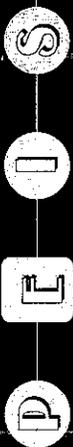
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 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 220: Anonymous

Response to Commentor No. 220

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

I am opposed to the restart of the FFTF for more reasons than I can fit onto this page. I have serious concerns about the process and options presented in the Environmental Impact Statement. We already have the most environmental threat facing the Pacific Northwest at Hanford. We should not only not worsen the situation we are in now in terms of contamination, we need spend all of our time and attention on getting ourselves out of our current mess. The Department of Energy needs to clean up the mess and not come up with new missions for the site. There is not a legitimate reason for ~~the~~ plutonium that is already available on the market. The DOE needs to listen to its opponents & the taxpayers public and CLEAN UP the site NOW. The ADE is engaged for some reason on a mission to worsen our environment & threaten our health. Giving proper notice for hearings and ensuring there is a fair public participation process will certainly lead to a resounding "No" by the public.

220-1

220-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

220-2

220-2: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

220-3

220-2

DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

220-4

Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from

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calling toll-free and leaving your comments: 1-877-562-4593
faxing your comments toll-free to: 1-877-562-4592
commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional):

Organization:

Home/Organization Address (circle one): 2946 NE 9th Ave

City: Portland State: OR Zip Code: 97212

Telephone (optional):

E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Collette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free telephone: 1-877-562-4593 • Toll-free fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



Commentor No. 220: Anonymous (Cont'd)

Response to Commentor No. 220

the target fabrication and processing in FMEF and how this waste would be managed at the site.

220-3: DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

220-4: DOE provided notice of scheduled public hearings in accordance with the requirements of CEQ and DOE regulations (i.e., 40 CFR Parts 1503.1 and 1506.6 and 10 CFR Part 1021.313, respectively). This included announcement of the hearings in the Federal Register as well as in the local media. In addition, copies of the Draft NI PEIS and/or the Summary (including the public hearing schedule) were sent to each individual or group listed to receive it at the address on record.

The public hearing format was designed to be fair and unbiased. The public hearing format used was based on stakeholder input and was presented in the Notice of Availability (65 FR 46443 et seq.) for the Draft NI PEIS. This format was intended to encourage public participation, regardless of the motivation for attending the hearing. It provided an opportunity for the participants to meet one another, exchange information, and share concerns with DOE personnel available throughout the course of each hearing to answer questions. The meetings were facilitated by an independent moderator to ensure that all persons wishing to speak had an opportunity to do so. Persons wishing to comment were selected at random from the audiences rather than according to the order in which they registered. This was accomplished by a random number drawing. In addition to the comment recorder stationed at the main hearing, a second recorder was available in an adjacent room to receive comments without the need to await selection at the main proceeding. The hearing format used promoted open and equal representation by all individuals and groups.

Commentor No. 221: Jane Civiletti

Response to Commentor No. 221

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

As stated unanimously by the Portland City Council, I strongly urge Alternative 5 - Permanently deactivating FFTF. We at the Pacific NW have seen to it that a commercial nuclear reactor along the Columbia River has been permanently shut down. We expect the Federal government to do nothing with our tax dollars at Hanford than to attempt a clean-up of the disaster it has created over the past 60 yrs. No new reactors should be built. No old reactors should be restarted. No existing facilities should be converted to new uses. At the hearings our elected officials or their designees have stated unequivocally their opposition to any further production of nuclear materials. They represent us, listen to us.

221-1

221-2

221-1

- 221-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 221-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and Alternative 4, Construct New Research Reactor, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): Jane Civiletti

Organization: _____

Home/Organization Address (circle one): 14614 S.E. Fair Oaks Ave.

City: Milwaukie State: OR Zip Code: 97267

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free telephone: 1-877-562-4593 • Toll-free fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



Commentor No. 222: Anonymous

Response to Commentor No. 222

Draft PEIS Comment Form

DO
 JUST NOT Restart the
 FFTF
 and one again, clean
 The dang plane pep
 and quit stalling.
 Seven lawmakers at least have said
 \$ ^{new} 3.14 billion ^{operating} 60 ^{which is} making money
 200 million 45 ^{fresh day} ^{BTU cost}
 They don't want it. The people have
 spent ^{plutonium} ^{clean it all up} ^{clean energy}

222-1

222-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

222-2

222-2: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

A listing of current Hanford contractors and their respective missions can be found at <http://www.hanford.gov>.

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- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): _____

Organization: _____

Home/Organization Address (circle one): _____

City: Portland State: OR Zip Code: 97202

Telephone (optional): _____

E-mail (optional): _____

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 E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Chapter 2—Written Comments and DOE Responses

Commentor No. 223: Everett Anttila

Everett Anttila
3415 NE 22nd Avenue
Portland, Oregon 97212 – 2432

United States Doe

I'm here to say a definitive No to the starting the fff for any reason including isotopes for medical purposes or for nuclear weapons production be it material for the existing weapons under stewardship.

223-1

Nuclear weapons are and will be the scourge to all life on earth.

*AS A CRIMINAL
LIFE*

The war to end all wars was fought supposedly already in the first w.w. .

The third w.w. with nuclear weaponry will be the end of all wars ,there will nothing to live for, if any remain.

223-2

There is no better time or place to start an end to this nuclear madness than on the Hanford reservation though greedy corporations vehemently are in opposition . Thank you reading this,

Everett Anttila

Response to Commentor No. 223

223-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

223-2: DOE notes the commentor's view on nuclear weapons. The scope of this Nuclear Infrastructure PEIS is limited to analysis of alternatives to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development. The three missions are civilian missions and are not defense-related.

Commentor No. 224: Anonymous

Response to Commentor No. 224

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

Dear Friends,

Clearly, NASA's "apparent" need for U-238 must be weighed against public opposition. NASA has no direct authority over DOE's hearings results. NASA's own hearings are only a part, perhaps a less relevant part, since NASA is not holding hearings here where the public - taxpayers, your funders - is most potentially impacted.

Bottomline: There are sufficient supplies available for this nuclear material.

This misuse of US/Oregonian/Washingtonian dollars is not justified and instead is much better off the left unbudgeted or applied to further research to find safe alternatives to U-238 and other such radioactive material.

Thank you.

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- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): _____

Organization: _____

Home/Organization Address (circle one): _____

City: _____ State: _____ Zip Code: _____

Telephone (optional): _____

E-mail (optional): _____

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7/12/00

224-1

224-1: Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted within the next several years. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost. DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Commentor No. 225: David Amundson

Draft PEIS Comment Form

I support taking option five
~~I support taking the Fast Flux test Facility permanently offline.~~

225-1

~~By doing this it will not add to pile up of nuclear waste at Hanford which is at a nightmare proportion.~~

225-2

* I demand that the Department of Energy disclose all risks associated with FFTF restart and examine all benefits associated with cleaning up and shutting down the reactor for good.

225-3

* Just starting a nuclear plant up to cure cancer is absurd ~~there is no way to fix~~ all the cancer victims that Hanford has caused. To restart it with a mission to heal is a insult. Besides we do not have a shortage of medical isotopes.

225-4

~~Before we explore Plutonium and beyond we have to clean up our environmental messes here~~

225-2

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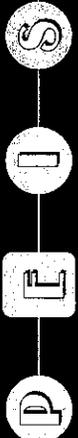
Name (optional): David Amundson
 Organization: Oregon Wildlife Federation
 Home/Organization Address (circle one): 1540 SW Clinton
 City: Astoria State: OR Zip Code: 97103
 Telephone (optional):
 E-mail (optional):

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NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Response to Commentor No. 225

- 225-1:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 225-2:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

Commentor No. 225: David Amundoon (Cont'd)

Response to Commentor No. 225

225-3: The risks during normal operations and postulated accidents associated with the restart and operation of FFTF are addressed in detail in Section 4.3 of the NI PEIS. Decommissioning of the FFTF, including clean-up efforts, is not within the scope of the NI PEIS, nor is an assessment of any potential benefits that may, or may not, result from shutdown of FFTF. Before decommissioning activities were undertaken, DOE would prepare the appropriate environmental documentation to address the associated environmental impacts.

225-4: DOE notes the commentor's views. However, a National Cancer Institute survey published in the Journal of the American Medical Association in 1991 showed no general increased risk of death for people living near nuclear facilities, including the Hanford Site. Cancers are believed to be caused by a combination of hereditary and environmental factors, including radiological and chemical agents. In ongoing clinical testing, therapeutic radioisotopes have proven effective in treating cancers and other illnesses while minimizing adverse side effects, making their use an attractive alternative to traditional chemotherapy and radiation treatments.

DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

Commentor No. 225: David Amundoon (Cont'd)

Response to Commentor No. 225

Although other manufacturers produce medical radioisotopes, DOE remains the key provider for a large number of radioisotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially experimental, these isotopes are not generally purchased in large-enough quantities to make their production financially attractive to private industry. However, supplies of many research isotopes are not readily available from existing domestic or foreign sources, causing a number of medical research programs to be terminated, deferred, or seriously delayed. Consistent with the mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure to support production of radioisotopes for medical applications and research. DOE's intent is to complement commercial sector capabilities to ensure that a reliable supply of isotopes is available in the U.S. to meet future demand, and to encourage the commercial sector to privatize the production of isotopes that have established applications to a level that would support commercial ventures.

Commentor No. 226: Jack Spadaro

Response to Commentor No. 226

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

The FFF restart ^{alternative} is not appropriate for several reasons;
 ① The ~~alternative~~ ^{alternative} increases transportation needs for radioactive materials;
 ② The cost differential between FFF restart and accelerator usage is less than 5% on the face of it, ~~but~~ ^{an insignificant cost when considering risks of FFF restart;}
 ③ The United States has not nearly maximized its ability to purchase the necessary isotopes abroad, many available from our strongest democratic allies.

I do not believe that ~~on~~ the Dept. of Energy track record in managing the current Hanford operations allows for a responsible restart of the FFF. Nuclear criticality is not the only issue. Nuclear waste production, diversion of Hanford cleanup resources, and dismissal of less harmful alternatives are also issues. The Hanford site has seen numerous management failures over the past 5 decades, from official denial and then admission of management failures demonstrates a continuing inability to responsibly sit and carry out safe missions at the reservation. The Dept. of Energy needs to focus on performing one mission well - cleanup of the Hanford reservation.

Every ~~time~~ you people develop cancer due to residue of nuclear production. Making more PEs residue does not seem like a smart way to cure cancer. Please follow your Tr. Party Agreement obligation to close down the FFF.

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): Jack Spadaro

Organization: Oregon Physicians for Social Responsibility

(Home) Organization Address (circle one): 2234 SE Grant Street

City: Portland State: OR Zip Code: 97214

Telephone (optional): _____

E-mail (optional): _____

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For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free telephone: 1-877-562-4593 • Toll-free fax: 1-877-562-4592
 Email: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

226-1

226-2

226-3

226-4

226-5

226-4

226-6

226-4

226-1: DOE notes the commentor's opposition to Alternative 1, Restart FFF. While there are differences in shipping distances and risks among the alternatives, risks from transportation are small for all the alternatives. Transportation risks are summarized in Section 2.7.1.6 of Volume 1 and are discussed in more detail throughout Chapter 4 and Appendix J.

226-2: The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS. DOE made every effort to obtain, analyze, and disclose all required information to make a decision on expanding nuclear infrastructure. The cost impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make decision documents such as the cost report available to the public before a decision is made. DOE mailed this document to interested parties on August 24, 2000, and was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P in the Final NI PEIS.

226-3: The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

With respect to the purchase of plutonium-238 from Russia, the United States has purchased 9 kilograms of plutonium-238 from the Russians since 1992. DOE is now considering re-establishing a domestic production capability of plutonium-238 at a United States facility because it is in our national interest to assure that the United States does not rely in the long term on any foreign government to support the NASA space program. A more detailed explanation of the need for a domestic source of plutonium-238 is found in Chapter 1 of Volume 1 of the Final NI PEIS.

Commentor No. 226: Jack Spadaro (Cont'd)

Response to Commentor No. 226

226-4: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy agreed to a change in the Tri-Party Agreement to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on FFTF's future. Public meetings were held on this formal milestone change. The NI PEIS missions would not have an impact on Hanford cleanup activities.

226-5: DOE notes the commentor's concerns. A range of reasonable alternatives are assessed in the NI PEIS. The development of these alternatives and descriptions of others considered, but dismissed, are presented in Chapter 2 of Volume 1. For each alternative assessed, a wide spectrum of postulated accidents has been evaluated and the management of all wastes generated during operations assessed. The environmental impacts, as given in Chapter 4, are small.

DOE remains committed to the cleanup of the Hanford site. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

226-6: Cancers are believed to be caused by a combination of hereditary and environmental factors, including radiological and chemical agents. In ongoing clinical testing, therapeutic radioisotopes have proven effective in

Commentor No. 226: Jack Spadaro (Cont'd)

Response to Commentor No. 226

treating cancers and other illnesses while minimizing adverse side effects, making their use an attractive alternative to traditional chemotherapy and radiation treatments.

The NI PEIS provides an estimate of waste generation and potential human health impacts associated with each of the alternatives proposed for the production of medical, industrial and research isotopes, production of plutonium-238, and nuclear research and development. Any additional wastes generated in support of these missions would be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws, regulations, and applicable DOE orders. In terms of potential human health impacts, the NI PEIS analysis indicates that the most likely impacts would not result in additional cancer fatalities among the population surrounding the DOE facilities that may be selected for use.

Commentor No. 227: Spring Svart

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

To William D. Magwood, IV and Collette Brown and the Dept. of Energy including the Office of Nuclear Energy

The only responsible action at Hanford Nuclear Reservation is clean-up as quickly and completely as possible. The more than \$15.2 billion (by accepted contractor BNFL, Inc.'s latest estimate) which could begin the clean-up process MUST be paid NOW. Initiate the clean-up process as quickly and completely as possible. "What part of NO don't you understand?"

The only responsible action at Hanford is a start to clean-up the 54 million gallons of radioactive waste already stored there. Bottom Line. Enough!

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Spring SVART

Organization: _____

Home/Organization Address (circle one): _____

City: Portland State: OR Zip Code: 97212

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Collette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
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7/12/00

Response to Commentor No. 227

227-1

227-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Commentor No. 228: Matthew Kenaga

Response to Commentor No. 228

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

- Shut down the FFFTF
- Hanford Cleanup should be a core mission of the DOE
- The Missions of Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States are flawed, we don't need them and don't want them. Candu has committed itself to national work and Pu-238 can be made or purchased from existing facilities.

228-1
228-2
228-3

228-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFFTF.

228-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

228-3: The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Matthew Kenaga

Organization: _____

Home/Organization Address (circle one): 9714 N.E. 102nd Ave.

City: Portland State: OR Zip Code: 97220

Telephone (optional): 503/257-7432

E-mail (optional): FabulousGorilla@roscopel.com

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Chapter 2—Written Comments and DOE Responses

Commentor No. 229: Anonymous

Response to Commentor No. 229

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

First, the D.O.E. needs to completely re-evaluate their (our) missions: do the people (taxpayers) want nuclear powered space missions? do the people want more nuclear medical isotopes or nuclear isotope research? Who is pushing this agenda? It's not me. I completely oppose restarting the FFTF - ~~we~~ we haven't even finished cleaning up the existing mess at Hanford!

My "guess" is that the demand for med. isotopes is directly proportional to the nuclear waste ~~and~~ and cancer-causing emissions from Hanford & other reactors. I don't care how "small" the FFTF would be, I want all nuclear power, fuel & medical isotope production + research out of my backyard and off this earth. Why don't we do the right thing for future generations and stop feeding & subsidizing big pharmaceutical companies (the U.S. government)

229-1

229-1: Cancers are believed to be caused by a combination of hereditary and environmental factors, including radiological and chemical agents. In ongoing clinical testing, therapeutic radioisotopes have proven effective in treating cancers and other illnesses while minimizing adverse side effects, making their use an attractive alternative to traditional chemotherapy and radiation treatments. However, supplies of many research isotopes are not readily available from existing domestic or foreign sources, causing a number of medical research programs to be terminated, deferred, or seriously delayed.

229-2

229-3

229-1

The NI PEIS provides an estimate of waste generation and potential human health impacts associated with each of the alternatives proposed for the production of medical, industrial and research isotopes, production of plutonium-238, and nuclear research and development. Any additional wastes generated in support of these missions would be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws, regulations, and applicable DOE orders. In terms of potential human health impacts, the NI PEIS analysis indicates that the most likely impacts would not result in additional cancer fatalities among the population surrounding the DOE facilities that may be selected for use.

DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility

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- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): _____

Organization: human being

Home/Organization Address (circle one): _____

City: Portland State: OR Zip Code: _____

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
toll-free telephone: 1-877-562-4593 • toll-free fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



Commentor No. 229: Anonymous (Cont'd)

has historically paid lots of taxpayers money for research, then a "Bristol Meyers Squibb" gets this free research so they can turn around + charge the consumers (human beings) inflated drug prices) - it's a nasty cycle and you know it's happening. The people elected some of you in government and we pay all your salaries - if we don't like what you are doing, ~~then~~ ^{then start packing!} Fold on lines and fasten with tape

Place stamp here

Colette E. Brown, NE-50
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

*At the Portland Hearing:
I didn't appreciate your unprofessional response to the gentleman who didn't understand the "costs" of the alternatives. You said "There's no math to do here." You seem defensive and were lying ~~to~~ when you said you were here to be impartial + to listen. Pffave it!*

229-1
(Cont'd)

229-4

Response to Commentor No. 229

infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

229-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

229-3: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

229-4: DOE disagrees with the commentor's characterization of the exchange between an audience member and the DOE PEIS Program Manager, Ms. Colette Brown, which took place during the short, interactive question and answer session immediately following DOE's overview presentation. Specifically, Ms. Brown was responding to one of several cost questions asked by an audience member, as the verbatim transcript from the hearing clearly shows. During this exchange, the audience member interrupted Ms. Brown while replying to the audience member's previous question regarding the cost of FFTF restart compared to building two new accelerators. The audience member then made the statements: "You

Commentor No. 229: Anonymous (Cont'd)

Response to Commentor No. 229

mentioned several different things. I wasn't able to do the math in my head. I apologize." To this, Ms. Brown replied, "There was no math to be done, sir." This was a conciliatory statement on the part of Ms. Brown and was not intended to be terse or demeaning. Instead, it was intended to convey Ms. Brown's understanding that the audience member appeared to be having difficulty with the cost analyses the audience member was questioning. Subsequently, the audience member asked an additional question on decommissioning which was then answered by Ms. Brown. DOE strives to ensure that all proceedings and matters of discourse are conducted in a professional manner.

Commentor No. 230: Lloyd K. Marbet
Don't Waste Oregon Council

Lloyd K. Marbet

19142 SE Bakers Ferry Road - Boring, OR 97009-9158 - Phone: (503) 637-3549, Fax: (503) 637-6130
 Email: marbet@mail.com

Tuesday, August 29, 2000

Testimony of Don't Waste Oregon Council

Representatives of the Department of Energy and members of the Public, my name is Lloyd Marbet and I represent a citizens activist organization known as Don't Waste Oregon Council. I appreciate the opportunity to appear before you today and testify on the "Draft Programmatic Environmental Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Missions In the United States. Including the Role of the Fast Flux Test Facility."

In reading this report it is not surprising that once again we find those directly involved in the nuclear industry telling us that we have to expand our reliance on nuclear power:

"There is an urgent sense that the nation must rapidly restore an adequate investment in basic and applied research in nuclear energy if it is to sustain a viable United States capability in the 21st Century." The chairman of NERAC

It not hard to tell who's urgent sense this really is, but the Department of Energy and this administration needs to know that there is another "urgent sense" out there and it is in the people and communities who have born the brunt of this ongoing experiment with Nuclear Technology.

The proponents of this industry never fail to remind me of the words contained in a song sung by Pete Seeger: "Waste deep in the big muddy and the big fool said push on." We are repeatedly told to "push on," one false promise after another. Compounding this tragedy is that once our government was through committing its acts of treachery on Native Americans, from broken treaties to uranium mines, it turned around and started in on ourselves.

Take the latest headlines: "Hanford will never be clean study says" Aug 8, 2000 Oregonian.

(Read quotes from the paper.)

Now juxtapose this with what we are being told in this draft study:

"It is the policy of this Administration that clean, safe, reliable nuclear power has a role in the future for our national energy security."

We can't clean our waste up but we've got to have "our own supply" of plutonium 238 for space missions because we obviously can't rely on Russian instability to keep us in large enough quantities. Like drug addicts in withdrawal, we are desperately being told that we need our own source of supply and there's nothing better than "home grown," especially if it keeps the failing infrastructure of the nuclear industry going.

But then there's "global warming" the new savior of the nuclear industry. Act two of the ongoing global drama of environmental deterioration, and what do you expect, when the policies of this administration has been to support business as usual. Surprisingly enough that is exactly what we have here "business as usual." And that is exactly what this document is,

Response to Commentor No. 230

230-1

230-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

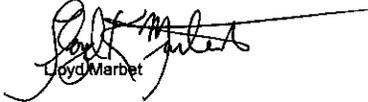
Commentor No. 230: Lloyd Marbet (Cont'd)

"business as usual!" Is there any wonder why we desperately need someone like Ralph Nader to become President?

How much longer do you think we are going to go down the road of the "big muddy" before we confront the fallacy of this Emperor persistently parading in front of us without any clothes. Instead of continuing the myth of dominating this throw away world, doesn't it make more sense to devote our precious resources to finding a way to live in balance on this earth, especially before importing anymore of our waste into outer space? Isn't it time for America to put the cart before the horse and have the decency to clean up the soiled radioactive diapers we have already produced before lulling ourselves into creating yet more national sacrifice zones?

The real urgency before us is the integrity of our ecological and biological life support systems and until we acknowledge this and accept the role we must play in protecting our planet, our government will forever bring these dog and pony shows into our communities asking us to embrace their predetermined goals of sanctioning yet another experiment upon the very fabric of life. Instead, let us take responsibility and wear the mantel of real accountability. This will not be done by starting up the Fast Flux Test Facility for one more round of nuclear experimentation. It will not be done by accepting any thing less than real alternatives, energy or otherwise. **Our only hope is to change the political leadership on our watch and putting stewardship back in our lives.**

Respectfully submitted,



Lloyd Marbet

230-1
(Cont'd)

Response to Commentor No. 230

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Public Hearing Evaluation Form

Please place a check mark in the box next to the public hearing attended:

- | | |
|--|--|
| <input type="checkbox"/> August 22, 2000
American Museum of Science and Energy
300 South Tulane Avenue
Oak Ridge, Tennessee 37830 | <input type="checkbox"/> August 30, 2000
Washington State Convention and Trade Center
800 Convention Place
Seattle, Washington 98101 |
| <input type="checkbox"/> August 25, 2000
Westcoast Idaho Falls Hotel
475 River Parkway
Idaho Falls, Idaho 83402 | <input type="checkbox"/> August 31, 2000
Best Western Tower Inn and Conference Center
1515 George Washington Way
Richland, Washington 99352 |
| <input type="checkbox"/> August 28, 2000
Hood River Inn
1108 E. Marina Way
Hood River, Oregon 97031 | <input type="checkbox"/> September 6, 2000
Crystal Gateway Marriott
1700 Jefferson Davis Highway
Arlington, Virginia 22202 |
| <input checked="" type="checkbox"/> August 29, 2000
Oregon Museum of Science and Industry
1945 SE Water Avenue
Portland, Oregon 97214 | |

Please circle the appropriate number:

	Very Good			Poor	
	5	4	3	2	1
Your Level of Knowledge about the PEIS before the Hearing	5	4	3	2	(1)
Your Level of Knowledge about the PEIS after the Hearing	5	4	(3)	2	1
Time and Date of Hearing	(5)	4	3	2	1
Location of Hearing	(5)	4	3	2	1
Registration Process	(5)	4	3	2	1
Clarity of Displays and Handouts	(5)	4	3	2	1
Clarity of Presentations	5	4	(3)	2	1
Relevancy of Issues and Concerns Addressed	(5)	4	3	2	1
Opportunities for Discussion	5	4	3	(2)	1
DOE Officials' Willingness to Listen	5	4	3	(2)	1
Knowledge/Responses from Staff Attending	5	4	3	(2)	1

How could the public hearing format and materials be improved? Colette Brown turned off and read during public comment! Is the hearing just lip service from DOE?

Was the public hearing helpful to you? helpful to hear substantiated unity of Oregonians. LISTEN: WE ARE OPPOSED! I am concerned that the DOE has done nothing to foster trust in the public. DOE has created a black record of lying to the public around issues of safety and health impact!

Please continue on the other side if you run out of space. Please return your completed evaluation form to the registration desk or mail or fax to the address below.

THANK YOU – YOUR FEEDBACK IS IMPORTANT TO US

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Tel-free telephone: 1-877-562-4573 • Toll-free Fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/27/00

232-1

232-1: DOE is committed to discharging its responsibilities in an open manner and providing the public with comprehensive environmental reviews of its proposed actions. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the environmental impact analysis of DOE's proposed alternatives for meeting mission requirements. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

Commentor No. 233: Anonymous

Response to Commentor No. 233

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Public Hearing Evaluation Form

Please place a check mark in the box next to the public hearing attended:

- August 22, 2000
American Museum of Science and Energy
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Oak Ridge, Tennessee 37830
- August 25, 2000
Westcoast Idaho Falls Hotel
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Idaho Falls, Idaho 83402
- August 28, 2000
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1108 E. Marina Way
Hood River, Oregon 97031
- August 29, 2000
Oregon Museum of Science and Industry
1945 SE Water Avenue
Portland, Oregon 97214
- August 30, 2000
Washington State Convention and Trade Center
800 Convention Place
Seattle, Washington 98101
- August 31, 2000
Best Western Tower Inn and Conference Center
1515 George Washington Way
Richland, Washington 99352
- September 6, 2000
Crystal Gateway Marriott
1700 Jefferson Davis Highway
Arlington, Virginia 22202

Please circle the appropriate number:

	Very Good		Poor	
	5	4	3	2
Your Level of Knowledge about the PEIS before the Hearing	5	4	(3)	2
Your Level of Knowledge about the PEIS after the Hearing	5	(4)	3	2
Time and Date of Hearing	5	(4)	3	2
Location of Hearing	5	(4)	3	2
Registration Process	5	(4)	3	2
Clarity of Displays and Handouts	5	(4)	3	2
Clarity of Presentations	5	4	3	(2)
Relevancy of Issues and Concerns Addressed	5	4	(3)	2
Opportunities for Discussion	5	4	(3)	2
DOE Officials' Willingness to Listen	5	4	3	(2)
Knowledge/Responses from Staff Attending	5	4	(3)	2

How could the public hearing format and materials be improved? *I have for the
the comment form, maybe try 2 next time.*

Was the public hearing helpful to you? *Yes, but you didn't address
the bigger picture concerns - the need for more rad.
material when it's available already.*

Please continue on the other side if you run out of space. Please return your completed evaluation form to the registration desk or mail or fax to the address below.

THANK YOU - YOUR FEEDBACK IS IMPORTANT TO US

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free telephone: 1-877-562-4893 • Toll-free fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/27/00

233-1: The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

233-1

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.



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Westcoast Idaho Falls Hotel
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Richland, Washington 99352
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Crystal Gateway Marriott
1700 Jefferson Davis Highway
Arlington, Virginia 22202

Please circle the appropriate number:

	Very Good		Poor		
	5	4	3	2	1
Your Level of Knowledge about the PEIS before the Hearing	5	4	3	2	1
Your Level of Knowledge about the PEIS after the Hearing	5	4	3	2	1
Time and Date of Hearing	5	4	3	2	1
Location of Hearing	5	4	3	2	1
Registration Process	5	4	3	2	1
Clarity of Displays and Handouts	5	4	3	2	1
Clarity of Presentations	5	4	3	2	1
Relevancy of Issues and Concerns Addressed	5	4	3	2	1
Opportunities for Discussion	5	4	3	2	1
DOE Officials' Willingness to Listen	5	4	3	2	1
Knowledge/Responses from Staff Attending	5	4	3	2	1

How could the public hearing format and materials be improved? *There seemed to be little or no questioning that the priorities & demands of DOE nuclear project are inappropriate or inconsistent with local & national public opinion.*

Was the public hearing helpful to you? *It was frustrating. I don't believe health & human welfare, the environment & the use of non-polluting safe energy options are receiving adequate consideration. The PEIS is incomplete & inadequate.*

Please continue on the other side if you run out of space. Please return your completed evaluation form to the registration desk or mail or fax to the address below.

OVER

THANK YOU - YOUR FEEDBACK IS IMPORTANT TO US

For more information contact: Colette E. Brown, NE-60
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/27/00

234-1

234-1: DOE notes the commentor's views. However, the furtherance of isotope production and nuclear research are consistent with good stewardship of the environment and human welfare. The NI PEIS is a complete evaluation of the environmental impacts of a range of reasonable alternatives for this proposed action. In addition to restarting the FFTF, the NI PEIS also evaluates alternatives that would either employ the use of existing facilities or rely on the construction of new facilities. Section 1.2 of Volume 1 was revised to clarify the purpose and need for the proposed action.

Commentor No. 234: Anonymous (Cont'd)

Although the missions of this project may be justifiable they are not without criticism, they are not justified just because they are justifiable. Nuclear reactors are just not consistent with human & environmental well-being, particularly not in the long-term. Our priorities should be to address existing problems, not to move forward on new ventures that just are not warranted or wanted. Existing reactors in other locations should be used & maximized if that makes sense. I don't understand why any needed materials cannot be gotten from Russia or any other location that provides them without starting new initiatives. How can you expect support when the track record of the DOE & safety & clean-up has been abysmal. The mission here should be on clean-up. It should certainly not be about any commercial objectives.

234-1
(Cont'd)

Response to Commentor No. 234

The United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Consistent with the mandates under the Atomic Energy Act, DOE seeks to fulfill its responsibility to ensure that there is a reliable supply of isotopes in the U.S. to meet future demand. DOE does not subsidize commercial producers. DOE encourages the commercial sector to privatize the production of medical isotopes in certain instances, and does this by turning over production of certain isotopes to commercial entities once DOE has established that commercial production is economically viable. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed action are relatively low and are discussed in detail in Chapter 4 and Appendixes H, I, and J in the Final NI PEIS. The proposed action would not have an impact on the cleanup missions at the candidate sites.

Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Commentor No. 235: Anonymous

Response to Commentor No. 235

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Public Hearing Evaluation Form

Please place a check mark in the box next to the public hearing attended:

- | | |
|--|--|
| <input type="checkbox"/> August 22, 2000
American Museum of Science and Energy
300 South Tulane Avenue
Oak Ridge, Tennessee 37830 | <input type="checkbox"/> August 30, 2000
Washington State Convention and Trade Center
800 Convention Place
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Best Western Tower Inn and Conference Center
1515 George Washington Way
Richland, Washington 99352 |
| <input type="checkbox"/> August 28, 2000
Hood River Inn
1108 E. Marina Way
Hood River, Oregon 97031 | <input type="checkbox"/> September 6, 2000
Crystal Gateway Marriott
1700 Jefferson Davis Highway
Arlington, Virginia 22202 |
| <input checked="" type="checkbox"/> August 29, 2000
Oregon Museum of Science and Industry
1945 SE Water Avenue
Portland, Oregon 97214 | |

Please circle the appropriate number:

	Very Good	4	3	2	Poor
Your Level of Knowledge about the PEIS before the Hearing	5	4	3	(2)	1
Your Level of Knowledge about the PEIS after the Hearing	5	(4)	3	2	1
Time and Date of Hearing	5	(4)	3	2	1
Location of Hearing	5	(4)	3	2	1
Registration Process	5	(4)	3	2	1
Clarity of Displays and Handouts	5	(4)	3	2	1
Clarity of Presentations	5	4	(3)	2	1
Relevancy of Issues and Concerns Addressed	5	(4)	3	2	1
Opportunities for Discussion	5	(4)	3	2	1
DOE Officials' Willingness to Listen	5	(4)	3	2	1
Knowledge/Responses from Staff Attending	5	(4)	3	2	1

How could the public hearing format and materials be improved? *stop nuclear reactors and save everyone all the time + energy*

Was the public hearing helpful to you? *yes*

Please continue on the other side if you run out of space. Please return your completed evaluation form to the registration desk or mail or fax to the address below.

THANK YOU - YOUR FEEDBACK IS IMPORTANT TO US

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 toll-free telephone: 1-877-362-4493 • toll-free fax: 1-877-362-4492
 e-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/27/00

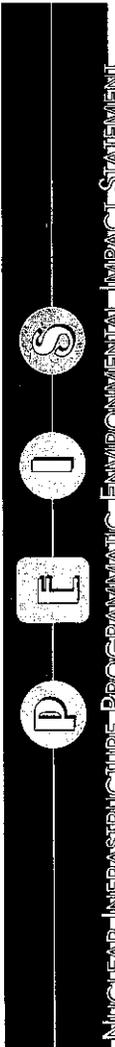
235-1

235-1: The commentor's opposition to nuclear reactors is noted. This PEIS evaluates a number of alternatives to produce radioisotopes, including plutonium-238. Some of the alternatives use an accelerator and not a nuclear reactor.

Commentor No. 236: Anonymous

Response to Commentor No. 236

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Public Hearing Evaluation Form

Please place a check mark in the box next to the public hearing attended:

- | | |
|--|--|
| <input type="checkbox"/> August 22, 2000
American Museum of Science and Energy
300 South Tulane Avenue
Oak Ridge, Tennessee 37830 | <input type="checkbox"/> August 30, 2000
Washington State Convention and Trade Center
800 Convention Place
Seattle, Washington 98101 |
| <input type="checkbox"/> August 25, 2000
Westcoast Idaho Falls Hotel
475 River Parkway
Idaho Falls, Idaho 83402 | <input type="checkbox"/> August 31, 2000
Best Western Tower Inn and Conference Center
1515 George Washington Way
Richland, Washington 99352 |
| <input type="checkbox"/> August 28, 2000
Hood River Inn
1108 E. Marina Way
Hood River, Oregon 97031 | <input type="checkbox"/> September 6, 2000
Crystal Gateway Marriott
1700 Jefferson Davis Highway
Arlington, Virginia 22202 |
| <input checked="" type="checkbox"/> August 29, 2000
Oregon Museum of Science and Industry
1945 SE Water Avenue
Portland, Oregon 97214 | |

Please circle the appropriate number:

	Very Good	3	2	Poor
Your Level of Knowledge about the PEIS before the Hearing	5	(4)	3	2 1
Your Level of Knowledge about the PEIS after the Hearing	5	4	3	2 1
Time and Date of Hearing	(5)	4	3	2 1
Location of Hearing	5	4	3	(2) 1
Registration Process	5	4	(3)	2 1
Clarity of Displays and Handouts	5	4	3	2 1
Clarity of Presentations	5	4	3	2 1
Relevancy of Issues and Concerns Addressed	5	4	3	2 1
Opportunities for Discussion	5	4	3	2 1
DOE Officials' Willingness to Listen	5	4	3	2 1
Knowledge/Responses from Staff Attending	5	4	3	2 1

How could the public hearing format and materials be improved? _____

Was the public hearing helpful to you? Only to let me tell you to quit this dangerous FFTR project.

Please continue on the other side if you run out of space. Please return your completed evaluation form to the registration desk or mail or fax to the address below.

THANK YOU – YOUR FEEDBACK IS IMPORTANT TO US

For more information contact: Collette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
toll-free telephone: 1-877-562-4592 • toll-free fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/27/00

236-1

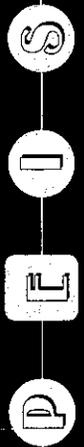
236-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTR. DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and holding public hearings is an essential and required part of the NEPA process. DOE takes this participation seriously. In preparing the Final NI PEIS, DOE has carefully considered and responded to all comments received from the public during the comment period, regardless of how or where they were received. DOE's responses are contained in the NI PEIS Comment Response Document.

Commentor No. 237: Gay Arpan

Response to Commentor No. 237

Draft PEIS Comment Form

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



We need FFTF, please restart it. This facility is already built and good for general maintenance of services. Let's use some of our own resources instead of importing everything we need.

237-1

237-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
returning this comment form to the registration desk at the meeting or to the address below
calling toll-free and leaving your comments: 1-877-562-4593
faxing your comments toll-free to: 1-877-562-4592
commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Gay Arpan

Organization:

Home Organization Address (circle one): PD Box 38

City: Alzada State: MT Zip Code: 59311

Telephone (optional): 406-828-4517

E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Commentor No. 238: Kenneth Norris Fluor Hanford, Inc.

08/31/00 THU 15:44 FAX 509 372 3150

A LEGAL SERVICES

001

Draft PEIS Comment Form

The Fast Flux Test Facility represents over \$1 billion in taxpayer investment that has operated efficiently and according to design. Changing the mission from one of applied research to radioisotope production for medical use is a prudent use of this capital resource. Critics are simply "non-nuclear" without regard to the chest X-rays and microwave ovens that all rely on nuclear science. Do the right thing: re-commission FFTF.

238-1

238-1: DOE notes the commentor's opinion.

238-2: DOE notes the commentor's support for radioisotope production for medical use.

238-3: DOE notes the commentor's support for Alternative 1, Restart FFTF.

238-2

238-3

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Kenneth Norris

Organization: Fluor Hanford, Inc.

Home/Organization Address (circle one): P.O. Box 1000
RT-15

City: Richland State: WA Zip Code: 99352

Telephone (optional): 509/776-4400

E-mail (optional): Kenneth.Norris@flg.com

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Celia E. Brown, NG-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

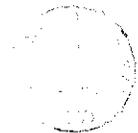


Response to Commentor No. 238

Commentor No. 239: Valorie Blaser

Response to Commentor No. 239

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

76



Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

Stop using the planet and
all creation on it as a personal
experiment - No FFER
here or anywhere,

Name Valorie Blaser

Address 1050 W 28

City, state Eugene, Ore Zip 97405

239-1

239-1: DOE notes the commentor's opposition to Alternative 1, Restart FTFE.

Commentor No. 240: Virginia J. Morrison

Draft PEIS Comment Form

Please consider the following in regards to restarting the Fast Flux Test Facility in Southeastern Washington:

- This facility can provide isotopes for many special purposes such as medical research and therapy, as well as deep space probes.
- This facility can produce these isotopes at the least cost and in the shortest time.
- There is still a 20 year lifetime in this facility and it makes no sense to simply destroy such a useful and needed resource.

Virginia J Morrison

240-1

240-1: DOE notes the commentor's support for Alternative 1, Restart FFTF. It should be noted that the FFTF would be operated for 35 years under this proposed action if selected in the Record of Decision.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Virginia J Morrison

Organization: _____

Home/Organization Address (circle one): 6412 W. Willamette

City: Rennewick State: WA Zip Code: 99336

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Collette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



Commentor No. 242: Patricia Sims

Response to Commentor No. 242

Aug. 30 '00 23:06 PAT SIMS FAX 2538590 P. 1

Public Hearing Evaluation Form

Please place a check mark in the box next to the public hearing attended:

- August 22, 2000
American Museum of Science and Energy
300 South Tulane Avenue
Oak Ridge, Tennessee 37830
- August 25, 2000
Westcoast Idaho Falls Hotel
475 River Parkway
Idaho Falls, Idaho 83402
- August 28, 2000
Hood River Inn
1108 E. Marine Way
Hood River, Oregon 97031
- August 29, 2000
Oregon Museum of Science and Industry
1945 SE Water Avenue
Portland, Oregon 97214
- August 30, 2000
Washington State Convention and Trade Center
800 Convention Place
Seattle, Washington 98101
- August 31, 2000
Best Western Tower Inn and Conference Center
1515 George Washington Way
Richland, Washington 99352
- September 6, 2000
Crystal Gateway Marriott
1700 Jefferson Davis Highway
Arlington, Virginia 22202

Please circle the appropriate number:

	Very Good	Good	Fair	Poor
Your Level of Knowledge about the PEIS before the Hearing	5	4	3	2
Your Level of Knowledge about the PEIS after the Hearing	5	4	3	2
Time and Date of Hearing	5	4	3	2
Location of Hearing	5	4	3	2
Registration Process	5	4	3	2
Clarity of Displays and Handouts	5	4	3	2
Clarity of Presentations	5	4	3	2
Relevancy of Issues and Concerns Addressed	5	4	3	2
Opportunities for Discussion	5	4	3	2
DOE Officials' Willingness to Listen	5	4	3	2
Knowledge/Responses from Staff Attending	5	4	3	2

How could the public hearing format and materials be improved? *Address The Issue of leaking Toxic Material That is already in danger to the Northwest*

Was the public hearing helpful to you? *Made me realize that the DOE is not truthful and is not concerned w/ the safety or even of the interests of the residents of Northwest citizens. Also made me realize that it is the nuclear energy interests that are behind this program.*
Please continue on the other side if you run out of space. Please return your completed evaluation form to the registration desk or mail or fax to the address below.

THANK YOU - YOUR FEEDBACK IS IMPORTANT TO US

For more information contact: Colette E. Brown, NE-30
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Telephone: 1-877-462-4692 • Toll-free Fax: 1-877-502-4692
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/27/00

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



242-1: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The Secretary of Energy will make the final determination on the alternative or combination of alternatives to satisfy the NI PEIS missions. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

242-2: DOE is committed to discharging its responsibilities in an open manner and providing the public with comprehensive environmental reviews of its proposed actions. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the environmental impact analysis of DOE's proposed alternatives for meeting mission requirements. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

242-3: The comment on the credibility of environmental impacts is noted. The environmental impacts associated with operation of the Hanford facilities during normal operations and from postulated accidents are presented in Section 4.3 of the NI PEIS. The assessments were made using well established and accepted analytical methods, as described in Appendixes

Commentor No. 242: Patricia Sims (Cont'd)

Aug. 30 '00 2:08

PAT SIMS

FAX 2532590

P. 1

Draft PEIS Comment Form

While I do not pretend to understand the complexities of this issue, there are several factors which have gone into my vehement opposition to restart of the FFTF reactor.

- 1- The toxic mess presently at Hanford must be cleaned up!! Your statement that environmental impacts are minimal is absurd.
- 2- Your commitment made years ago to clean up this Hanford mess has not been honored - leakage into the Columbia River is now imminent.
- 3- DOE is not credible - your claim of the need for medical isotopes is not valid and your claim for NASA's needs is distorted.
- 4- DOE is not paying attention to the message of northwest residents - WE DO NOT WANT THIS REACTOR RESTARTED. SHUT IT DOWN ENTIRELY.
- 5- The decision is being made in the wrong place - in Washington DC instead of the Northwest. DOE officials do not have to live w/ the mess that is already there, let alone more.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure.PEIS@hq.doe.gov

Name (optional): Patricia Sims
 Organization: Not a part of Ralph Nader's group
 Home/Work/Other Address (circle one):
13617 SE GRANT CT
 City: PORTLAND State: OR Zip Code: 97233
 Telephone (optional): 503-253-0590
 E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Collette E. Brown, NE-50
 U.S. Department of Energy - 19001 Germantown Road - Germantown, MD 20874
 Toll-free telephone: 1-877-562-4693 • Toll-free fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure.PEIS@hq.doe.gov



7/12/00

Response to Commentor No. 242

G through L. The analytical methodology is conservative by nature; the actual impacts to the environment would be expected to be less than calculated. All impacts have been shown to be small. No fatalities among workers or the general public would be expected over the full 35 year operational period. The impacts to the biosphere (air, water, and land) are also seen to be small.

242-1

242-3

242-1

242-4

242-5

242-1

- 242-4: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings.

The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's



Commentor No. 242: Patricia Sims (Cont'd)

Response to Commentor No. 242

charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Under the No Action Alternative, DOE would continue to purchase plutonium-238 to meet the space mission needs for the 35-year evaluation period considered in the NI PEIS. However, DOE recognizes that any purchase beyond what is currently available to the United States through the existing contract would likely require negotiation of a new contract and may require additional NEPA review. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

242-5: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 243: Edith D. Iler

From: Edith Iler[SMTP:RFC_822:EILER.TEACHERS.WRHS@WRHS.BCSD.K12.ID.US]
 Sent: Wednesday, August 30, 2000 7:35:44 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Cc: larry_craig@craig.senate.gov%internet; ask.helen@mail.house.gov%internet; mike.simpson@mail.house.gov%internet; governor@governor.state.id.us%internet
 Subject: Comments
 Auto forwarded by a Rule

to: the Honorable Senators Crapo & Craig,
 The Honorable Representatives Chenoweth & Simpson,
 and Ms. Colette Brown _ Dept. of Energy, Office of Space & Defense Power Systems

RE: My political and environmental opposition to the draft environmental impact statement for accomplishing expanded nuclear energy research and development and isotope production missions in the U.S. including the role of the FFTF facility at Hanford, WA _ none of this in Idaho, please keep it at Hanford!

Please tell the Department of Energy:

- a. Reprocessing is not acceptable and should not be considered at INEEL or any other facility.
- b. Building 666 is a decrepit and highly contaminated building and should be decommissioned in a manner that is protective of human health and the environment.
- c. Plutonium_238 production is unnecessary and its use too risky.
- d. Using ATR at INEEL would interfere with its current mission of producing medical and industrial isotopes.
- e. Extend the comment deadline 30 days

243-1

243-2

243-3

243-4

243-5

Response to Commentor No. 243

243-1: The commentor's position on the roles of Hanford and INEEL is noted.

243-2: DOE would not conduct any reprocessing to produce weapons grade plutonium under any of the alternatives considered under this programmatic environmental impact statement. The alternatives do include processing of target materials used to produce isotopes for medical and industrial uses, plutonium-238 for space missions, and nuclear materials research and development. Sections 4.3.1.1.13; 4.3.2.1.13; 4.3.3.1.13; and 4.4.3.1.13 were revised to clarify the waste management approach for waste resulting from processing of target materials for plutonium-238 production.

Building CPP-666 is divided into two parts, the Fuel Storage Facility and the Fluorinel Dissolution Process Facility (FDPF). The FDPF is under consideration in this PEIS for storage of neptunium-237 oxide, preparation of neptunium-237 targets, and separation of plutonium-238 from irradiated targets. This facility will meet, with further analysis and/or minor modifications, the criteria to safely conduct these operations.

243-3: DOE notes the commentor's opposition to enhancing its existing nuclear facility infrastructure to support production of plutonium-238 for use in future NASA space exploration missions. Section 1.2.2 of Volume 1 was revised to clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed production of plutonium-238 are relatively low and are discussed in detail in Chapter 4 of Volume 1 and appendixes H, I, and J of Volume 2 in the Final NI PEIS. For almost 40 years, radioisotope power systems have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. However, potential health and safety impacts associated with future launches of spacecraft utilizing plutonium 238 are not within the scope of the NI PEIS analysis, but would be addressed in the specific NEPA documentation prepared by NASA in support of such missions.

243-4: As stated in EIS Section 2.3.1.2, ATR would continue to meet its medical and industrial radioisotope production mission for the no action and most other alternatives considered where ATR is not used for the production

Commentor No. 243: Edith D. Iler (Cont'd)

While there is no preferred alternative in this study, which is entitled Draft Programmatic Environmental Impact Statement for Accomplishing Expanded Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility (FFTF) at Hanford, WA., DOE would prefer to accomplish the aforementioned activities at the Fast Flux Test Facility at Hanford.

243-6

I am strongly opposed to the possibility that this program may end up in Idaho by default.

243-1

Sincerely,
Edith D. Iler
Ketchum, Idaho

Response to Commentor No. 243

of plutonium-238. If ATR were to be used as a production facility for plutonium-238 (options 1, 2, 3, 7, 8, and 9 under Alternative 2), it would support medical and industrial radioisotope production to the extent possible. DOE would try to minimize the impact of the new mission on current medical and industrial radioisotope production.

243-5: DOE notes the commentor's request for extension of the public comment period. The Council on Environmental Quality's (CEQ) "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act" (40 CFR 1506.10(c)) require that a minimum of 45 days be allowed for public comment on the Draft NI PEIS. As stated in the Notice of Availability (65 FR 46443 et seq.), the public comment period began on July 28, 2000 and continued to September 18, 2000. In preparing the Final PEIS, DOE has assessed and considered both oral and written comments received on the Draft PEIS during the public comment period and has responded to these comments in the Final PEIS. Volume 3 of the NI PEIS contains public comments received on the NI PEIS and DOE responses to those comments. Moreover, late comments were considered to the extent practicable.

243-6: As outlined in 40 CFR Part 1502.14 (e), an agency is not required to specify a preferred alternative or alternatives in the Draft EIS if one does not exist, but must do so in the Final EIS. Accordingly, DOE has identified its preferred alternative in Section 2.8 of Volume 1 that includes a discussion of DOE's reasons for selecting it. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

Commentor No. 244: *Cjleech@aol.com*

From: Cjleech@aol.com%internet
[SMTP:CJLEECH@AOL.COM]
Sent: Wednesday, August 30, 2000 7:34:31 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: (no subject)
Auto forwarded by a Rule

Please restart the FFTF.

|| 244-1

Response to Commentor No. 244

244-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 245: Laura Feldman

From: Laura Feldman[SMTP:LAURA@SEUL123.ORG]
Sent: Wednesday, August 30, 2000 8:57:18 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Hanford
Auto forwarded by a Rule

Dear Ms. Brown,

Starting up the FFTF reactor is sheer lunacy. No kind way of putting that. When my brother was dying of cancer I learned that Oregon has the highest cancer stats on the West coast. I can believe it as I've lost five family members and friends to the disease. My Uncle who died of cancer had actually worked for Hanford in the 50's. Firing up the FFTF reactor, creating cancer victims in order to make isotopes to cure the cancer is a bit like a mad dog chasing its tail (capitalism).

After last night's hearing in Portland, I really don't imagine people in this region are going to stand by while the USDOE and its partner corporations spend billions of tax payer dollars to add to the nuclear waste that hasn't been safely contained or disposed of turning the Columbia watershed into nuclear dumpsite. Please spend our money and your agency's energies on cleaning up Hanford. Nothing else is acceptable.

Sincerely,

Laura Feldman
817 SE 29th
Portland, OR 97214
503_236_8499

Response to Commentor No. 245

245-1: DOE notes the commentor's views and opposition to Alternative 1, Restart FFTF. However, a National Cancer Institute survey published in the Journal of the American Medical Association in 1991 showed no general increased risk of death for people living near nuclear facilities, including the Hanford Site. Cancers are believed to be caused by a combination of hereditary and environmental factors, including radiological and chemical agents. In ongoing clinical testing, therapeutic radioisotopes have proven effective in treating cancers and other illnesses while minimizing adverse side effects, making their use an attractive alternative to traditional chemotherapy and radiation treatments.

245-2: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Response to Commentor No. 245

Wastes generated for the NI PEIS missions will be managed in accordance with applicable Federal and state laws and regulations and appropriate DOE orders.

Commentor No. 245: Laura Feldman (Cont'd)

Commentor No. 246: Chris Francovich

From: Chris Francovich[SMTP:CFRAN@MICRON.NET]
 Sent: Wednesday, August 30, 2000 10:07:40 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: INEEL and P_238
 Auto forwarded by a Rule

Ms. Colette Brown
 DOE
 Office of Space and Defense Power Systems

Dear MS. Brown:

Reprocessing is not acceptable and should not be considered at INEEL or any other facility. Building 666 is a decrepit and highly contaminated building and should be decommissioned in a manner that is protective of human health and the environment. Plutonium_238 production is unnecessary and its use too risky.

Using ATR at INEEL would interfere with its current mission of producing medical and industrial isotopes. Extend the comment deadline 30 days.

Thank you,

Chris Francovich, Ed.D.
 370 W. Hughes Ln
 Post Falls, ID 83854
 208.777.7624

246-1

246-2

246-3

246-4

Response to Commentor No. 246

246-1: DOE would not conduct any reprocessing to produce weapons grade plutonium under any of the alternatives considered under this PEIS. The alternatives include processing of target materials used to produce isotopes for medical and industrial uses, plutonium-238 for space missions, and nuclear materials research and development. Sections 4.3.1.1.13; 4.3.2.1.13; 4.3.3.1.13; and 4.4.3.1.13 were revised to clarify the waste management approach for waste resulting from processing of target materials for plutonium-238 production.

Building CPP-666 is divided into two parts, the Fuel Storage Facility and the Fluorinel Dissolution Process Facility (FDPF). The FDPF is under consideration in this PEIS for storage of neptunium-237 oxide, preparation of neptunium-237 targets, and separation of plutonium-238 from irradiated targets. This facility will meet, with further analysis and/or minor modifications, the criteria to safely conduct these operations.

246-2: DOE notes the commentor's opposition to enhancing its existing nuclear facility infrastructure to support production of plutonium-238 for use in future NASA space exploration missions. Section 1.2.2 of Volume 1 was revised to clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed production of plutonium-238 are relatively low and are discussed in detail in Chapter 4 of Volume 1 and Appendixes H, I, and J of Volume 2 in the Final NI PEIS. For over 30 years, radioisotope power systems have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. However, potential health and safety impacts associated with future launches of spacecraft utilizing plutonium-238 are not within the scope of the NI PEIS analysis, but would be addressed in the specific NEPA documentation prepared by NASA in support of such missions.

246-3: As stated in EIS Volume 1, Section 2.3.1.2, ATR would continue to meet its medical and industrial radioisotope production mission for the no action and most other alternatives considered where ATR is not used for the production of plutonium-238. If ATR were to be used as a production facility for plutonium-238 (options 1, 2, 3, 7, 8, and 9 under Alternative 2), it would support medical and industrial radioisotope production to the

Commentor No. 246: Chris Francovich (Cont'd)

Response to Commentor No. 246

extent possible. DOE would try to minimize the impact of the new mission on current medical and industrial radioisotope production.

- 246-4:** DOE notes the commentor's request for extension of the public comment period. The Council on Environmental Quality's (CEQ) "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act" (40 CFR 1506.10(c)) require that a minimum of 45 days be allowed for public comment on the Draft NI PEIS. As stated in the Notice of Availability (65 FR 46443 et seq.), the public comment period began on July 28, 2000 and continued to September 18, 2000. In preparing the Final PEIS, DOE has assessed and considered both oral and written comments received on the Draft PEIS during the public comment period and has responded to these comments in the Final PEIS. Volume 3 of the NI PEIS contains public comments received on the NI PEIS and DOE responses to those comments. Moreover, late comments were considered to the extent practicable.

Commentor No. 247: Brenda Goodwin

From: JBCGoodwin@aol.com%internet
 [SMTP:JBCGOODWIN@AOL.COM]
 Sent: Wednesday, August 30, 2000 10:39:10 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Cc: larrycraig@craig.senate.gov%internet;
 ask.helen@mail.house.gov%internet;
 mike.simpson@mail.house.gov%internet;
 governor@governor.state.id.us%internet
 Subject: (no subject)
 Auto forwarded by a Rule

No Plutonium at INEEL or anywhere. We need to find alternatives to this highly dangerous substance. Our building where the proposed site of production would be is 666. This building is already contaminated and has not been in use for years. The danger of a space shuttle crash releasing pounds of this substance would kill thousands of people, when you consider just one tiny particle is deadly.

Please consider the health of future generations and avoid a terrible catastrophe by stopping all production of plutonium. God is your judge and He is watching you...666.

Sincerely,
 Brenda Goodwin

247-1

247-2

247-3

247-1

Response to Commentor No. 247

247-1: DOE notes the commentor's opposition to enhancing its existing nuclear facility infrastructure to support production of plutonium-238 for use in future NASA space exploration missions. Section 1.2.2 of Volume 1 was revised to clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed production of plutonium-238 are relatively low and are discussed in detail in Chapter 4 of Volume 1 and appendixes H, I, and J of Volume 2 in the Final NI PEIS. For over 30 years, radioisotope power systems have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. However, potential health and safety impacts associated with future launches of spacecraft utilizing plutonium-238 are not within the scope of the NI PEIS analysis, but would be addressed in the specific NEPA documentation prepared by NASA in support of such missions.

247-2: Building CPP-666 is divided into two parts, the Fuel Storage Facility and the Fluorinel Dissolution Process Facility (FDPF). The FDPF is under consideration in this PEIS for storage of neptunium-237 oxide, preparation of neptunium-237 targets, and separation of plutonium-238 from irradiated targets. This facility will meet, with further analysis and/or minor modifications, the criteria to safely conduct these processes.

247-3: DOE notes the commentor's opposition to NASA's use of nuclear materials for space missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. As used by NASA, the plutonium-238 is encapsulated and shielded to minimize any hazards to personnel or to the environment, even in the event of a catastrophic launch accident or inadvertent earth re-entry.

Commentor No. 248: Jeffrey Belt

From: Jeffrey Belt[SMTP:JEFFOU@SPEAKEASY.ORG]
 Sent: Thursday, August 31, 2000 1:43:20 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Nuclear Infrastructure PEIS comments
 Auto forwarded by a Rule

I strongly favor initiative 5 (permanent shutdown of FFTF and no new facilities) for the following reasons:

1. From an investment perspective, I don't want public funds spent on an unsure and hugely controversial technology.

a. There's no assurance that the benefits (medical isotopes, NASA instrument fuel) outweighs the risk (soil or groundwater contamination, even the unlikely accident). I also find suspicious the almost contradictory statistics and incomprehensible technical details bandied by both the "pro" and "con" sides. Either the technology is not well understood, or there's some hidden agenda around the FFTF restart which muddies the details.

b. The funds may be separate from cleanup funds, but it's still tax money, and it's money that could be spent on cleanup anyway. Spending funds on FFTF restart now is basically saying Hanford will need more cleanup funds later. If you can really clean up to prove it's possible, thereby showing complete control of the entire nuclear cycle, then I would be more favorable to the FFTF or other facilities restarted or being built.

2. The DoE discredited its own PEIS by making verbal statements that things as they stand now are not as they are in the EIS: the cost report is separate, final treatment of wastes is unspecified and probably unknown, and distinctions were made between research vs. commercial isotopes that aren't in the EIS. This should all be part of the EIS. I am looking forward to a second draft.

Thank you for this opportunity to provide feedback. I hope public feedback is of use and not ignored, whichever way the final decision goes.

Jeffrey Belt
 15600 NE 8th St B1 PMB 480, Bellevue, WA 98008, (425) 641 6933

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248-5

248-7

Response to Commentor No. 248

- 248-1:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 248-2:** DOE notes the commentor's opinion. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.
- 248-3:** There is no hidden agenda around the restart of FFTF. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.
- Potential environmental, health, and safety impacts associated with the proposed action are relatively low, and are discussed in detail in Chapter 4 of Volume 1 and associated appendixes in Volume 2 of the Final NI PEIS.
- 248-4:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE).

Commentor No. 248: Jeffrey Belt (Cont'd)

Response to Commentor No. 248

The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

248-5: DOE notes the views expressed but the nature and scope of the statements referenced by the commentor are unclear. The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. DOE mailed this document to about 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P in the Final NI PEIS.

DOE does make the distinction between research and commercial quantities of isotopes. Although the discussion of purpose and need in the NI PEIS (Section 1.2 of Volume 1) is more focused on the two broad civilian applications for isotopes (medical and industrial), the differentiation between research and commercial isotopes is made within the context of DOE isotope production capacity. Specifically, Section 1.2.1 of the Final NI PEIS has been revised to better make the distinction between the relatively small quantities of individual isotopes used in research and development and those that have proven application and are produced in relatively larger quantities to meet commercial demands.

248-6: DOE notes the commentor's concern regarding waste treatment. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and

Commentor No. 248: Jeffrey Belt (Cont'd)

Response to Commentor No. 248

environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and appropriate DOE orders.

- 248-7:** DOE policy encourages effective public participation in its decision making process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

Commentor No. 249: Joanne Witiak

From: Joanne Witiak[SMTP:WITIAK@WORLDNET.ATT.NET]
Sent: Thursday, August 31, 2000 7:09:26 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: I support the restart of the FFTF
Auto forwarded by a Rule

I support the restart of the FFTF

Joanne Witiak
500 Stony Hill Rd.
Yardley, PA 19067

|| 249-1

Response to Commentor No. 249

249-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 250: Eugene Johnson

From: Linda (038) Eugene
 [SMTP:SANIBELS@EARTHLINK.NET]
 Sent: Thursday, August 31, 2000 8:15:04 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: support for ffff
 Auto forwarded by a Rule

I support the restart of the FFTF Reactor Facility at Hanford to meet the national needs for medical isotopes and other peaceful nuclear materials. The FFTF is the most economical, safe, and environmental friendly method available to meet these needs.

_Eugene Johnson

250-1

Response to Commentor No. 250

250-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 251: Linda Johnson

From: Linda (038) Eugene
[SMTP:SANIBEL77@EARTHLINK.NET]
Sent: Thursday, August 31, 2000 8:34:50 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: restart of ffff
Auto forwarded by a Rule

I Support the restart of the FFTF reactor facility at Hanford to meet the national needs for medical isotopes and other peaceful nuclear materials. The FFTF is the most economical, safe, and environmentally friendly method available to meet those needs.

Linda Johnson

251-1

Response to Commentor No. 251

251-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 252: Jan Nissl

From: Jan Nissl[SMTP:JNISSL@HEALTHWISE.ORG]
 Sent: Thursday, August 31, 2000 9:48:23 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Cc: 'larry(u)craig(a)craig.senate.gov'; 'ask.helen(a)mail.house.gov';
 'mike.simpson(a)mail.house.gov'; 'governor(a)governor.state.id.us'
 Subject: Ms. Colette Brown
 Auto forwarded by a Rule

Please do not allow plutonium reprocessing to start again at INEEL. It is a hazardous material and the means of generating it has been proven to be faulty, resulting in massive clean-ups at Hanford and Savannah River.

252-1

No one wants this level of isotope production, especially those of us in Idaho _ we're trying to get INEEL cleaned up!

It is also not acceptable that this is being pushed through without a longer public comment period _ please extend the deadline by at least another 4 weeks.

252-2

The site that is proposed is Building 666 _ how ironic that number is thought of as being a satanic expression _ take the hint _ don't continue with this proposal. Besides that, the building has already been classified as highly contaminated _ how do you make it fit for people to work there?

252-1

I doubt NASA really needs this isotope _ the government has done little to prove to the people that these dangerous hazards in any form are for the good of mankind. The Bush administration shut down reprocessing in 1992 __ This was done to demonstrate US willingness to staunch the flow of plutonium and to persuade other countries not to engage in this threatening technology. Let's keep it that way. I understand the ATR at INEEL is being used to produce medical and industrial isotopes _ that at least seems credible _ to switch to something that is so hazardous and NASA doesn't really need it, is foolish.

252-3

252-4

Please deny this proposal. Thank you
 Jan Nissl
 1115 E. State, Boise, Id 83712

Response to Commentor No. 252

252-1: DOE would not conduct any reprocessing to produce weapons grade plutonium under any of the alternatives considered under this programmatic environmental impact statement. The alternatives include processing of target materials used to produce isotopes for medical and industrial uses, plutonium-238 for space missions, and nuclear materials research and development. Sections 4.3.1.1.13; 4.3.2.1.13; 4.3.3.1.13; and 4.4.3.1.13 were revised to clarify the waste management approach for waste resulting from processing of target materials for plutonium-238 production.

Building CPP-666 is divided into two parts, the Fuel Storage Facility and the Fluorine Dissolution Process Facility (FDPF). The FDPF is under consideration in this PEIS for storage of neptunium-237 oxide, preparation of neptunium-237 targets, and separation of plutonium-238 from irradiated targets. This facility will meet, with further analysis and/or minor modifications, the criteria to safely conduct these operations.

252-2: DOE notes the commentor's request for extension of the public comment period. The Council on Environmental Quality's (CEQ) "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act" (40 CFR 1506.10(c)) require that a minimum of 45 days be allowed for public comment on the Draft NI PEIS. As stated in the Notice of Availability (65 FR 46443 et seq.), the public comment period began on July 28, 2000 and continued to September 18, 2000. In preparing the Final PEIS, DOE has assessed and considered both oral and written comments received on the Draft PEIS during the public comment period and has responded to these comments in the Final PEIS. Volume 3 of the NI PEIS contains public comments received on the NI PEIS and DOE responses to those comments. Moreover, late comments were considered to the extent practicable.

252-3: Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the

Commentor No. 252: Jan Nissl (Cont'd)

Response to Commentor No. 252

potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions would be in jeopardy. Section 1.2.2 of Volume 1 was revised to clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed production of plutonium-238 are relatively low and are discussed in detail in Chapter 4 of Volume 1 and appendixes H, I, and J of Volume 2 in the may be lost. For over 30 years, radioisotope power systems have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. However, potential health and safety impacts associated with future launches of spacecraft utilizing plutonium 238 are not within the scope of the NI PEIS analysis, but would be addressed in the specific NEPA documentation prepared by NASA in support of such missions.

Unlike plutonium-239, plutonium-238 is not used in nuclear weapons. The technology that is discussed in the NI PEIS would be used to chemically separate plutonium-238 and neptunium from irradiated targets and not from irradiated or spent nuclear fuel, whereas reprocessing separates weapons grade plutonium-239 from irradiated nuclear fuel. As discussed in the separate nonproliferation impact assessment report, use of this technology to produce plutonium-238 from irradiated targets will not create a nonproliferation threat. DOE is committed to full compliance with and support of the U.S. policy prohibiting reprocessing.

- 252-4:** As stated in PEIS Section 2.3.1.2 of Volume 1, ATR would continue to meet its medical and industrial radioisotope production mission for the no action and most other alternatives considered where ATR is not used for the production of plutonium-238. If ATR were to be used as a production facility for plutonium-238 (options 1, 2, 3, 7, 8, and 9 under Alternative 2), it would support medical and industrial radioisotope production to the extent possible. DOE would try to minimize the impact of the new mission on current medical and industrial radioisotope production. Specific future NASA space missions which will require significant quantities of plutonium-238 are identified in EIS Section 1.2.2. The commentor's opposition to the production of plutonium-238 for NASA is noted.

Commentor No. 253: Parke G. Burgess, Jr.

From: Parke Burgess
 [SMTP:PARKE@NORTHWESTWATCH.ORG]
 Sent: Thursday, August 31, 2000 10:50:46 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Cc: 'j.burgess(a)esw.org'
 Subject: Do Not Restart the FFTF Reactor at Hanford
 Auto forwarded by a Rule

I am writing to urgently oppose the restart of the FFTF reactor at Hanford.

I believe that the materials produced, the manner of their production, and the waste such production entails are too dangerous to undertake. DOE has a long-standing obligation to cleanup Hanford, at which task DOE is woefully behind schedule. Creating more hazards at Hanford, on our roadways, railways and sea lanes is utterly unacceptable.

When are we going to learn that we cannot control these highly toxic substances; that accidents do happen; that we do not have sufficient understanding to take care of wastes that will be lethal for thousands of years to come?

By the way, your safety assurances in the PEIS are laughably optimistic: do you take us for fools?

Parke G. Burgess Jr
 5316 2nd Ave NW
 Seattle, WA 98107
 (206) 297_0391
 pjburgess@aya.yale.edu

253-1

253-2

253-3

253-2

Response to Commentor No. 253

253-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

253-2: The comments on the production of materials, and on the safety of operations considered under Alternative 1, have been noted. The types of materials produced under Alternative 1, Restart FFTF, are given in Section 1.2 of Volume 1, Purpose and Need for Agency Actions, of the NI PEIS. All of the materials (mainly radioactive isotopes) have been safely managed by DOE in the past. The manner of their production, including target production, processing and irradiation is described briefly in Section 2.3 of Volume 1, Description of Facilities and in more detail in Appendixes A through D. The impacts associated with each of these production activities are presented in Section 4.3. The presentations include the numbers of human health effects to Hanford workers and the general public in the Hanford area, and an assessment of the management of radioactive and hazardous wastes generated during facility operations. The analytical methodology (described in Appendix G through L) is conservative by nature; the actual impacts during normal operations and the risks associated with postulated accidents would be expected to be less than calculated. All impacts are shown to be small.

253-3: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Chapter 4 of the PEIS, Environmental Consequences, evaluates the risk from transportation activities associated with each alternative. Transportation risks were determined to be very low.

Commentor No. 254: Ruthann Saphier

From: Ruthann Saphier
[SMTP:RSAPHIER@SUNVALLEY.NET]
Sent: Thursday, August 31, 2000 12:31:25 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: No Reprocessing at INEEL PLEASE!!!!
Auto forwarded by a Rule

Ms. Colette Brown
DOE, Office of Space and Defense Power Systems

I am a resident of Sun Valley in the great state of Idaho. I am terrified by the news of reprocessing at INEEL. Not only is INEEL over our Snake River Aquifer is also located over a seismic fault line. The question might be WHY with the educated group at DOE does INEEL still exist in its present location. Any more activity there is simply unacceptable and hazardous to our health!

254-1

Reprocessing is not acceptable and should not be considered at INEEL or any other facility .

254-2

Building 666 is a decrepit and highly contaminated building and should be decommissioned in a manner that is protective of human health and the environment .

Plutonium_238 production is unnecessary and its use too risky .

254-3

Using ATR at INEEL would interfere with its current mission of producing medical and industrial isotopes.

254-4

Response to Commentor No. 254

254-1: The commentor's position concerning additional activities at INEEL is noted. Reprocessing spent nuclear fuel is prohibited by DOE policy, and reprocessing would not occur under any of the nuclear infrastructure alternatives described in Section 2.5 of Volume 1. Under Alternatives 1 through 4, the Fluorinel Dissolution Process Facility at INEEL is a candidate facility for processing irradiated neptunium-237 targets to harvest plutonium-238 for use in NASA's deep space missions. Postirradiation processing is described in Section 2.2.2.3.

The Snake River Plain aquifer and the DOE's use of the aquifer are described in Section 3.3.4.2.1 of the NI PEIS. An analysis of water resource impacts that would result from selection of the Fluorinel Dissolution Process Facility as a fabrication/processing facility for production of plutonium-238 is given in Section 4.3.2.1.4 of the NI PEIS. An annual increase of 23,000 liters of process wastewater would result from plutonium-238 target processing. Under normal operations, no radioactive liquid effluent discharges would occur. Selection of the Fluorinel Dissolution Process Facility as a fabrication/processing facility would have no significant effect on the Snake River Plain aquifer. As discussed in Section 4.4.1.1.4, selection of the Advanced Test Reactor for irradiation of plutonium-238 targets would not measurably alter groundwater use or effluent discharge from the reactor.

Capable fault segments of the Lost River Fault and the Lemhi Fault are thought to terminate near the site boundary of INEEL (see Section 3.3.5 of the NI PEIS). However, INEEL is not located over a seismic fault line. Analyses shown in Sections 4.2.3.2.5, 4.3.2.1.5, 4.4.1.1.5, 4.4.2.1.5, 4.5.2.2.5, and 4.6.2.2.5 of the NI PEIS show that earthquakes pose no significant risk to Building CPP-651, the Fluorinel Dissolution Processing Facility, or the Advanced Test Reactor.

254-2: DOE would not conduct any reprocessing to produce weapons grade plutonium under any of the alternatives considered under this programmatic environmental impact statement. The alternatives include processing of target materials used to produce isotopes for medical and industrial uses, plutonium-238 for space missions, and nuclear materials research and development. Sections 4.3.1.1.13; 4.3.2.1.13; 4.3.3.1.13; and 4.4.3.1.13 were revised to clarify the waste management approach for waste resulting from processing of target materials for plutonium-238 production.

Commentor No. 254: Ruthann Saphier (Cont'd)

Please extend the comment deadline 30 days. This is too critical an issue to rush through.

254-5

Could you accomplish the activities at the Fast Flux Test Facility at Hanford? We folks in Idaho do not want to end up with this program.

254-6

Sincerely yours,
Ruthann Saphier
Concerned citizen from the beautiful state of Idaho

Response to Commentor No. 254

Building CPP-666 is divided into two parts, the Fuel Storage Facility and the Fluorine Dissolution Process Facility (FDPF). The FDPF is under consideration in this PEIS for storage of neptunium-237 oxide, preparation of neptunium-237 targets, and separation of plutonium-238 from irradiated targets. This facility will meet, with further analysis and/or minor modifications, the criteria to safely conduct these operations.

254-3: DOE notes the commentor's opposition to enhancing its existing nuclear facility infrastructure to support production of plutonium-238 for use in future NASA space exploration missions. Section 1.2.2 of Volume 1 was revised to clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed production of plutonium-238 are relatively low and are discussed in detail in Chapter 4 of Volume 1 and appendixes H, I, and J of Volume 2 in the Final NI PEIS. For over 30 years, radioisotope power systems have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. However, potential health and safety impacts associated with future launches of spacecraft utilizing plutonium 238 are not within the scope of the NI PEIS analysis, but would be addressed in the specific NEPA documentation prepared by NASA in support of such missions.

254-4: As stated in EIS Volume 1, Section 2.3.1.2, ATR would continue to meet its medical and industrial radioisotope production mission for the no action and most other alternatives considered where ATR is not used for the production of plutonium-238. If ATR were to be used as a production facility for plutonium-238 (options 1, 2, 3, 7, 8, and 9 under Alternative 2), it would support medical and industrial radioisotope production to the extent possible. DOE would try to minimize the impact of the new mission on current medical and industrial radioisotope production.

254-5: DOE notes the commentor's request for extension of the public comment period. The Council on Environmental Quality's (CEQ) "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act" (40 CFR 1506.10(c)) require that a minimum of 45 days be allowed for public comment on the Draft NI PEIS. As stated in the Notice of Availability (65 FR 46443 et seq.), the public comment period

Commentor No. 254: Ruthann Saphier (Cont'd)

Response to Commentor No. 254

began on July 28, 2000 and continued to September 18, 2000. In preparing the Final PEIS, DOE has assessed and considered both oral and written comments received on the Draft PEIS during the public comment period and has responded to these comments in the Final PEIS. Volume 3 of the NI PEIS contains public comments received on the NI PEIS and DOE responses to those comments. Moreover, late comments were considered to the extent practicable.

254-6: DOE notes the commentor's support for Alternative 1, Restart FTFE, and opposition to using any facilities in Idaho for the DOE missions covered in the NI PEIS.

Commentor No. 255: Charles E. Weems

From: Charles/Sally Weems[SMTP:FLOATING@SEANET.COM]
 Sent: Thursday, August 31, 2000 1:21:53 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Auto forwarded by a Rule

Dear Ms. Colette Brown:

I wish these comments to be placed in the record as I was unable to give them at either the forum or to a Court reporter during the hearings in Seattle on August 30th.

I was disappointed in the hearings for the following reasons. (1) Your PEIS had failed to make available to us answers to several key questions that should have been addressed prior to the meetings. A partial completion of this job with a mailing on the Friday before a Wednesday meeting only increases the public's perception that the DOE is trying to withhold information and obfuscate the issues. (2) My disappointment with the entire tone of the meeting cannot be laid at your feet, but I greatly fault the confrontational style of the letter read into the record from our Senator Gorton and I will let him know of this. This tone was continued by many speakers, however, and restricted any meaningful debate. (3) The packing of the audience by members of the Hanford employees makes it important that in the future the speakers should state their affiliations or at least their name and home address. How it occurred that the majority of them got chosen to read their prepared statements suggests a large number of tickets were picked up by that group and the holding of more than one number led to their preponderance in those allowed to speak.

255-1

Response to Commentor No. 255

255-1: DOE notes the commentor's concerns regarding the timing of the issuance of the Cost Report and the tone and format of the Seattle public hearing. DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and to providing ample opportunity for public comment on those actions. The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. DOE mailed this document to about 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P in the Final NI PEIS.

The public hearing format was designed to be fair and unbiased. The public hearing format used was based on stakeholder input and was presented in the Notice of Availability (65 FR 46443 et seq.) for the Draft NI PEIS. This format was intended to encourage public participation, regardless of the motivation for attending the hearing. It provided an opportunity for the participants to meet one another, exchange information, and share concerns with DOE personnel available throughout the course of each hearing to answer questions. The meetings were facilitated by an independent moderator to ensure that all persons wishing to speak had an opportunity to do so. Persons wishing to comment were selected at random from the audiences rather than according to the order in which they registered. This was accomplished by a random number drawing. In addition to the comment recorder stationed at the main hearing, a second recorder was available in an adjacent room to receive comments without the need to await selection at the main proceeding. The hearing format used promoted open and equal representation by all individuals and groups.

255-2: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the

Commentor No. 255: Charles E. Weems (Cont'd)

I was glad to hear in your prepared address some explanation of alternatives. Your PEIS and your talk did not display any real sign of impartiality however. These alternatives need to be thoughtfully considered before a decision is made. Despite the emotional rhetoric and obvious confusion about research versus commercial production of medical isotopes, this reason for the FFTF is neither needed nor will be cost effective. Several groups including the American Institute of Medicine and your own group do not feel that it will be effective or needed. The DOE loses credibility in using this very emotional item to push their goals. Research of medical isotopes is by your own admission not the goal. It is for many of the known and stated reasons also unfeasible at that facility or could be done equally well elsewhere. I admire the pride in their role that the Hanford contingent takes but it does not detract from a reasoned analysis of the FFTF need.

255-2

An equally troublesome aspect is the commercial production proposed, this is not the role of government and should not be used as an excuse to restart. The cure of cancer is not with isotopes, any more than it is with current conventional therapy. In sum the medical isotope use of FFTF is unneeded... Plutonium_238 has been discussed so far in a curious way. Statements have been made that it probably won't come through Puget Sound but continue to come into Charlestown South Carolina. So to get to Hanford it would cross the entire US. This does not compute. Is there an alternative source for this item for NASA? By both your admission and their statement there is. I would further add that to state that Plutonium_238 because it is not used for bombs is therefore "safe" is neither true an excuse to restart FFTF. Nuclear Energy research as an alternative to the current "dirty" carbon dioxide emitting sources is another reason stated for reopening the FFTF. With all the solid information currently in on the cost effectiveness of nuclear plants, the current and projected needs, and the other technologies emerging this reason is clearly used to fill a projected hope rather than a real need.

255-3

255-2

Response to Commentor No. 255

next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

DOE's production and sale of radioisotopes fall into two categories "commercial" and "research" and both types of isotope production are considered under the proposed actions. Commercial radioisotopes are those that are produced in large, bulk quantities and sold to pharmaceutical companies or distributors, or to equipment or sealed source manufacturers. Examples of commercial radioisotopes produced by DOE include strontium-82 and germanium-68 for medical applications, and iridium-192 and californium-252 for industrial applications. DOE only produces commercial isotopes when there is no U.S. private sector capability or when foreign sources do not have the capacity to meet U.S. needs reliably. In contrast, research radioisotopes are typically produced and sold in small quantities in response to specialty orders from researchers preparing experiments in the field of medicine, with small quantities of these radioisotopes also purchased by industrial researchers. Because small-quantity production of research isotopes is not financially attractive to private-sector producers and is generally not undertaken, DOE attempts to provide all research radioisotopes that are requested, subject to production capability, inventory, and financial constraints. As successful application of a specific research isotope is established, the production and sales of that radioisotope may shift from research to commercial status. In recent years, over 95 percent of DOE's sales of radioisotopes by dollar volume were commercial and 5 percent have been for research.

The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the

Commentor No. 255: Charles E. Weems (Cont'd)

Much has been said about low risk. We have been told that transportation is without risk, storage of waste (even without a known final destination) is without risk, we are given levels of radioactive elements above that found naturally occurring that are said to be without risk. A risk must be evaluated in relation to its statistical likelihood but also in relation to its severity. The risks of continuing with an unnecessary FFTF are catastrophic, the calculated risk ratios do not justify it. The only reasonable decision should be the alternative of using only existing facilities and permanently deactivating FFTF.

Charles E. Weems, M.D.
933 No.Northlake Way #9
Seattle, WA 98103_8874
floating@seanet.com

255-4

255-5

Response to Commentor No. 255

suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost. Potential health and safety impacts associated with the proposed production of plutonium-238 are relatively low and are discussed in detail in Chapter 4 of Volume 1 and Appendixes H, I, and J of Volume 2 in the Final NI PEIS.

Commentor No. 255: Charles E. Weems (Cont'd)

Response to Commentor No. 255

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

In January 1997, President Clinton tasked his Committee of Advisors on Science and Technology (PCAST) to evaluate the current national energy research and development portfolio and to provide a strategy that ensures the United States has a program to address the Nation's energy and environmental needs for the next century. In its November 1997 report responding to this request, the PCAST Energy Research and Development Panel determined that restoring a viable nuclear energy option to help meet our future energy needs is important and that a properly focused research and development effort to address the potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) was appropriate. The PCAST panel further recommended that DOE reinvigorate its nuclear energy research and development activities to address these potential barriers. Section 1.2.3 provides information on the nuclear energy research and development mission.

255-3: Alternative 1 does postulate that DOE might decide at some point to import mixed oxide fuel from Europe to fuel FFTF. At this time, however, DOE has not proposed to import this fuel through any specific port. If DOE ultimately decides to import fuel from Europe, it would perform a separate NEPA analysis to select a port. This review would address all relevant potential impacts of overseas and inland water transportation, shipboard fires, package handling, land transportation, as well as safeguards and security associated with the import of SNR-300 mixed oxide fuel through a variety of specific candidate ports on the east and west coasts. It would consider all public comments, including local resolutions, concerning the desirability of bringing mixed oxide fuel into the proposed alternative ports.

In the event that DOE decides to enhance its nuclear infrastructure, it would not expose any population to high, unacceptable risks under any alternative. Any transportation activities that would be conducted by DOE would comply with U.S. Nuclear Regulatory Commission and U.S.

Commentor No. 255: Charles E. Weems (Cont'd)

Response to Commentor No. 255

Department of Transportation regulations. Associated transatlantic shipment would comply with International Atomic Energy Agency requirements. In Section J.6.2, DOE reviewed the potential maximum impacts from the marine transportation of mixed oxide fuel from Europe to a representative military port, Charleston, South Carolina, and overland transportation to Hanford. Also in that section, a bounding analysis demonstrates that the maximum potential radiological risks to the surrounding public from mixed oxide fuel shipments would be small (e.g., less than 1 chance in a trillion for a latent cancer fatality per shipment from severe accidents at docks and in channels and less than 1 chance in 50 billion for a latent cancer fatality per shipment from overland highway accidents).

- 255-4:** The environmental impacts associated with restart and operation of the FFTF are presented in Section 4.3 of the NI PEIS. The impacts include human health risks to workers and the general public associated with operation of the FFTF, with the management of waste, and with the transportation of reactor fuel, targets, and irradiated products to and from Hanford. Details of the accident assessments are presented in Appendix I. It is not claimed in the NI PEIS that the activities associated with the FFTF restart alternative are without risks. However, it is shown that they are small.
- 255-5:** DOE notes the commentor's support for Alternative 2, Use Only Existing Operational Facilities, which includes permanently deactivating FFTF.

Commentor No. 256: Nancy Dolan

From: Nancy Dolan[SMTP:DOLANN@LYCOS.COM]
Sent: Thursday, August 31, 2000 10:36:13 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF restart
Auto forwarded by a Rule

There is NO reason to restart this. The current waste isn't being dealt with, so why accumulate more? There is no shortage of medical isotopes, and putting nuclear powered anything in space is dangerous and could lead to militarization of space. Is that what we want?

Nancy Dolan
19319 89th Ave. N.E.
Bothell, WA 98011

|| 256-1
|| 256-2
|| 256-3

Response to Commentor No. 256

- 256-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 256-2:** DOE notes the commentor's concern regarding waste generation. The restart of FFTF would not impact the schedule or available funding for the cleanup missions at Hanford. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and appropriate DOE orders.
- 256-3:** DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings.
- The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been

Commentor No. 256: Nancy Dolan (Cont'd)

Response to Commentor No. 256

revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

Potential environmental, health, and safety impacts associated with the proposed action are relatively low, and are discussed in detail in Chapter 4 of Volume 1 and associated appendixes in Volume 2 of the Final NI PEIS. Potential health and safety impacts associated with future launches of spacecraft utilizing plutonium-238 are not within the scope of the NI PEIS analysis, but would be addressed in the specific NEPA documentation prepared by NASA in support of such missions.

Commentor No. 257: John E. Cozad

From: John_E_Cozad@rl.gov%internet
[SMTP:JOHN_E_COZAD@RL.GOV]
Sent: Thursday, August 31, 2000 1:39:18 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: restart fftf for medical isotopes
Auto forwarded by a Rule

To Colette E. Brown

I think it would be great thing to restart the FFTF for medical use and for PU 238. my father had bladder cancer 3 years ago, went throught a couple of surgerys and took almost 2 years for him to recover from all of that he is 77 years old now. If the FFTF had been making Isotopes back then it would not have been as hard on him, lot less recovery time and maybe even cost less. Lets get it restarted to help man kind.

Thanks

John E. Cozad

257-1

Response to Commentor No. 257

257-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

**Commentor No. 258: Irene Svete, Charles Terrill,
Garry Boyden**

From: ISvet@aol.com%internet[SMTP:ISVET@AOL.COM]
Sent: Thursday, August 31, 2000 2:49:36 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF comments
Auto forwarded by a Rule

Dear Ms. Brown:

We are writing to oppose attempts to restart the Fast Flux Test Facility at the Hanford Nuclear reservation. This absurd and costly idea flies in the face of logic.

Over the past several years, it has become obvious that neither DOE nor its Hanford contractors have found a satisfactory way to deal with the toxic waste already on the site. Yet DOE has simply ignored the additional waste this proposal will create at what is already considered the most contaminated nuclear site in the Western hemisphere.

There is already a glut of isotopes available for medical treatment. Rather than restart the FFTF, we strongly support the option of permanently shutting down the reactor, despite the \$281 million cost. This is the responsible, sane option and we hope you will take it.

Sincerely,
Irene Svete
Charles Terrill
Garry Boyden
11107 SE 204th St.
Kent, WA 98031

258-1

258-2

258-3

Response to Commentor No. 258

258-1: Management of wastes that would be generated under implementation of Alternative 1 (Restart FFTF) is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

258-2: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information.

Although other private manufacturers produce medical isotopes, DOE remains the key provider for a large number of isotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially experimental, these

***Commentor No. 258: Irene Svete, Charles Terrill,
Garry Boyden (Cont'd)***

Response to Commentor No. 258

isotopes are not generally purchased in large-enough quantities to make their production financially attractive to private industry. The United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. Section 1.2.1 of Volume 1 has been revised to clarify DOE's role and other producers' capabilities to fulfill U.S. isotope needs.

- 258-3:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 259: Pennie Stasik O'Grady

Draft PEIS Comment Form

If it is true that the DOE at this date (8-30-00) "has no preference" for any of the 6 alternatives in the PEIS, then why are the 3 tasks and tripods and comments made by the DOE at this hearing in support of Pu238 for medical + space technologies? Where are the beautifully done displays for alternative 5, ~~where are the displays~~ in particular? I am for clean energy - I am for the health + well-being of our citizens - I am for workers + quality employment opportunities - I am for business - but I am NOT for anything which risks the ultimate health + well-being of our citizens. What is causing this level of cancer and ill-health in our population in the first place? Why does the US use so much more energy per capita than any other country? We need to look at solutions to the underlying problems presumably addressed by ETRF - not use a supposedly "low-risk" technology with devastating potential consequences should our human infallibility kick in. Remainder The Titanic?

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): Pennie Stasik O'Grady

Organization: _____

Home/Organization Address (circle one): 8038 Maryland Ave N

City: Seattle State: WA Zip Code: 98103

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Response to Commentor No. 259

259-1

259-1: The displays developed for the public meeting were not intended to convey a preference for any alternative. The displays were developed to address the information contained in the Draft PEIS.

259-2

259-2: DOE notes the commentor's concerns. However, the many factors contributing to current U.S. cancer levels and energy demands are not within the scope of the NI PEIS. Rather, the NI PEIS evaluates a range of reasonable alternatives for maintaining and enhancing DOE's existing nuclear facility infrastructure for the purposes of addressing three primary needs:

- 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;
- 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and
- 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Section 1.2 of Volume 1 has been revised to clarify the purpose and need of the proposed action.

Potential environmental, health, and safety impacts associated with the proposed action are relatively low, and are discussed in detail in Chapter 4 of Volume 1 and associated appendixes in Volume 2 of the NI PEIS.

Commentor No. 260: Ralph Nielsen

Ralph Nielsen
4182 Ironton Drive
West Richland, Washington 99353

I would like to thank the Department of Energy for preparing the PEIS and considering restart of FFTF to produce medical isotopes, plutonium-238 and for nuclear research and development. I believe these missions are important to this nation. Production of medical isotopes is costly and needs government support so that a stable and varied supply of specialized isotopes is available to the medical and research community. I believe that only a facility like FFTF can create these special isotopes.

FFTF can be operated safely with very minimal impacts to the environment. The facility provides the greatest flexibility and capability of any of the alternatives that were evaluated in the PEIS. I believe that it should be selected as the preferred alternative.

260-1

Response to Commentor No. 260

260-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 261: Jim Montano

PEIS COMMENTS

I would like to go on record in support of the FFTF option in the PEIS based on the demonstrated mission capability of the FFTF. I do have a major concern that some people will oppose FFTF just because it is part of the Hanford Site and/or that it is a nuclear facility. It is in the best interest of Washington, the Northwest and the country to examine the factual data available and to not be misled by inaccurate information and fear of the unknown or unfamiliar.

As citizens and taxpayers it should be in all our interests that our nations assets and resources are utilized to the best extent possible. FFTF is a known commodity, not a new risk operation or process. It has previously demonstrated 10 years of outstanding capabilities and safe operation. It is not a single use facility and can be effectively utilized for materials testing, energy research, support of NASA space missions, and most importantly to the general public a wide spectrum of medical isotope production that can meet quantity and quality needs in this growing field. Medical isotope production provides a significant opportunity to improve the future health care for all our citizens.

In closing, I urge all citizens and the DOE to base the PEIS decision on factual data including the cost effectiveness and versatility of the alternatives. Lets all contribute to keeping the PEIS process open, factual and avoid unfounded rhetoric and statements.

Jim Montano
2519 Allegheny Ct.
Richland, WA 99352

261-1

Response to Commentor No. 261

261-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 262: The Sierra Club

Testimony Regarding the Draft Environmental Impact Statement on the Proposed Re-Start of the Fast Flux Test Facility at Hanford

The Sierra Club
Carole Woods, Cascade Chapter
Aug. 30, 2000

We are deeply dismayed that the Department of Energy is considering re-starting the FFTF in the face of a 'slow-motion catastrophe' comprised of extensive contamination of air, land, and water on and around the Hanford Nuclear Reservation. While sixty-nine huge underground storage tanks are known to be leaking extremely radioactive and toxic materials, all resources should be directed to mitigating this and other problems at Hanford. To divert any resources toward anything else at Hanford is unconscionable.

In 1995 the Department of Energy promised (in the Hanford Cleanup Agreement) to shut down the FFTF and use the money saved for higher priority cleanup. Instead, USDOE has spent more than 100 million dollars of cleanup money to keep the FFTF on hot stand-by while searching for a mission to justify re-start. Arguments for re-start are ludicrous. Specifically:

Plutonium 238 for NASA:

NASA has stated they have no need to purchase Plutonium-238 for the specific space mission used to justify FFTF restart.

Medical Isotopes:

USDOE's own Subcommittee for Isotope Research and Production Planning concluded that FFTF is not a viable source for medical research radioisotopes. Even the Washington State Medical Association says there is no need for FFTF as an additional source of medical isotopes.

Finally, the Draft Environmental Impact Statement misleads the public by omitting information that shows that FFTF restart is dangerous and unnecessary. Specifically:

Cost:

The costs of restarting the FFTF are not disclosed.

Nuclear Fuel for the FFTF:

The need to ship weapons-grade Plutonium fuel through Puget Sound is not mentioned.

Nuclear Waste From the FFTF:

The effects and risks of waste production, storage, reprocessing and transportation resulting from the FFTF re-start are not disclosed.

There's an important question of stewardship here. We do not feel that the Pacific Northwest is ours to pollute and deplete at will. We believe it is a trust that we must protect for future generations. We must do all we can to restore the Hanford region, including the groundwater and Columbia River, to a state of cleanliness that will not threaten the people, or wildlife that will live there for a very, very long time.

I have lost count of how many years I've testified at hearings like this on FFTF re-start. At every one of those hearings I observed that the vast majority of those testifying -- all who did not have financial interests in Hanford -- were clearly and strongly opposed to FFTF re-start. How many times do the majority of citizens of this region have to tell you that we want cleanup, not more nuclear waste at Hanford, before you will act on our mandate?

In summary, the DEIS for FFTF re-start is incomplete. It omits information that proves that there is no justification for FFTF re-start, and that the risks of restart are unacceptable. Moreover, the Department of Energy made a promise in the Tri-Party Agreement to make cleanup Hanford's primary mission. Re-starting the FFTF will be a violation of that promise.

Response to Commentor No. 262

262-1: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

The U.S. Congress funds Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM). Congress also funds FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The proposed actions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

Hanford tank waste issues are not within the scope of this PEIS, as none of the alternatives considered would add to these waste volumes.

262-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

262-3: Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science

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Commentor No. 262: The Sierra Club (Cont'd)

Response to Commentor No. 262

and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. DOE does not stockpile large quantities of Russian plutonium-238 long in advance of needs due to budget constraints and the additional processing required to remove decay products that occur following extended storage of the material.

The May 22, 2000, correspondence from NASA to DOE identifies that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium 238 to support deep space missions. Rather, SRTG development efforts were stopped in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires one-third less plutonium-238 as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000, letter to DOE that large RTGs be maintained as backup. Section 1.2.2 of Volume 1 was revised to clarify plutonium-238 mission needs.

The major mission of FFTF would not be the production of plutonium-238. Rather, all three missions are of equal importance; no one mission is given priority in the NI PEIS.

- 262-4:** The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and

Commentor No. 262: The Sierra Club (Cont'd)

Response to Commentor No. 262

conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

DOE has taken the Expert Panel and NERAC report recommendations under consideration in developing the range of alternatives evaluated in the NI PEIS. These reports were made available to the public at the NI PEIS public information centers and on the Internet at <http://www.nuclear.gov>.

262-5: This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS. DOE made every effort to obtain, analyze, and disclose all required information, including information on FFTF, to make a decision on expanding nuclear infrastructure. Further, DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives.

The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. DOE mailed this document to about 730 interested parties on August 24, 2000. The

Commentor No. 262: The Sierra Club (Cont'd)

Response to Commentor No. 262

report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P in the Final NI PEIS.

262-6: The commentor's concern about shipments of plutonium through Puget Sound is noted. None of the proposed alternatives would involve the shipment of weapons-grade plutonium to any port in the United States. Alternative 1 does postulate that DOE might decide at some point to import mixed oxide fuel from Europe to fuel FFTF. At this time, however, DOE has not proposed to import this fuel through any specific port. If DOE ultimately decides to restart FFTF and to import fuel from Europe, it would perform a separate NEPA analysis to select a port. This review would address all relevant potential impacts of overseas and inland water transportation, shipboard fires, package handling, land transportation, as well as safeguards and security associated with the import of SNR-300 mixed oxide fuel through a variety of specific candidate ports on the east and west coasts. It would consider all public comments, including local resolutions, concerning the desirability of bringing mixed oxide fuel into the proposed alternative ports.

In the event that DOE decides to enhance its nuclear infrastructure, it would not expose any population to high, unacceptable risks under any alternative. Any transportation activities that would be conducted by DOE would comply with U.S. Nuclear Regulatory Commission and U.S. Department of Transportation regulations. Associated transatlantic shipment would comply with International Atomic Energy Agency requirements. In Section J.6.2, DOE reviewed the potential maximum impacts from the marine transportation of mixed oxide fuel from Europe to a representative military port, Charleston, South Carolina, and overland transportation to Hanford. Also in that section, a bounding analysis demonstrates that the maximum potential radiological risks to the surrounding public from mixed oxide fuel shipments would be extremely small (e.g., less than 1 chance in a trillion for a latent cancer fatality per shipment from severe accidents at docks and in channels and less than 1 chance in 50 billion for a latent cancer fatality per shipment from overland highway accidents).

262-7: This NI PEIS addressed wastes produced for each alternative, as well as cumulative impacts related to waste production. In particular, Section 4.3.1.1.13 of Volume 1 provides information on waste that would

Commentor No. 262: The Sierra Club (Cont'd)

Response to Commentor No. 262

be associated with the restart of the FFTF. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. In most cases, wastes will be managed on the site it was generated. Transportation of waste off site is covered by other NEPA review specific to the site of waste generation.

262-8: DOE notes the commentor's concerns regarding potential impacts to groundwater and the Columbia River. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

More specific to the alternatives presented in the NI PEIS, FFTF is located approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to the groundwater. Analyses presented in Chapter 4 of the NI PEIS (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4) indicate that there would be no discernible impacts to groundwater or surface water quality at Hanford from normal operation of the existing Hanford facilities in support of the stated missions. Also, no water quality impacts would be expected as a result of permanent deactivation of FFTF (Section 4.4.1.2.4).

The environmental impacts associated with operation of the FFTF and support facilities at Hanford during normal operations and from postulated accidents are presented in Section 4.3 of the PEIS. All impacts to human health and ecological resources, e.g., wildlife, were demonstrated to be small in the immediate area of the Hanford Site and negligible at all distant locations.

262-9: This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE

Commentor No. 262: The Sierra Club (Cont'd)

Response to Commentor No. 262

implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS. Further, DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives. DOE made every effort to obtain, analyze, and disclose all required information to make a decision on expanding nuclear infrastructure. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

- 262-10:** The environmental impacts associated with operation of the FFTF are addressed in detail in Section 4.3 of the NI PEIS. The impacts are shown to be small. These impacts specifically include the risks to human health during normal operations and associated with postulated accidents. Over the 35-year operational period no fatalities would be expected among workers or in the general public.
- 262-11:** Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- Ecology, EPA, and DOE agreed to a change in the Tri-Party Agreement to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on FFTF's future. Public meetings were held on this formal milestone change. The NI PEIS missions would not have an impact on Hanford cleanup activities.

Commentor No. 263: Gary Boehnke

My name is Gary Boehnke and I am speaking today as private citizen who has resided in eastern Washington for 23 years. In recent years I have watched several close family members during their fights to survive battles with cancer. Sadly, one was not successful.

It is extremely important that the United States develop and maintain a means of producing a much greater supply of isotopes for medical research, diagnostic and therapeutic use. The demand for an increasing amount and wider variety of isotopes is growing and the U. S. now only produces about 10% of what it needs and must rely on sources outside the country. The FFTF is the quickest and safest way to begin producing the high quality isotopes needed by the medical and research communities while a national long term production strategy is finalized and we citizens of Washington should be proud to be able to play a vital part in serving this growing need.

I have worked in commercial industry including shipyards and can assure those with concerns about waste that by design and proven after 10 years of excellent operation ratings there is no waste problem at FFTF. Anyone in this room can go to the site right now and observe the fuel used to date safely stored in concrete containers in a space about the size of a basketball court. My kids and grandkids have used the Columbia river for recreation for many years and the FFTF is not a cause for concern to that activity since it's operation is completely self contained.

I am proud to support the restart of a facility that can help all of us and also proud to have it "IN MY BACKYARD".


GARY BOEHNKE
6012 N. CONWAY PL.
KENNEWICK, WASHINGTON

Response to Commentor No. 263

263-1

263-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

263-2: See comment response 263-1.

263-2

Commentor No. 264: *Bernie Patterson*

Good Evening,

My Name is Bernie Patterson and I would like to offer this personal testimony on behalf of restarting the FFTF. I am a concerned citizen, representing myself.

Isotopes are an extremely important tool used in the life sciences. 13 million medical procedures and 100 million lab tests use isotopes every year in the U.S. 80% of all newly approved drugs use isotopes during research and development. Without question, medical isotopes have a tremendous role in our health care yet the true benefits of isotopes are just now starting to be realized.

Until now, most medical isotopes were used in diagnosing injuries and diseases. The main isotope used in these diagnostic procedures is technetium-99m, which is derived from its parent isotope molybdenum-99. Large quantities of this isotope are easily produced in small reactors, such as the ones in Canada that now provide most of our supply. Most other diagnostic isotopes are produced in accelerators or cyclotrons scattered across the U.S. Recent advances in biotechnology have opened a whole new dimension for the role of isotopes in treating diseases like arthritis, heart disease, and cancer. Isotopes can now be effectively attached to antibodies and other biological targeting tools that are designed to seek out unwanted tissues such as cancer cells. The isotope can then deliver its close range particles to kill the unwanted cell.

Therapeutic isotopes are fundamentally different than their diagnostic cousins. Therapeutic isotopes need to deliver large amounts of killing energy over very short distances. For this reason therapeutic isotopes need to give off alpha or beta particles. These particles come from radioactive isotopes that are neutron-rich and seek to obtain stability by ridding themselves of excess neutrons...in the form of alpha and beta particles. These isotopes are generally made in reactors, not accelerators or cyclotrons. Accelerators and cyclotrons make neutron-poor isotopes. These isotopes decay by methods that produce photons that can be used by special cameras to provide a picture of what's happening in a particular area of the body. Accelerators and cyclotrons cannot effectively make large quantities of therapeutic isotopes.

264-1

Response to Commentor No. 264

264-1: DOE notes the commentor's support for greater availability of medical isotopes.

264-2: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 264: Bernie Patterson (Cont'd)

As stated several years ago in the often- misquoted Institute of Medicine report on isotopes, "if isotopes become important for cancer therapy, the current number and condition of reactors in North America will be inadequate". As of now, isotopes are becoming very important in curing cancer and other diseases. The main problem is that there are not enough isotope production reactors in the U.S. to meet even the demand for clinical trials of certain isotopes much less be able to meet the demand when these trials are finished and the therapy gets approved by the FDA.

264-1
(Cont'd)

As shown in report after report, the DOE infrastructure is not capable of providing the variety and quantity of isotopes that will be required by the medical and research communities, and the millions of patients over the next several decades. Indeed, enhancing this infrastructure is the purpose of the PEIS and of these public hearings.

The FFTF is the only reactor in North America that has the volume, high flux, and overall capabilities to make a significant contribution towards meeting this nations' need for isotopes, while also meeting the other mission needs in the PEIS. It is a unique asset to the Pacific Northwest, and to the United States. When first built and operated it was labeled as the finest test reactor in the world yet many felt that the FFTF was ahead of its time. Well, its time has come and the FFTF is ready to meet the challenges of producing the next generation of therapeutic isotopes. Isotopes that will dramatically alter the course of our war on cancer, providing superior, low-cost care to millions of suffering patients.

264-2

Response to Commentor No. 264

Commentor No. 265: Sam Volpentest**TRIDEC**

 TRI-CITY INDUSTRIAL DEVELOPMENT COUNCIL

901 N. Colorado, Kennewick, WA 99336-7685 USA 1-800-TRI-CITY 509-735-1000 509-735-6609 fax tridec@tridec.org www.tridec.org

September 13, 2000

Colette E. Brown, NE-50
 U.S. Department of Energy
 19901 Germantown Road
 Germantown, MD 20874

DRAFT PROGRAMMATIC ENVIRONMENTAL STATEMENT
 FOR
 ACCOMPLISHING EXPANDED CIVILIAN NUCLEAR
 ENERGY RESEARCH AND DEVELOPMENT AND
 ISOTOPE PRODUCTION MISSIONS IN THE UNITED STATES
 INCLUDING THE ROLE OF THE FAST FLUX TEST FACILITY (NI PEIS)

Dear Ms. Brown:

Transmitted herewith, is a copy of the statement made by William Martin, President of the Tri-City Industrial Development Council, at the NI-PEIS hearing in Richland, Washington on August 31. As indicated in our statement, TRIDEC and the regional business community strongly supports the restart of the FFTF to meet the national programmatic needs described in the draft EIS. We are submitting this statement for inclusion in the record of the EIS hearings.

Subsequent to the preparation of this statement, we have received and reviewed the supporting Alternative Cost Analyses and the Non Proliferation Impact Assessment reports. We support the conclusion in these reports that the FFTF provides the lowest cost alternative for meeting the mission needs, and restart of the FFTF does not raise any significant non-proliferation concerns.

We also wish to thank you for the conduct of the EIS hearings. The hearings were carried out in a controlled, fair and balanced manner. All of the competing and conflicting interests represented at the hearings were provided with balanced opportunities to present their views on this subject, which is of significant interest in this region. The patience and conduct of you and your staff during the hearing process is commendable.

We appreciate the opportunity to present our views on the FFTF.

Very truly yours,

Sam Volpentest
 Executive Vice President

Response to Commentor No. 265

Commentor No. 265: Sam Volpentest (Cont'd)

TRIDEC



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901 N. Colorado, Kennewick, WA 99336-7685 USA 1-800-TRI-CITY 509-735-1000 509-735-6609 fax tridec@tridec.org www.tridec.org

NUCLEAR INFRASTRUCTURE
DRAFT ENVIRONMENTAL IMPACT STATEMENT
EXPANDED CIVILIAN NUCLEAR ENERGY RESEARCH & DEVELOPMENT
DOE/EIS-03100

August 31, 2000

Thank you for the opportunity to provide comments regarding this Draft Environmental Impact Statement. My name is Sam Volpentest and I am the Executive Vice President of TRIDEC. The Tri-City Industrial Development Council is a non-profit organization, whose objective is the economic development and health of the Tri-City area, which encompasses the Hanford site. Our membership is composed of over 500 businesses, organizations, labor, and governmental entities interested in the welfare of the Tri-Cities.

TRIDEC strongly supports the objectives of the Department's Nuclear Energy Program and specifically endorses the implementation of the various missions identified and evaluated in the Draft EIS. We also strongly support and urge the identification of the Fast Flux Test Facility as the preferred option for accomplishing these missions.

The Draft EIS evaluation of these alternatives clearly shows the capability and superiority of the FFTF over the other alternatives considered. The FFTF is the most modern reactor available in the DOE complex, was designed and constructed to meet both Department of Energy and Nuclear Regulatory Commission requirements and operated flawlessly for over ten years with no significant safety incidents or issues. With its large volume core, it has the capability to carry out a number of production or research and development missions simultaneously. The proposed low power operation of the reactor provides added safety margins above the already high standard safety requirements established for this reactor.

The FFTF was never intended for or utilized in nuclear weapons production missions and none are proposed or considered in the current Draft EIS evaluation.

The FFTF has the demonstrated capability to produce a number of medical isotopes which are either unavailable or in limited supply. There is a significant national need for the production of these isotopes, many of which cannot be effectively produced in an accelerator. An accelerator of the size and energy level, which would be required for this mission, does not exist and the construction of such a speculative untried machine in the future is highly questionable.

The startup and operation of the FFTF for the missions evaluated in this EIS will not interfere with or detract from the Hanford cleanup mission. The funding for FFTF programs is provided through Nuclear Energy program appropriated funds, which by law are separately appropriated and segregated from the Environmental Management program. Conversely, if the decision were to be

Response to Commentor No. 265

265-1: The commentor's support for implementation of Alternative 1, Restart FFTF, is noted. The Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, costs, nonproliferation issues, schedules, technical assurance, policy, and program objectives.

The commentor's position concerning FFTF capabilities is noted. Descriptions of the capabilities of candidate irradiation facilities are discussed in Section 2.3.1 of Volume 1.

The commentor's positions on socioeconomic impacts and the supply of medical isotopes that would result from implementation of Alternative 1 are noted. Socioeconomic impacts that would result from implementation of Alternative 1 are discussed in Section 4.3 of Volume 1. Section 2.7.3 of Volume 1 contains a discussion of the mission effectiveness of the alternatives.

265-2: As discussed in Section 1.2 of Volume 1, the nuclear infrastructure missions are unrelated to the national defense or weapons production.

The commentor's support of FFTF for radioisotope production is noted. As stated in Section 2.3.1.1 of Volume 1, during its operation, FFTF successfully produced a variety of medical isotopes. Section 2.5 of Volume 1 describes alternatives, including the construction of one or more accelerators, for accomplishing the nuclear infrastructure missions. Section 2.7.3 contains a discussion of the mission effectiveness of the Alternatives. Accelerators are not speculative or untried. DOE and the U.S. have considerable experience in designing, building, and operating accelerators similar to the accelerators that would be constructed and operated under Alternative 3.

265-3: The commentor is correct on the separation of NI PEIS mission and Hanford cleanup funding sources and a possible impact of deactivation of FFTF on existing cleanup activities. FFTF restart and operation would not impact the schedule or available funding for existing cleanup activities.

265-4: DOE notes the commentor's views that Alternative 1 options involving the restart of FFTF are preferred on the basis of associated environmental and socioeconomic impacts. No decisions have been made with regard to the facilities and locations evaluated to fulfill the requirements of the stated missions, which include the production of

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Commentor No. 265: Sam Volpentest (Cont'd)
TRIDEC

made to shutdown the FFTF and decommission it, then responsibility for the facility would be transferred to the Environmental Management program. This would have a major negative impact on the limited cleanup program funding which is available.

The opponents of the FFTF have made a number of allegations regarding safety and waste management issues related to the operation of the FFTF. These allegations are not factually correct and are being responded to by other commenters who support the FFTF. We will not repeat these issues in this statement but are enclosing two attachments for record purposes, which provide issue papers on these topics and respond to recent public statements by the opponents.

We wish to call your attention to the agreement reached between DOE and the State of Oregon and Washington for the preparation of a "Waste Management and Minimization Plan" to ensure that FFTF waste issues do not negatively impact the Hanford Site cleanup programs.

We believe that the FFTF has been clearly identified in the EIS studies to be the preferred options for meeting the identified program missions without any significant negative social, environmental, or economic impacts. Operation of the FFTF will provide significant positive economic and social impacts not only to the Pacific Northwest, but also to the nation. The supply of currently unavailable or limited medical isotopes for general use is of particular significance.

Local area business, labor and governmental leaders strongly support the restart and operation of the FFTF. During the review of the draft EIS, we expect that these interests as well as our Congressional Delegation will submit strong statements of support for restart of the EIS. We expect that regional and national environmental interests will also continue to express their opposition to operation of the reactor. However, these are not the views of the local community and reflect a "knee jerk" reaction to any new programs at Hanford and in particular to any consideration of restarting the Fast Flux Test Facility. We have reviewed recent letters and press releases, which have been released by these interests regarding the FFTF. Many of the allegations contained in these papers are factually incorrect or scare statements and do not apply to the current program proposals.

We have submitted to the Department as an attachment to previous testimony a compilation of position statements and letters from our Congressional Delegation, the State of Washington, and other regional interests supporting the FFTF. Please consider this previous submission for inclusion in the record of this hearing. We expect that this same level of support will continue to be available in support of the FFTF for the currently proposed missions.

We request that the assets of the FFTF receive an objective, balanced, and realistic evaluation of the alternatives during the preparation of the Record of Decision on this Environmental Impact Statement.

Thank you for the opportunity to present our views on this subject.

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(Cont'd)

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Response to Commentor No. 265

medical and industrial isotopes, the production of plutonium-238 for NASA space missions, and nuclear research and development. In accordance with Council on Environmental Quality regulations (40 CFR 1502.14(e)), DOE has identified its preferred alternative in Section 2.8 of the Final NI PEIS. The Record of Decision for the PEIS will be based on a number of factors including environmental impacts, costs, public input, nonproliferation issues, schedules, technical assurance, policy, and program objectives.

265-5: DOE notes the commentor's views and contention that local interests support Alternative 1, Restart FFTF. In preparing this NI PEIS, DOE carefully considered all scoping comments received from the public, and all comments received during the scoping periods are part of the Administrative Record for this NI PEIS. The Record of Decision for the PEIS will be based on a number of factors including environmental impacts, costs, public input, nonproliferation issues, schedules, technical assurance, policy, and program objectives.

Commentor No. 266: Sol Guttenberg

Good evening. My name is Sol Guttenberg and I am representing myself. I recently went to the Heart of America Northwest homepage to see what information they were making available to the public about FFTF. One article that really caught my eye is called "Nuclear Safety at FFTF and Hanford: Unsafe, Unregulated, No Public Right to Review". I was amazed at the inaccuracy and misleading nature of the articles that I found there. It is truly unfortunate that distortions and fabrications are being circulated to create unsupported fear and distrust in people that live in the Northwest. Public opinion plays an important role in the Department of Energy's decision making process. Each of us here tonight will be affected by these upcoming decisions, especially those related to medical isotope production. I would like to set the record straight on some of the inaccuracies in this article. It would take most of the evening to address each false statement, so I will limit my response to a few examples.

One HOA topic area states "Government planning documents reveal that if FFTF were to resume production, the risk of a large radiation release accident serious enough to require crop seizure and mass evacuation is as high as 30%." The accident referred to is associated with the drop of a cask containing tritium targets. It is also interesting to note that the probability of this particular accident is incredible which means that it has less than 1 in a million chance of occurring, not the claimed 30 percent. Not only was this quote taken out of context, it doesn't even relate to the missions being discussed here tonight! FFTF will not be making tritium if restarted. HOA apparently likes to use this misrepresentation over and over again to frighten the public.

Another misinformed HOA topic area states " FFTF will require Highly Enriched Uranium or Plutonium fuel, which was the type of fuel being fabricated at Tokaimura, Japan... In light of the recent accident in Japan, many are concerned that a similar accident could happen here." Operation of FFTF does not involve the fabrication of any nuclear fuel at Hanford so how can there be a risk to the region? If additional fuel for FFTF is eventually required, it is expected that it would be fabricated at an existing commercial facility. The U.S. nuclear fuel fabrication facilities have an exemplary safety record, including the fabrication of highly enriched fuel for the U.S. Navy. Existing DOE reactors and many international test reactors safely use highly enriched uranium fuel.

Lastly, HOA states "Nor does USDOE plan to disclose that Plutonium and target processing will add more liquid High-level Nuclear Wastes to Hanford's leaking and explosive High-Level Nuclear Waste tanks." This is an example of using scare tactics to reach an unsupported conclusion. As stated in the PEIS, FFTF has never generated high level waste, nor will any high

Response to Commentor No. 266

266-1

266-1: DOE notes the commentor's views and observations. DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and to providing ample opportunity for public comment on those actions.

266-2: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 266: Sol Guttenberg (Cont'd)

level radioactive waste be generated by any of the proposed missions. Since no waste of this type will be generated, the truth is that not a single drop of waste will be added to Hanford's high-level waste tanks. Well, there goes HOA again. They continue to use this outright falsification to suit their needs.

I would challenge each of you tonight to keep an open mind, carefully evaluate where you are obtaining your information on these important issues, and formulate your own opinions based on truth and facts. The very vocal antinuclear activists in this area are not large in number, but they are quite skilled at taking information and data out of context and twisting it to meet their own agenda. It is clear to me that these groups do not represent the good of the public at large. I believe that FFTF is the best alternative evaluated in the PEIS. It provides the greatest capability and flexibility to meet the proposed mission needs.

**266-1
(Cont'd)**

266-2

Response to Commentor No. 266

Commentor No. 267: Pat Schweiger

Nuclear Research and Development

Hello. My name is Pat Schweiger. I live in Kennewick, Washington, and I am here representing myself. I fully support conducting the three missions outlined in the PEIS using Alternative #1, which is to Operate the FFTF. I would like to focus on one of the missions in particular – the expanded nuclear research and development work.

I believe nuclear energy is very important in meeting increasing electrical power needs and in helping to protect the environment. In the United States, nuclear energy is the second largest source of electricity and generated about 20 percent of all electricity in 1999.

Nuclear power plants do not have a combustion process like that in a fossil-fuel plant. The heat in a nuclear power plant is produced by a process in which atoms of uranium or plutonium in fuel rods are split by neutrons in a controlled reaction to produce heat. Coolant water absorbs this heat from the fuel rods which is used to produce steam to generate electricity. Since this process does not involve any combustion, nuclear power plants emit none of the combustion gases associated with air pollution, acid rain, or global climate changes. Nuclear power plants are thus a key factor in reducing greenhouse gas emissions. For example, in 1999, if the electricity produced by the 103 nuclear power plants in the U.S. had instead been produced by coal or oil fired plants, 90 million cars would have to be removed from America's highways just to maintain air quality at its current level.

With the current shortage of electricity just to the south of us in California and developing elsewhere, with oil and gas prices skyrocketing, and with a growing need for electricity worldwide, the role of nuclear power in producing safe, reliable electricity is likely to increase. This will be particularly true when it comes time to meet greenhouse gas restrictions specified in the Kyoto accord. To ensure that nuclear power will be a viable option for the future, it will be necessary to reduce nuclear waste, to provide more proliferation resistant fuel and to develop the technology for cheaper, more efficient power plants. To do these things requires a renewed nuclear energy research and development program.

Response to Commentor No. 267

267-1

267-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

267-2: DOE notes the commentor's support for nuclear research and development initiatives.

267-2

Commentor No. 267: Pat Schweiger (Cont'd)

Current U.S. nuclear power plants are based on the technology of the 1970's to early 1980's and include very large design margins to address any technical uncertainties and to ensure safety. Improvements in materials and nuclear fuel behavior as well as investigation of advanced design concepts will lead to plant designs with improved performance and economy of operation. Future reactor technologies are likely to involve higher temperatures which will improve plant thermal efficiency and reduce costs, will use longer life nuclear fuel rods which will reduce the amount of spent nuclear fuel generated, and may use different coolants. Testing of these concepts and improved materials will require irradiation in a reactor environment.

**267-2
(Cont'd)**

The FFTF can make a significant contribution to the nuclear research and development needed. The FFTF is unique in the United States and is one of only several reactors in the world that has a combination of high temperature, high neutron flux, and fast neutron energy spectrum with a liquid metal coolant that makes it ideal for many types of advanced irradiation testing. The FFTF has performed flawlessly in conducting extensive testing on various materials and nuclear fuels. This included international testing of materials for a fusion reactor which could have major positive environmental impacts as an energy source in the future. The neutron flux in the FFTF can also be adjusted (tailored) to different energies to provide custom irradiation environments providing greater flexibility.

267-1

I believe that the modern FFTF reactor and associated support facilities represents a multi-billion dollar national asset that is essential to ensuring that a clean and reliable nuclear energy option be maintained for our future. I strongly urge the Department of Energy to restart the FFTF to help ensure that there will be a viable nuclear energy option when it is needed.

Response to Commentor No. 267

Commentor No. 268: Robert R. Beach

TESTIMONY AT THE NI PEIS PUBLIC HEARING – SEATTLE, OREGON – AUGUST 30, 2000
BY
ROBERT R. BEACH OF KENNEWICK, WASHINGTON

I, Robert R. Beach, residing at 7803 West Deschutes Ave. Kennewick, Washington would like to make the following personal statement related to the DOE request for public comment on their draft Nuclear Infrastructure Environmental Impact Statement.

First, I commend the efforts to make this an actual public hearing, as opposed to a political sideshow. I will attempt to stay away from political cliché and outright propaganda and lies. Unfortunately, you will hear more untruths than truths here tonight from the representatives of supposedly public outcry organizations.

Secondly, the DOE should be commended for the recognition that they require additional resources to provide the public services that they are charged with doing. This is contrary to the tenets of the present Clintonesque oligarchy, and certainly required courage and moral fiber.

As for technical comments:

First, the DOE should proceed with the development of an enhanced nuclear infrastructure with the utmost in speed and great determination. The gains to the people of the United States are extremely clear, and urgent to meet. We are presently frittering away every opportunity due to inaction.

Second, it should be noted, that from an environmental impact standpoint, each of the alternatives contained in the EIS is completely acceptable. From an environmental standpoint, this EIS is actually unnecessary and only serves to meet the legal requirement. The care of the environment is being engineered into the systems and processes.

Third, the DOE should carefully review each alternative to define the extent to which that alternative meets the requirements of the three missions. The concern is that some of the options are “cheapies” that attract the political eye, but actually are not capable of meeting the needs of the three missions.

Fourth, the DOE should utilize available resources rather than shutting down and deactivating one facility, so that they can build another. This is not good management of my taxpayer funding. There is altogether too little attention paid to what is thrown away – since it doesn’t require funding.

Fifth, the DOE should carefully review the costs for the Alternatives 3 and 4 that are provided in the Cost Study. These costs, particularly for the low-power accelerator and the pool reactor are sorely underestimated. In my opinion, there is no way that the DOE can obtain and operate these facilities with the required supporting facilities and services for the stated costs. The capability of the described systems to meet each of the three mission goals is also highly questionable, without extended designs and much higher costs.

Sixth, the cost benefit for this Nuclear Infrastructure Program goes far beyond the DOE. For example, in the case of medical isotopes, the benefits accrue to the taxpayers themselves, the insurers for the medical industry, and finally to the administrators of MEDICARE. The first return in battling cancer through the use of radioisotopes is the better chance for recovery for any of us who may be afflicted. But, the financial return to each group is also extraordinary, and these are not presently considered a part of the DOE decision, in fact, they are not even discussed. It is time that the needs of the taxpayer are considered – not the political needs of the politician.

Seventh, the DOE should break itself free from the encumbrances of the “Nuclear Weapons and Cleanup” missions, and begin to fill the needs of the American public. The full capabilities of the nuclear medicine alternatives need to be exploited, and support for the civil use of nuclear energy needs to be greatly

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Response to Commentor No. 268

268-1: DOE notes the commentor’s views and remarks concerning the Seattle, Washington, public hearing.

268-2: DOE notes the commentor’s support for the proposed action.

268-3: The results of analyses described and shown in the NI PEIS indicate that from an environmental impact standpoint, each of the alternatives assessed in the NI PEIS is acceptable.

268-4: Section 2.5 describes each alternative analyzed in the NI PEIS. Part of that description includes a review of the extent to which each alternative can meet the purpose and need for agency action as described in Section 1.2. Volume 1, Section 2.7.3 compares the mission effectiveness among alternatives.

268-5: DOE notes the commentor’s views on costs, support for Alternative 1, Restart FFTF, and opposition to Alternative 3, Construct New Accelerator(s) and Alternative 5, Construct New Research Reactor. DOE acknowledges that Alternative 1, 3, and 4 do not meet the mission objectives in the same manner.

268-6: DOE notes the commentor’s concern about the cost benefit of the Nuclear Infrastructure missions described in the Final PEIS and the support for the stated missions. The estimated costs of the range of reasonable alternatives are presented in the Cost Report, summarized in Appendix P of the Final NI PEIS. However, the Cost Report is not a cost-benefit analysis. While it is reasonable to believe that the benefits of medical isotopes are substantial, the purpose of this NI PEIS is to describe the nuclear infrastructure missions (Section 1.2 of Volume 1), a range of reasonable alternatives for satisfying the mission requirements (Section 2.5 of Volume 1), and the environmental impacts that would result from implementation of the alternatives.

268-7: The commentor’s support of FFTF is noted. Many of the commentor’s FFTF facts are contained in PEIS Section 2.3.1.1 of Volume 1. Evaluation of the environmental impact of restarting FFTF, denoted Alternative 1 in the PEIS, is presented in the Summary, Section 2.7, and Section 4.3.

Commentor No. 268: Robert R. Beach (Cont'd)

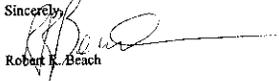
expanded. It is clear that there is no technical, health or environmental reason not to utilize the benefits of the technologies. LEADERSHIP IN THIS BENEFICIAL EFFORT IS WHY DOE EXISTS.

Eighth, the facts related to the Fast Flux Test Facility should be clearly presented to the public.

- The FFTF has already operated for ten years with no adverse environmental impact.
- The FFTF has demonstrated an excellent safety record during this period in addition to the extended standby period.
- The FFTF has already demonstrated production of many of the isotopes that are considered.
- Operation of the FFTF does not impact cleanup of the Hanford wastes.
- The FFTF can be operated for more than twenty years without having to manufacture any new fuel. This would also remove plutonium fuels from inventory that will otherwise probably require chemical processing to remediate.
- The reliability of FFTF is known. Any new facility of equal capability is an unknown.
- The FFTF is certainly not the "old" Hanford. If the FFTF was in any other DOE laboratory, it would probably already be in operation and providing beneficial services to the people of the United States.

I welcome this opportunity to present my comments for your consideration.

Sincerely,


Robert R. Beach

268-6
(Cont'd)

268-7

Response to Commentor No. 268

Commentor No. 269: Shirley Breitenstein

My name is Shirley Breitenstein. I lived in Richland, WA from 1974 to 1984. During that period I was married to Dr. Bryce Breitenstein who was chairman of Hanford Environmental Health Foundation.

I now live in Redmond, WA - however, spend many weekends in West Richland with a friend who is dying of bone cancer or in Kennewick with my oldest daughter and her family.

In the summer of '75 we were awakened by the phone in the middle of the night. Bryce was called to receive a patient at the decontamination center located next to Kadlec Hospital - a facility constructed at the request of Dr. Dag Norwood, a former chairman of HEHF. An explosion in the small room the patient had been working in had left him with pieces of glass and a highly radioactive substance imbedded in his face.

The newspapers were very interested in this accident. Within 2 days, Bryce was told by DOE authorities that he was not to speak to the newspapers. He was very aware of patient confidentiality. If you've ever been placed in that position, perhaps you know how it feels. He is presently working at a facility on Long Island. I would imagine he still says very little to the public.

The patient was held in the center for several weeks, finally released to a trailer parked nearby - with all water and waste contaminants that touched his body, placed in containers and taken to the site. A substance created by Batelle Laboratories and never before used on humans, was used on this patient.

Response to Commentor No. 269

Commentor No. 269: Shirley Breitenstein (Cont'd)

2

I believe very few people realize, in spite of our fantastic space travel and science fiction movies, what type of facility, expertise, money, technology, etc. it takes to keep one man alive after such an accident.

I believe very few people realize what a major disaster at Hanford would be like - least of all our politicians and perhaps even some of our Department of Energy experts. Do we consider the disaster at Chernobyl happened because that particular facility was not constructed properly nor maintained and monitored responsibly?

For years Hanford has been a vast piece of desert land in Eastern Washington that no one really cared about - sadly, even many of us who have lived there. One day someone must have said, "Oh dear!" "I do believe that a bit of the waste is not being held in their containers as we had hoped. This may become a problem."

I don't know what's out there or how much contaminant is already going into the beautiful Columbia river. I don't know how much money it's going to take to get it cleaned up or if it can be cleaned up. I also realize that the restart of the reactor would provide jobs for many people and boost the economy of the Tri-Cities and thus the economy of this state. But at what cost?

The Tri-City Herald recently printed a full front page article that described some of the many issues surrounding the clean-up and how the person in charge (described as quite responsible) had quit, apparently due to his frustration with DOE authorities. Even the people of the community were expressing frustration. That's unusual for a community that largely depends on Hanford for its survival.

269-1

Response to Commentor No. 269

269-1: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford and the risk of contamination to the Columbia River. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Commentor No. 269: Shirley Breitenstein (Cont'd)

3

As small children, our parents attempted to teach us we should clean up one mess before starting another. Parents are still giving their children the same messages but with what validity. Aren't we now adults that refuse to even see our messes.

Let's wake up and take responsibility. It would even be refreshing to hear our politicians take on a new slant with words that would encourage responsibility.

Response to Commentor No. 269

Commentor No. 270: Greg Bergquist

Greg Bergquist
1312 Cedar Ave
Richland, WA 99352

Good Evening. I'm Greg Bergquist, representing myself. I have a few points that I'd like to make in the next couple of minutes.

First, I'd like to thank the DOE for going forward with this PEIS. I too, as a private citizen, am concerned about the degradation of the DOE nuclear infrastructure and the associated impact that it has on the people in the Pacific Northwest as well as the nation. I recognize that completion of the PEIS is a key step in the decision process to enhance this capability, so that DOE can fulfill their obligation for the identified missions in the PEIS. I believe it is imperative that they do so and in a timely manner, with specific emphasis on promoting the development and utilization of diagnostic and therapeutic medical isotopes in conjunction with pharmaceutical firms by assuring an adequate and stable supply of these isotopes.

Second, the purpose of the PEIS is to address the environmental impacts of the proposed actions. It does, and it concludes that they are extremely small for all the alternatives under consideration. However, there is a major void that would likely prohibit the Secretary from making what I consider to be an informed decision, and that is, there is no comparison of capabilities for the alternatives. As a result, the implication is that Alternatives 1, 3, and 4 (i.e. startup of the FFTF, two new accelerators or a new reactor) all equally meet the mission needs. This is not the case. We the public can't tell if we're buying a VW, Cadillac, Minivan or truck. They all provide transportation, but they don't meet the same requirements. Therefore, it is essential that a technical comparison of capabilities for the alternatives be performed either as a stand-alone document or folded into the PEIS. In concert with the environmental consequences, cost information and other inputs, this will enable the decision process to move forward on an even keel and for the Department to recognize where they're getting the best bang for their buck.

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Response to Commentor No. 270

270-1: DOE notes the commentor's support for the proposed action.

270-2: The summary of environmental impacts (Sections 2.7.1 of Volume 1) has been completely revised and reformatted in the Final NI PEIS for the reader to compare the environmental impacts between alternatives. Section 2.7.3 of Volume 1, "Comparison of Mission Effectiveness Among Alternatives," has been revised in the Final NI PEIS to provide the reader a better understanding of the medical isotopes that can be produced using accelerator technology (Alternative 3) and reactor technology alternatives (Alternatives 1 and 4).

Commentor No. 270: Greg Bergquist (Cont'd)

Greg Bergquist
1312 Cedar Ave
Richland, WA 99352

Third, I'd like to set the record straight with respect to the so-called diversion of funds that others indicate the startup of FFTF would have on the cleanup budget at Hanford. The reality is, there is no diversion. Funding for the potential restart of FFTF would be provided by Nuclear Energy, which is completely unrelated to the cleanup budget under Environmental Management. This funding level is approximately \$314M. If another alternative is selected, appropriate funding would still be required. It is also important to recognize that additional funding of \$281M would also be required to deactivate the FFTF. This funding would come from the Hanford cleanup budget and would have a significant impact on the Hanford cleanup. So, if FFTF is not selected as the preferred alternative, the cost to the DOE would be almost twice as much or greater for the first five years or so (roughly the deactivation time for the FFTF.)

Well, it seems to me that the conclusion is obvious. Selection of FFTF makes sense economically as well as environmentally and technically. The startup costs and shutdown costs are comparable. If shutdown, the hit on Hanford cleanup costs would be substantial. FFTF has the largest capability and flexibility of all the options. It is the premier test reactor in the world with a proven performance and a safety record second to none. I am sure that when the Department completes the capabilities comparisons, that I spoke to earlier, coupled with other technical input, they will come to the same conclusion that I have – and that is the FFTF is and should be the preferred alternative.

Response to Commentor No. 270

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270-3: The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

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270-4: Except for Alternative 2, the cost of implementing Alternatives 3 and 4 (construction of new accelerators or new research reactor) would be at least twice the cost of restarting FFTF, when FFTF deactivation costs are included. Volume 2, Appendix P contains the Cost Report Summary.

270-5

270-5: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 271: Heidi Wills

Statement regarding FFTF Nuclear Reactor - Public Hearing - 8/30/00

Seattle City Councilmember Heidi Wills
Read by Legislative Assistant Katy Carter

My name is Katy Carter and I work for Seattle City Councilmember Heidi Wills. Councilmember Wills is unfortunately out of town tonight, but I do have a statement from her to present.

I would like to emphasize my opposition to restarting Hanford's FFTF Nuclear Reactor.

First of all, restarting the reactor is unnecessary. Officials have claimed that it would produce needed medical isotopes and fuel for NASA spacecraft. However, the Department of Energy's own Nuclear Energy Research Advisory Committee concluded that "the reactor will not be a viable source of research isotopes." In addition, NASA has informed the Department of Energy that it no longer needs the fuel the FFTF might have produced.

Secondly, the FFTF poses great risks to human health and to the environment. Nuclear waste from the facility may contaminate the water used by the people of Puget Sound, threatening the health of millions of people as well as endangered salmon and other parts of our ecosystem.

Finally, I am concerned that there has not been enough public input into the decision to restart the FFTF. The Department of Energy should disclose the costs of restarting FFTF and the effects of waste production before public hearings are held, so that the public is fully informed.

Thank you for the opportunity to speak about this important issue.

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Response to Commentor No. 271

271-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

271-2: The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April, 2000, regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

The May 22, 2000, correspondence from NASA to DOE identifies that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium 238 to support deep space missions. Rather, SRTG development efforts were suspended in order to permit reprogramming of funds to support development of a new power system based on a Stirling technology generator. This new power system, referred to in the subject correspondence, similarly requires plutonium-238 as its fuel source. Section 1.2.2 was revised to clarify plutonium-238 mission needs.

271-3: The potential health and environmental impacts associated with operation of the Hanford facilities during normal operations and from postulated accidents are presented in Section 4.3 of Volume 1. All impacts to human health and to ecological resources would be small in the immediate area and negligible at all distant locations.

Commentor No. 271: Heidi Wills (Cont'd)

Response to Commentor No. 271

271-4: No decisions have been made with regard to the facilities and locations evaluated to fulfill the requirements of the stated missions. In accordance with Council on Environmental Quality regulations (40 CFR Section 1502.14(e)), DOE has identified its preferred alternative in Section 2.8 of Volume 1. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the environmental impact analysis of DOE's proposed alternatives for meeting the mission requirements, and gave equal consideration to all comments, regardless of how or where they were received. DOE has analyzed each environmental resource area in a consistent, unbiased manner across all the alternatives to allow for a fair comparison among the various alternatives. The analysis included the effects of waste generation to include the quantities and types of waste expected to be generated under each alternative, expected path of disposition, and the impact on waste management infrastructure.

The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS. DOE made every effort to obtain, analyze, and disclose all required information to make a decision on expanding nuclear infrastructure. The costs of the proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. DOE mailed these documents to more than 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P of the Final NI PEIS.

Commentor No. 272: Joe Szwaja

Statement of Joe Szwaja concerning the NI PEIS

My name is Joe Szwaja. I am the Green Party's nominee for Congress from the 7th District. I am a teacher at Nova, a public High School in Seattle. From 1986 to 1993 served on the City Council of Madison, Wisconsin.

The NI-PEIS, as it currently stands, is not acceptable. It does not give an objective, comprehensive review of the need for radioisotopes, and it does not accurately compare the advantages and disadvantages of the possible strategies for meeting America's needs for radioisotopes.

The need for Plutonium 238 for space exploration has not been accurately portrayed in the NI-PEIS. NASA has plainly stated that its usage of Pu-238 will be much less than DOE is projecting. As technology improves, more and more deep space missions will use solar power. It is unlikely that Plutonium will ever again be a significant item on NASA's exploratory mission shopping list.

The military stockpile and demand for Pu-238 has also not been accurately portrayed. The U.S. Air Force's Space Command is planning, in its own words, to "Dominate Space...to dominate the world". On whose behalf? In the words of Arthur Stephenson, director of NASA's Marshall Space Flight Center, "We serve American industry..."

The Air Force and NASA are planning to spend more than a quarter trillion dollars in new military spacecraft in the next ten years. Longer range plans call for much more. Space Command is planning weapons to use in space, but also against ground targets. It even envisions destroying subversives with space-based lasers. Many of its weapons would employ Pu-238. Why is there no discussion of this need for Pu-238 in this PEIS? One possibility is obvious—the DOD and DOE want FTF to produce Pu-238 for space warfare, but they know the American people would reject such belligerence. They are hiding behind a smokescreen of space exploration and cancer fighting.

The people of the seventh district, and in deed of Washington as a whole, have a different agenda for Hanford. Again and again, we repeat: your job is to clean up the mess you made. Your job is to stop nuclear pollution from entering the Columbia. Your job is to stabilize the high level waste to eliminate leakage and prevent catastrophe. Your job is to decontaminate what can be decontaminated, and return those portions of the Hanford site to ecologically sustainable, economically useful purposes. Your job is not to restart FTF, not to import radioactive material to the Northwest, not to contaminate the FMEF, not to persecute whistleblowers, not to lie to the public and not to produce more waste. It is a good job, a vital job, and a challenging job. Get on with it.

Joe Szwaja,
P.O. Box 30929
Seattle, WA 98103
(206) 633-2464

8/30/00

272-1

272-2

Response to Commentor No. 272

272-1: The NI PEIS evaluates a range of reasonable alternatives for maintaining and enhancing DOE's existing nuclear facility infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. However, no component of the proposed action is for the purpose of supporting any defense or weapons-related mission.

DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1 2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

A May 22, 2000, correspondence from NASA to DOE identified that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG

Commentor No. 272: Joe Szwaja (Cont'd)

Response to Commentor No. 272

development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires one-third less plutonium-238 as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000, letter to DOE that large RTGs be maintained as backup. Section 1.2.2 was revised to clarify plutonium-238 mission needs.

272-2: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to “ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use.” The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

DOE notes the commentor’s opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission and migration of contaminants to the Columbia River. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Commentor No. 272: Joe Szwaja (Cont'd)

Response to Commentor No. 272

More specific to the DOE missions presented in the NI PEIS, FFTF is located approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to the groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

All workers at Hanford are free to, and in fact, encouraged to disclose safety hazards associated with DOE activities. Workers are protected against reprisals by legislation applicable to the U.S. Departments of Energy and Labor.

Commentor No. 273: David Johnson
Heart of America Northwest

COMMENTS TO USDOE NI PEIS HEARING
SEATTLE, WASHINGTON _ AUGUST 30, 2000

- MY NAME IS DAVE JOHNSON, I AM A MEMBER OF THE BOARD OF HEART OF AMERICA NORTHWEST
- I HAVE A Ph.D. IN NUCLEAR PHYSICS FROM THE UNIVERSITY OF WASHINGTON
- I WORKED FOR A NUMBER OF YEARS AT HANFORD
- THAT WORK INCLUDED DOING REACTOR PHYSICS ON THE FFTF REACTOR
- I WAS ALSO RESPONSIBLE FOR ALL MEASUREMENTS OF RADIO-ISOTOPES IN SUPPORT OF DESIGN OF A HIGH POWER ACCELERATOR BASED NEUTRON SOURCE
- I TESTIFIED ON OCTOBER 18, 1999 HERE IN SEATTLE AT THE SCOPING HEARING THAT A SPECIALLY DESIGNED ACCELERATOR BASED NEUTRON SOURCE FACILITY WAS A MUCH BETTER WAY TO MAKE MEDICAL ISOTOPES THAN RESTARTING THE FFTF REACTOR
- THE NI PEIS HAS ANALYZED THE ALTERNATIVE OF BUILDING TWO ACCELERATORS TO FULFILL IT'S NEEDS FOR NEUTRON SOURCES AS SPECIFIED IN THE PEIS
- * HOWEVER, AS I WILL SHOW, THE ANALYSIS APPEARS TO BE A STRAW MAN THAT IS DOOMED TO FAIL IN COMPARISON TO THE FFTF REACTOR
- IT IS APPARENTLY SET UP SO THAT THE FFTF WILL LOOK FAR SUPERIOR
- WHY DO I SAY THIS? LET ME EXPLAIN
- THE TWO ACCELERATORS THAT ARE PROPOSED ARE AS FOLLOWS
- THE FIRST ACCELERATOR IS A LOW ENERGY CYCLOTRON THAT IS PROPOSED FOR MAKING RADIO-ISOTOPES FROM A BEAM OF UP TO 70 MEV PROTONS
- NOTE THAT THIS ACCELERATOR WOULD NOT BE DESIGNED AS A NEUTRON SOURCE
- HENCE, IT WOULD NOT BE CAPABLE OF PRODUCING THE SAME ISOTOPES THAT COULD BE MADE BY THE NEUTRONS IN THE FFTF REACTOR
- FURTHERMORE, I HAVE A LETTER SIGNED BY WILLIAM D MAGWOOD IV, THE USDOE DIRECTOR OF THE OFFICE OF NUCLEAR ENERGY, SCIENCE, AND TECHNOLOGY DATED JULY 7, 1999 THAT STATES THAT THE USDOE DOES NOT NEED SUCH ACCELERATORS

273-1

Response to Commentor No. 273

273-1: DOE notes the commentor's view but contends that Alternative 3, Construct New Accelerators, is a reasonable alternative for meeting the mission objectives.

The high-energy accelerator supports both the plutonium-238 production mission and the civilian nuclear energy research and development mission. The commentor concluded that there is no need for this accelerator because the May 22, 2000, correspondence from NASA to DOE identifies that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium-238 as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that large RTG be maintained as backup. Volume 1, Section 1.1.2 was revised to clarify the plutonium-238 mission needs.

The commentor observed that the low-energy accelerator in Alternative 3 is proposed for the production of medical isotopes. DOE acknowledges that this accelerator will not produce the same array of medical and industrial isotopes produced by reactors or high-energy accelerators. Each irradiation device evaluated in this PEIS for the production of medical isotopes (FFTF, new low-energy accelerator, and new research reactor) will produce an array of medical and industrial isotopes unique to the facility. As indicated above, the design of the high-energy accelerator presented in the PEIS focused on supporting the plutonium-238 production mission, but as stated in Volume 1, Section 2.3.1.5.2, the design could be refined and expanded to perform additional missions such as the production of a select set of medical and industrial isotopes. The low-energy accelerator was configured primarily for the production of a spectrum of proton enriched medical and industrial isotopes. The modified high-energy accelerator and low-energy accelerator could jointly produce a broader spectrum of medical and industrial isotopes.

Commentor No. 273: David Johnson (Cont'd)
Heart of America Northwest

- A DIRECT QUOTE FROM THE LETTER IS "GIVEN OUR EXISTING ACCELERATOR FACILITIES, THE DEPARTMENT DOES NOT REQUIRE A NEW ACCELERATOR FACILITY FOR THE PRODUCTION OF ISOTOPES"
- HE MEANT THE PRODUCTION OF ISOTOPES VIA CHARGED PARTICLES, NOT VIA NEUTRONS
- I WILL ATTACH A COPY OF THIS LETTER TO MY TESTIMONY AS ITEM 1
- BY THE WAY, HE IS ALSO RESPONSIBLE FOR THIS NI PEIS
- FINALLY, SUCH AN ACCELERATOR WOULD COMPETE DIRECTLY WITH INDUSTRY WHICH IS NOT ALLOWED BY THE USDOE'S OWN POLICIES
- HENCE, THERE ARE THREE REASONS THAT THE FIRST ACCELERATOR IS A STRAW MAN, DOOMED TO FAIL AGAINST THE FFTF REACTOR
- THE SECOND ACCELERATOR THAT WAS PROPOSED IN THE NI PEIS IS A LARGE LINEAR ACCELERATOR THAT IS DESCRIBED ONLY FOR USE IN PRODUCING THE ISOTOPE PLUTONIUM -238 FOR POSSIBLE USE IN NASA SPACE PROJECTS
- IT IS A CONVENTIONAL SPALLATION NEUTRON SOURCE THAT IS WELL KNOWN TO WORK WELL, BUT THE BEAM ENERGY IS HIGH AT 1000 MEV
- THE COST OF THIS ACCELERATOR WAS STATED IN A RECENT REPORT AS OVER \$1 BILLION, BUT WITH SIGNIFICANT CONTINGENCY BECAUSE OF SO-CALLED UNCERTAINTIES
- HENCE, IT CLEARLY WOULD NOT COMPETE DIRECTLY WITH THE FFTF RESTART ON THE BASIS OF CAPITAL COST ALONE
- HOWEVER, SURPRISINGLY, IT IS MUCH CHEAPER TO OPERATE THAN THE FFTF
- MORE IMPORTANTLY, HOWEVER, IN MAY OF THIS YEAR NASA FORMALLY TOLD THE USDOE THAT IT DOES NOT NEED THE PLUTONIUM-238 THAT COULD BE PRODUCED BY THE FFTF OR SOME OTHER SOURCE
- HENCE, THE SECOND ACCELERATOR IS ALSO A STRAW MAN, SINCE PLUTONIUM-238 IS NOT NEEDED, THE SECOND ACCELERATOR IS NOT NEEDED
- I HAVE ANOTHER PROPOSAL THAT SHOULD BE THOROUGHLY EXAMINED FOR THE FINAL NI PEIS
- IN DECEMBER OF 1999, THE USDOE SHUT DOWN THE HFBR REACTOR AT BROOKHAVEN NATIONAL LABORATORY FOR SAFETY AND ENVIRONMENTAL REASONS

273-1
(Cont'd)

273-2

Response to Commentor No. 273

The commentor also concluded that based on a July 7, 1999 DOE letter, there is no need for an accelerator to produce medical and industrial isotopes. The letter stated, "Given our existing accelerator facilities, DOE does not require a new accelerator facility for the production of isotopes." DOE operates two accelerators that are being utilized for the production of medical isotopes, the Brookhaven Linac Isotope Producer (BLIP) located at the Brookhaven National Laboratory and the Los Alamos Neutron Science Center (LANSCE) located at the Los Alamos National Laboratory. DOE is currently in the process of upgrading the LANSCE facility with the 100 MeV isotope production facility. The upgrade is scheduled for completion in 2001. After the completion of the LANSCE upgrade, the existing capability at these two facilities will be twice the current need for accelerator generated medical isotopes. Thus, no new accelerator capacity is needed in the short term. In 1998, an Expert Panel convened to forecast future demand for medical isotopes estimated that the expected growth rate of medical isotope use during the next 20 years will range between 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These growth projections were adopted by DOE as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, there will be a need for expanded isotope production capacity.

- 273-2: The PEIS did examine a steady state spallation neutron source, the high energy accelerator. As stated in Volume 1, Section 2.3.1.5.2, the design of the high-energy accelerator presented in the PEIS focused on supporting the plutonium-238 production mission, but the design could be refined and expanded to perform additional missions such as the production of a select set of medical and industrial isotopes. The modified high-energy accelerator and low-energy accelerators could jointly produce a broad spectrum of neutron and proton enriched medical and industrial isotopes.

The commentor stated that the capital cost of his proposed accelerator design could be made, "with more study," comparable to restarting FFTF. He estimated the total program cost of the proposed accelerator to be in the range of \$420-570 million. This estimate was based on 1985 dollars.

Commentor No. 273: David Johnson (Cont'd)
Heart of America Northwest

- THIS REACTOR WAS A VITAL PART OF THIS COUNTRY'S NEUTRON SCATTERING RESEARCH PROGRAM. IT HAD SPECIAL LOW TEMPERATURE CAPABILITIES THAT ARE RARE
- I PROPOSE THAT THE NIPES EXAMINE A STEADY STATE SPALLATION NEUTRON SOURCE
- * IT WOULD BE DESIGNED TO DO STEADY STATE NEUTRON SCATTERING RESEARCH AS WELL AS PRODUCE MEDICAL ISOTOPES FROM THE NEUTRONS
- * IT COULD ALSO BE USED FOR SOME OF THE OTHER PROPOSED NUCLEAR RESEARCH ACTIVITIES
- ACCORDING TO EXPERTS IN THE FIELD OF NEUTRON SCATTERING, THERE IS STILL A NEED FOR A STEADY STATE NEUTRON SOURCE EVEN THOUGH A LARGE PULSED NEUTRON SOURCE (THE SNS AT OAK RIDGE NATIONAL LAB) IS UNDER CONSTRUCTION
- I HAVE INCLUDED ITEM 2 AS AN ATTACHMENT TO THIS TESTIMONY TO VERIFY THE NEED FOR A STEADY STATE NEUTRON SOURCE
- THE COST OF SUCH A SPALLATION FACILITY SHOULD BE LESS THAN FOR THE SECOND ACCELERATOR IN THE DRAFT NIPES
- THE FACILITY IS FEASIBLE, IN FACT IT WAS PROPOSED 15 YEARS AGO AT A WORKSHOP AT THE (THEN) NATIONAL BUREAU OF STANDARDS
- I KNOW BECAUSE I AM CO-AUTHOR OF THE PROPOSAL PAPER
- IT WAS TO BE A SPALLATION NEUTRON SOURCE WITH A BEAM ENERGY OF 300 MEV OR MORE
- HENCE, THE ENERGY WOULD BE MUCH LESS THAN THE SECOND ACCELERATOR
- THE BEAM CURRENT WOULD BE MUCH HIGHER HOWEVER
- I HAVE ATTACHED A COPY OF THE PROPOSED STEADY STATE NEUTRON SOURCE AS ITEM 3
- I IMPLORE THE USDOE TO CONSIDER THE STEADY STATE NEUTRON SOURCE AS I HAVE PROPOSED
- IT WOULD BE CAPABLE OF DOING THE NEUTRON SCATTERING RESEARCH AS WELL AS MAKE ALL THE MEDICAL ISOTOPES AND OTHER RESEARCH THAT COULD BE DONE IN THE FFTF
- HOWEVER, IT WOULD DO ALL THAT WITHOUT MAKING MORE FISSION PRODUCT OR TRANSURANIC WASTES

273-2
(Cont'd)

Response to Commentor No. 273

This cost would escalate to \$603-818 million in 2000 dollars due to an inflation rate of 43.5 percent between 1985 and 2000 (<http://www.economagic.com/em-egi/data.exe/fedstl/gnpdef+1>). The total cost of FFTF restart, which includes facility modifications, startup, target development, testing, and evaluation, presented in Table S-3 of the Cost Report, is \$314 million in 2000 dollars. The capital costs of the commentor's proposed accelerator design would have to be decreased, "with more study," more than 48-61 percent to be comparable to the total cost of FFTF restart.

The commentor stated that the annual operating cost of his proposed accelerator should be less than FFTF. Operating costs for the proposed accelerator estimated at \$20-40 million per year in 1985 dollars is \$29-57 million in 2000 dollars. The upper end of the estimated operating cost range is slightly less than the FFTF annual operating cost, \$58.9 million.

273-3: Deactivation of FFTF is not part of implementing Alternative 1, Restart FFTF. Deactivation of FFTF is part of implementing Alternatives 2, 3, 4, and 5 and including the cost of FFTF deactivation in the implementation costs for these alternatives is appropriate. The Cost Report was structured to identify the implementation costs of the various alternatives so the Secretary of Energy would have this information along with other data for consideration. The Cost Report did not identify the source of funding for implementation.

Commentor No. 273: David Johnson (Cont'd)
Heart of America Northwest

- FURTHERMORE, WITH MORE STUDY, THE CAPITAL COST COULD BE MADE QUITE COMPARABLE TO RESTARTING THE FFTF
- FINALLY, THE OPERATING COST SHOULD BE LESS THAN THAT OF THE FFTF WHICH MEANS THAT REVENUE FROM SALE OF ISOTOPES COULD MORE QUICKLY PAY OFF THE DEBT
- AS AN ADDED POINT, IT IS NOT FAIR TO ADD \$281 MILLION TO THE COST OF ACCELERATORS WHEN THE COST FOR DISMANTALLING THE FFTF WOULD COME OUT OF THE ENVIRONMENTAL MANAGEMENT BUDGET, NOT THE NUCLEAR ENERGY BUDGET
- THANK YOU

273-2

273-3

David Johnson PhD

P.O. Box 1034

ENUMCLAW WA 98022

360-825-0480

Response to Commentor No. 273

**Commentor No. 274: Nancy Rising
Peace Action of Washington**

Statement of Nancy Rising concerning the NI PEIS

I am the Chairperson of Peace Action of Washington, representing almost 18,000 households in Western and Eastern Washington. Peace Action's members have been concerned about Hanford for many years. We want the DOE to stick to first things first. We want the clean up of Hanford to become the primary objective of the DOE, without distractions such as a return to production of nuclear waste for whatever purpose.

Until you have shown that you can clean out all leaking or "watch list" tanks, and stabilize all high-level waste in a timely and cost-effective fashion, that is your job. Until you have identified all significant bodies of pollution on the site and downstream, and taken appropriate measures to keep them out of the Columbia and out of our environment, that is your job. Until you have thoroughly decontaminated usable land and facilities, so that they can again make positive contributions to the region and the nation, that is your job. Until Hanford workers are free to speak out when they see safety hazards, incompetence or corruption, without fear of reprisal, that is your job. Other priorities can wait.

The Department of Energy's draft NI PEIS is neither complete nor objective. Whether deliberate or inadvertent, the cumulative effect of numerous omissions to the PEIS are unprofessional and bias the PEIS in favor of a de-facto "preferred alternative," the restart of the Fast Flux Reactor. Many have already been brought to your attention, especially the NASA letter should have been included in the discussion of the need for Pu-238.

An omission that hasn't been mentioned since it was pointed out by Peace Action members during the scoping process is the military Pu-238 stockpile. Since the START treaty, the number of deployed nuclear warheads has been drastically reduced. Further reductions are expected. The Pu-238 used to power the electronics on these warheads can now be used to power spacecraft, if necessary. The omission of any discussion of this resource tends to bias the PEIS further in favor of restarting FFTF.

The tri-cities economy is dependent on Hanford, and the DOE has an obligation to continue to provide steady employment in the area. If the DOE does not make real progress on the Hanford cleanup, and continues to pursue pork-barrel projects instead of real solutions to America's energy and security needs, we are concerned that Congress will continue underfunding the Hanford clean up. Hanford will become an environmental and economic national sacrifice area.

Nancy Rising, Chair
Peace Action - Washington
5001 - 112th Ave. NE
Kirkland, WA 98033

Response to Commentor No. 274

274-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

DOE was tasked by Congress in the Atomic Energy Act to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental impacts to accomplishing the proposed action. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure mission described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected. FFTF restart and operation would not impact the schedule or available funding for existing cleanup activities.

Steady and consistent progress in restoring Hanford is documented in annual reports. These are available at www.hanford.gov. Hanford has a comprehensive waste minimization and pollution prevention program in place as summarized in Section 3.4.11.8 that controls any activity generating waste on the site.

Workers at Hanford are free to and encouraged to disclose safety hazards associated with DOE activities. Workers are protected against reprisals by legislation.

274-1

274-2

274-1

***Commentor No. 274: Nancy Rising (Cont'd)
Peace Action of Washington***

Response to Commentor No. 274

274-2: This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR 1500 through 1508 and 10 CFR 1021, respectively). DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives.

The acquisition and use of surplus, defense-related plutonium-238, if available, were not considered and are outside the scope of the civilian nuclear infrastructure missions considered in this NI PEIS. The commentor is correct that small radioisotope thermoelectric generators (RTGs) using plutonium-238 are used to power electronic systems on some strategic weapons, some of which have become surplus due to strategic arms reductions. Although the exact configuration of these RTGs is classified, the amount of plutonium-238 in each unit is relatively small and the assay of the plutonium-238 is much lower than that required for use in NASA spacecraft.

DOE assumes that the commentor's reference to the "NASA letter" refers to the May 22, 2000, letter from NASA Headquarters to the DOE Office of Space and Defense Power Systems. This letter is cited in Section 1.2.2 of Volume 1 of the Draft and Final NI PEIS with regard to the discussion of plutonium-238 needs for future space missions. While this letter states that NASA no longer has a need for Small Radioisotope Thermoelectric Generator (SRTG) power systems, this letter also lists the planned deep space probe missions which would specifically require plutonium-238. These missions and their planned launch dates are outlined in Section 1.2.2 of this NI PEIS. For reference, this letter and all of the references cited in this NI PEIS are available in the public reading rooms established by DOE.

Commentor No. 275: Chris Jackins

August 30, 2000

REGARDING:

Opposition to restarting FFTF Nuclear Reactor
(Fast Flux Test Facility reactor)

FROM: Chris Jackins
P.O. Box 84063, Seattle, WA 98124

My name is Chris Jackins.

Thank you sending me a copy of the draft Environmental Impact Statement. Looking through the documents, I saw information on economic (socioeconomic) impacts, like jobs.

For example, the documents mention that more Plutonium-238 could have been purchased from Russia, but was not purchased, "due to budget constraints". (page S-5) And, some alternatives were dismissed based on projected costs. (page S-19)

Three questions:

1. The documents state that some 12 million nuclear medicine procedures are performed each year. (page S-2) If the FFTF reactor were to supply medical isotopes for these procedures, do you have an estimate for the average cost per procedure attributable to the FFTF reactor, and a comparison to the cost from other sources?
2. Do you have an estimate for the average cost per kilogram of Plutonium-238 produced by the FFTF reactor, and a comparison to the cost from other sources?
3. If FFTF costs are higher, would subsidizing production be legal under World Trade Organization (WTO) agreements?

After recent fires at Hanford, traces of a number of radioactive elements were detected in nearby areas. This is a reminder that Hanford already has an existing abundant supply of radioactive elements.

It has been reported for some time that the precise contents of a number of the waste tanks at Hanford is not known. Perhaps there is a lot of "swell stuff" in those storage tanks.

The process of dealing with this waste is already on the agenda. It would be sensible to look the waste over first, before shopping around for more. One need not be like alchemists, who, not content at owning an actual gold mine, wish instead to manufacture the element themselves.

According to recent news reports, NASA does not need the Plutonium-238 that would be produced by the FFTF reactor, and there is already adequate production of medical isotopes. (See, for example, Seattle Times, August 29, 2000, "Restart of reactor challenged"; Seattle Times, August 29, 2000, "Hanford's FFTF reactor poses unacceptable risks")

The FFTF reactor should not be restarted. The focus should be on cleaning up Hanford's radioactive waste.

Thank you.



Response to Commentor No. 275

275-1: The estimated costs of the range of reasonable alternatives are presented in the Cost Report and are summarized in Appendix P of the Final NI PEIS. However, the Cost Report is not a cost-benefit analysis. While it is reasonable to believe that the benefits of medical isotopes are substantial, the purpose of this NI PEIS is to describe the nuclear infrastructure missions (Section 1.2 of Volume 1), a range of reasonable alternatives for satisfying the mission requirements (Section 2.5 of Volume 1), and the environmental impacts that would result from implementation of the alternatives. According to 40 CFR Section 1502.23, if a cost-benefit analysis exists, it must be reported and summarized in the NI PEIS.

No estimate of average cost per procedure or cost per kilogram of plutonium-238 attributable to FFTF was made in the Cost Report. DOE also does not anticipate any need to subsidize the operation of FFTF.

275-2: No radioactive materials were "released" in the Hanford wildfires of 2000. Wildfires did resuspend some materials already in the environment. The resuspended materials were low; slightly above natural background levels. The very low levels required several days of analysis to quantify. Additional information is available to the public at <http://www.Hanford.gov/envmon/index.html>. This site also provides a link to information on the independent offsite air monitoring conducted by the U.S. Environmental Protection Agency.

The utilization of radioisotopes in current Hanford wastes for medical isotope use was not in the scope of this PEIS. The primary reason is that Hanford wastes contain "aged" isotopes not typically useful in medical procedures (i.e., short-lived isotopes). A secondary reason is that nearly all wastes at Hanford has had a treatment and disposition determined.

275-3: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice

Commentor No. 275: Chris Jackins (Cont'd)

Response to Commentor No. 275

regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

A May 22, 2000, correspondence from NASA to DOE identified that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires one-third less plutonium-238 as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000, letter to DOE that large RTGs be maintained as backup. Section 1.2.2 was revised to clarify plutonium-238 mission needs.

275-4: DOE notes the commentor's opposition to Alternative 1, Restart FFTE.

Draft PEIS Comment Form

PLEASE INCLUDE p. 106, 116, 120, 121, 123
FROM STANSFIELD TURNER BOOK CAGING THE NUCLEAR
GENIE.

SEATTLE IS PAYING 10's OF MILLIONS IN
EXCESS DEBT SERVICE IN CITY LIGHT TO BACK
WPPSS BONDS. WPPSS WAS SAID TO BE ABLE TO
PRODUCE ENERGY TOO CHEAP TO METER.

FFTF IS SAID BY SIMILAR CORPORATE
INTERESTS TO BE ABLE TO PRODUCE CHEAP
ISOTOPES FOR WHATEVER GOVERNMENT AGENCIES WANT.

REUNDO - AS MR. TURNER SAID IN
HIS BOOK DOD WAS ABLE TO PUSH WEAPON
SYSTEMS WITH IMPUNITY. COSTS OF CLEANUP
EXTERNALIZED TO DOE.

SECRETLY PREVENTS SOLVING THESE
PROBLEMS. OBJECTIVE AGENCIES SUCH AS
THE IAEA THAT HAVE NOT BEEN CONTRACTORS
OR OFFICIALS WITH SUBJECTIVE INTEREST MUST
BE USED TO APPROXIMATE THE TRUTH. TRUTH IS
NECESSARY TO SOLVE TECHNICAL PROBLEMS NOT P.R.

*PEIS - NIPEIS MEDICAL AND INDUSTRIAL ISOTOPE PRODUCTION.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): BARBARA ZEPEDA

Organization: _____

Home/Organization Address (circle one): 308 E REPUBLICAN ST #708

City: SEATTLE State: WA Zip Code: 98102

Telephone (optional): 206-324-8571

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Collette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

276-1

276-1: DOE notes the commentor's views and concerns and receipt of the referenced attachment. The purpose of this NI PEIS is to evaluate the environmental impacts of reasonable alternatives to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238 for NASA space missions, and nuclear research and development. As evaluated under Alternative 1 in this NI PEIS, FFTF would be restarted to accomplish these nondefense-related missions. Other unrelated nuclear energy and defense-related considerations are beyond the scope of this NI PEIS.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 277: Roy D. Goodman

8/30/00 Presentation in Seattle at Department of Energy public hearing
on NI PEIS for Fast Flux Test Facility at Hanford
(to the tune of the Village People's "Y.M.C.A.")
by Roy D. Goodman,
Seattle, Washington

**Hanford, it's in Washington State,
I said Hanford, full of nuclear waste,
I said Hanford, suffers from your delay
To honor your clean-up agreement,**

**Hanford's where you want to restart,
I said Hanford, making plutonium as part
Of your charter to power NASA in space,
First fix the earthly mess you've made.**

**It's time to shutdown the F.F.T.F.,
It's time to shutdown the F.F.T.F.,
Hanford's fouled up enough, you don't need to make more
Deadly waste you don't know how to store.**

**It's time to shutdown the F.F.T.F.,
It's time to shutdown the F.F.T.F.,
And get on with your task of clean-up till it's done,
Make life safer for everyone.**

**Hanford's not where you need to impose
To produce medical isotopes,
Your own folks said don't be such dopes,
It can be done cheaper elsewhere.**

**Hanford for research nuclear,
Ship plutonium thru ports around here,
Vhat?! Are you crazy?! If ve all vant to live,
There's only one alternative.**

**And that's to shutdown the F.F.T.F.,
It's time to shutdown the F.F.T.F.,
Hanford's messed up enough, you don't need to make more
Deadly waste you don't know how to store.**

277-1

277-1: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

277-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

277-2

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost-efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of

Commentor No. 277: Roy D. Goodman (Cont'd)

**It's time to shutdown the F.F.T.F.,
It's time to shutdown the F.F.T.F.,
And get on with your task of clean-up till it's done,
Make life safer for everyone.**

**F.F.T.F.,
Dismantle the F.F.T.F.,
One big mistake and we all just might die,
Bend over now and kiss your rear goodbye.**

**277-2
(Cont'd)**

Response to Commentor No. 277

various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NIPeIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

The commentor appears to express the concern that DOE would expose constituents in the Seattle area to risks associated with the transport of weapons-grade plutonium. None of the proposed alternatives involve the shipment of any weapons-grade plutonium to any port in the United States. Alternative 1 does postulate that DOE might decide at some point to import mixed oxide fuel from Europe to fuel FFTF. At this time, however, DOE has not proposed to import this fuel through any specific port. If DOE ultimately decides to import fuel from Europe, it would perform a separate NEPA analysis to select a port. This review would address all relevant potential impacts of overseas and inland water transportation, shipboard fires, package handling, land transportation, as well as safeguards and security associated with the import of SNR-300 mixed oxide fuel through a variety of specific candidate ports on the west and east coasts. It would consider all public comments, including local resolutions, concerning the desirability of bringing mixed oxide fuel into the proposed alternative ports.

In the event that DOE decides to enhance its nuclear infrastructure, it would not expose any population to high, unacceptable risks under any alternative. Any transportation activities that would be conducted by DOE would comply with U.S. Nuclear Regulatory Commission and U.S. Department of Transportation regulations. Associated transatlantic shipment would comply with International Atomic Energy Agency

Commentor No. 277: Roy D. Goodman (Cont'd)

Response to Commentor No. 277

requirements. In Section J.6.2, DOE reviewed the potential maximum impacts from the marine transportation of mixed oxide fuel from Europe to a representative military port, Charleston, South Carolina, and overland transportation to Hanford. Also in that section, a bounding analysis demonstrates that the maximum potential radiological risks to the surrounding public from mixed oxide fuel shipments would be extremely small (e.g., less than 1 chance in a trillion for a latent cancer fatality per shipment from severe accidents at docks and in channels and less than 1 chance in 50 billion for a latent cancer fatality per shipment from overland highway accidents).

Commentor No. 278: Rick Mounce

Rick Mounce
2806 W. 46th Ave
Kennewick, Washington 99337

Good Evening, my name is Rick Mounce. I reside in Kennewick, WA. I am speaking tonight as a private citizen.

I was not surprised that the PEIS confirmed that there was essentially no public risk associated with operation of the FFTF to support an expanded isotope mission. Since I have been associated with operation of the FFTF for many years, I can personally attest to its high standards of safety.

278-1

But tonight, I would like to comment on information that I have seen distributed by some of the anti-nuclear activist groups attending these meetings.

One activist brochure I picked up is titled "Hanford and the River" by Columbia River United. This brochure identifies the major areas and past operations at Hanford that have impacted the Columbia River. I read this document front to back and would like to point out that the FFTF operated for ten years, but is not mentioned one single time as having had a past impact on the Columbia River. Why? Because operation of FFTF has absolutely no impact on the river.

278-2

Another hand-out I read was from Columbia Riverkeeper. In it they demand that the following statement be removed from the PEIS summary on spent fuel management. "The environmental impacts associated with the existing inventory of spent fuel at the Hanford site are minimal."

I agree that this statement should be removed. Instead, the PEIS summary should reflect DOE's well-publicized and appropriate commitment to remove the 2100 metric tons of spent fuel from Hanford's 100 area water basins. This defense mission spent fuel does not include the 16 metric tons of non-defense spent FFTF fuel.

278-3

The PEIS summary should also discuss the minimal environmental impacts associated with storing the spent FFTF fuel on its own merits. Namely, that it is not corroded and is stored in dry storage casks, not the aging defense mission water basins. This section should also be consistent with Chapter 4 of the PEIS which correctly states that the FFTF spent fuel will be packaged and shipped to the repository for disposal.

However, I am surprised at some of the information I have seen distributed by Heart of America Northwest. Maybe I shouldn't be. It seems that because they could not find any significant or legitimate comments on the PEIS, they have had to resort to distributing inflammatory half-truths and outright fabrications under the guise of "public education."

278-2

Response to Commentor No. 278

278-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

278-2: DOE notes the commentor's views and observations. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to the groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

278-3: The discussions in the Summary and Section 4.8.3.5 of Volume 1 on the cumulative impacts for spent nuclear fuel management at Hanford were revised to clarify that the management of the existing spent nuclear fuel at Hanford results in a dose of less than 0.1 millirem per year of the maximally exposed member of the public. This dose is well within the DOE limits given in DOE Order 5400.5. As discussed in that Order, the dose limit from airborne emissions is 10 millirem per year, as required by the Clean Air Act; drinking water is 4 millirem per year, as required by the Safe Drinking Water Act; and the dose limit from all pathways combined is 100 millirem per year. DOE has committed to remove the spent nuclear fuel at Hanford for ultimate disposition in a geologic repository.

Commentor No. 278: Rick Mounce (Cont'd)

The lengths they will go to mislead the public into supporting their agenda is evidenced in information they publish and distribute. One example of their so-called "credible" educational material is their statement that; "Restart of the FFTF nuclear reactor will have enormous environmental consequences for the Pacific Northwest for generations to come. Restart of the FFTF nuclear reactor will mean importation of Weapons Grade Plutonium in "Mixed Oxide" fuel to Hanford from Germany and production of 35,000 pounds of High-Level Nuclear Waste - waste which USDOE has no idea of where or how to dispose of, but the report (and here they mean the PEIS) just concludes that the waste can be stored indefinitely at Hanford."

Note that the 35,000 pounds of High-level Nuclear Waste they are referring to is the 16 metric tons of spent FFTF fuel that I mentioned earlier. Also note that FFTF fuel is not, nor could it ever be, classified as weapons-grade plutonium.

Well, had Heart of America Northwest read the PEIS, they would have noticed the section entitled Spent Nuclear Fuel Management in Chapter 4. In it they would have discovered that DOE did not, in any way, conclude that the spent fuel would be stored indefinitely at Hanford. Instead, they would know that the disposition path for the 16 metric tons of spent FFTF fuel is to package it in acceptable containers and ship it to the repository for disposal, the same process as for the nation's 105,000 metric tons of commercial reactor fuel. They would also know that the time-line for doing this is either during operation or at cessation of reactor operation.

Furthermore, if Heart of America Northwest really had public education in mind they would be knowledgeable about the status of the repository at Yucca Mountain. They would then know that the FFTF fuel is suitable for repository disposal in its current form and that its contribution to the overall projected repository inventory is a whopping 0.015%.

This hardly qualifies as enormous environmental consequence for generations to come.

This is just one example of deliberate misrepresentation of the facts by a handful of anti-nuclear activists. You have already heard or will hear other examples tonight.

By using false pretenses to intentionally scare and mislead the public into supporting their agenda, some of these organizations have seriously undermined the NEPA process and their own credibility and it is my opinion that they are not trustworthy nor qualified to speak on behalf of the public interest.

On a personal note, just last month I lost my brother to cancer. He was 49 years old. Perhaps, had FFTF been restarted to produce medical isotopes earlier, he may still be alive today; therefore I fully support the restart of the FFTF to produce medical isotopes in support of the eradication of this and other debilitating diseases.

278-2
(Cont'd)

278-1

Response to Commentor No. 278

Commentor No. 279: Sarah Schmidt

Response to Commentor No. 279

Draft PEIS Comment Form

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Shut down FFTF
 Clean up Hanford
 Cease & desist incompetence in handling
 of waste (see attached form)

|| 279-1
 || 279-2
 || 279-3

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): _____
 Organization: _____
 Home/Organization Address (circle one): _____
 City: _____ State: _____ Zip Code: _____
 Telephone (optional): _____
 E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free telephone: 1-877-562-4593 • Toll-free fax: 1-877-562-4592
 E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

279-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

279-2: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site.

279-3: DOE notes the commentor's concern regarding the proper handling and transportation of wastes. DOE Order 435.1 "Radioactive Waste Management" was issued on July 9, 1999. Per this Order, each DOE radioactive waste receiving facility shall evaluate waste for acceptance, including confirmation that the technical and administrative requirements have been met including the facilities waste acceptance criteria. A process for the disposition of nonconforming wastes is also to be established. The commentor provided a few examples of when the waste receiving facility had identified certain wastes that did not meet the technical and administrative requirements.

FFTF restart would not impact the cleanup missions at Hanford. With respect to waste management and cleanup issues, the Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Chapter 2—Written Comments and DOE Responses

Commentor No. 279: Sarah Schmidt (Cont'd)

Sarah Schmidt
3815 Woodland Park Ave N #205
Seattle, WA 98103

The following information was researched and compiled during my internship at Heart of America Northwest. This information, consisting of internal memos and reports, was sent by the Department of Energy and obtained through the Freedom of Information Act.

Per Memo dated May of 1995, issued by The Hanford Public Westing House Company, document number 9502473R1. Pertaining to a mismanaged waste shipment sent by the Lawrence Berkeley National Laboratories to Hanford's Low Level Burial Ground. Problems with this shipment included, but were not limited to:

- Leaking containers
- Mislabeled Waste
- Improper Packaging such as mixing, and overfilling

Per reports by Lana Richterich, dates ranging from December 1996 to January 98, document number SWIR611. Pertaining to repeated nonconformance by Argonne National Laboratories in their shipment of waste to Hanford. These violations contained but were not limited to:

- Leaking containers
- Mislabeling of waste
- Exceeding allowed weight of waste
- Mixing of potentially incompatible waste

Because these examples were repeat errors by Argonne National Laboratories, the reader of the reports is lead to the conclusion that nothing was done to solve the problem.

Per Memos pertaining to End of the Year Assessments by Department of Energy Contractors to confirm that they are up to State and Federal guidelines on waste management:

Martin Marietta Energy Systems March 1994, Document number 9452287.

Restricted Status.

General Atomics July 1994, Document Number 9455507.

Not Approved.

Paducah Gaseous Diffusion Plant, September 1994, Document number 9456361.

Restricted Status.

279-3

Response to Commentor No. 279

Commentor No. 279: Sarah Schmidt (Cont'd)

Sarah Schmidt
3815 Woodland Park Ave N #205
Seattle, WA 98103

Problems identified at the various locations mentioned above included but were not limited to:

- mislabeling of waste
- mixing of waste
- inadequately trained staff handling the waste

This is just a small example of the incompetence that is displayed in the handling of the waste already buried at Hanford. Now you expect the citizens of Washington and Oregon to trust you when you say that the Department of Energy can handle the excessive waste that will be created by the Fast Flux Test Facility?

It is time to stop robbing the cleanup fund and keep the promises you made in the Tri-Party Agreement.

SHUT DOWN FFTF ONCE AND FOR ALL AND CLEAN UP THE MESS YOU HAVE ALREADY CREATED.

This is our state and we will be heard.

279-3
(Cont'd)

279-2

279-1

279-2

Signature:  Date: 8/30/00

Commentor No. 280: Sally Lamson

Good Evening. My name is Sally Lamson. I'm ^{currently} a resident of Kennewick Washington and representing myself. I would like to spend the next few minutes setting the record straight on one of the topics in Heart of Americas citizens guide for these hearings. Specifically, the distortion and fabrications that DOE is "Violating the Hanford Cleanup Agreement" and that "cleanup funds are lost every year to FFTF."

Let's go over the facts.

Fact 1.

The decision to shut down the FFTF was a unilateral decision by the U.S. Department of Energy, not a "covenant" or promise between the DOE, Environmental Protection Agency and Washington Department of Ecology. Following the shutdown decision in December 1993, FFTF was included in the Tri-Party Agreement to establish milestones with the goal of conducting shutdown work in an orderly sequence to ensure coordination with other Hanford Site cleanup actions.

Fact 2.

When DOE identified a possible future mission for the reactor, shutdown work was terminated and the facility was placed in standby. ¹ DOE initiated discussions with the Washington State Department of Ecology to revise the TPA milestones, and public meetings were held. As a result, the milestones were placed in temporary suspension until the Secretary of Energy issues a final decision on whether or not to restart the FFTF. If the FFTF restarts, the milestones will be deleted. If the FFTF is directed to shut down, new dates for the milestones will be negotiated. What I described is the TPA change process. Therefore, is Heart of America also inferring

Response to Commentor No. 280

280-1

280-1: DOE notes the commentor's views and observations.

280-2: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 280: Sally Lamson (Cont'd)

that the EPA and the WDOE are violating the Hanford Cleanup Agreement? I don't think so, and neither is the DOE.

Fact 3.

The statement that cleanup funds are being directed to the FFTF is recurring and false ^{distortion.} ~~Heart of America rhetoric.~~ They are fully aware that resources for maintaining the FFTF in standby is provided by separate funding appropriations from Nuclear Energy, which is completely unrelated to the cleanup budget under Environmental Management. If the FFTF were to restart, Nuclear Energy funding appropriations would continue. Let me reemphasize, **FFTF funding for standby and potential restart does not come out of the cleanup budget.**

Fact 4.

If FFTF was selected for the proposed missions, the estimated restart funding is \$314M. If the missions under consideration in the PEIS were assigned to other DOE sites, appropriate funding from Nuclear Energy, **not clean up**, will still be required. Interestingly, if this were to occur, additional funding of ~\$281M would also be required for the concurrent deactivation of the FFTF, and this funding would come from the Hanford cleanup budget. It takes money to shut the FFTF down. Recapping, if the FFTF were not selected as the preferred alternative, the cost to the DOE would be almost twice as much or greater to meet the PEIS needs, depending on which alternative was selected. And the hit on Hanford cleanup costs would be substantial.

280-1
(Cont'd)

Response to Commentor No. 280

Commentor No. 280: Sally Lamson (Cont'd)

My conclusions are:

- 1.) The Heart of America statements discussed earlier are completely unfounded and without merit.
- 2.) Selection of the FFTF as the preferred alternative makes sense economically as well as environmentally and technically. The startup costs and shutdown costs are comparable. The FFTF has the largest capability and flexibility of all the options. It meets the needs and requirements of the PEIS. It is the premier test reactor in the world with a proven performance and a safety record second to none. I trust that the DOE will agree and make the right decision.

**280-1
(Cont'd)**

280-2

Response to Commentor No. 280

Commentor No. 281: Brian Berglin

Good evening, my name is Brian Berglin. I live in the Tri-Cities and I am representing myself this evening. First, I would like to thank the DOE for preparation of this PEIS and addressing the need for expanding the nation's nuclear infrastructure to support these important civilian missions. I believe that FFTF should be selected as the preferred alternative in the final PEIS because it provides the greatest capacity and flexibility of the options being evaluated and, as the PEIS analyses clearly indicate, the environmental impacts associated with restart and operation are small.

I want to also express my concerns tonight about the misleading information being circulated by Heart of America Northwest regarding FFTF restart, apparently to scare and mislead the public. This does a great disservice to the EIS and decision-making process, and more importantly, to the people in this region. A lot is at stake with the upcoming decision on this PEIS, and opinions should be based on truthful information, not obvious fabrications being made under the guise of informing the public. I would like to address one topic in particular where this is occurring, waste generation and management.

Waste generation is an area of importance to everyone in the northwest. I would like to address several false statements that were made related to the wastes that would be generated by the proposed restart of FFTF and how these wastes would be managed. I have been involved with operation of FFTF for many years and I believe I am knowledgeable to speak in this area.

Heart of America claims that "Internal USDOE documents reveal that restarting the FFTF Nuclear Reactor will add more liquid radioactive waste to Hanford's leaking and explosive High-Level Nuclear Waste tanks." This is untrue and a good example of the use of scare tactics. FFTF has never generated high level waste and as stated in the PEIS there will be **NO** high level radioactive waste produced by any of the proposed missions. Since not a single drop is generated, then it goes without saying that operation of FFTF, or the Hanford facilities being considered for processing, would not add a single drop of waste to the Hanford High Level Waste tanks, nor in any way affect the Columbia River. In fact, as stated in the PEIS waste management sections, if the FFTF is selected for the proposed missions, DOE plans to use available 400 Area and commercial facilities to store, process and dispose of the wastes that would be generated.

Heart of America claims that "Radioactive Wastes would be buried in Hanford's unlined, unregulated low-level waste trenches -with no consideration of environmental and health

281-1

281-2

Response to Commentor No. 281

281-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

281-2: DOE notes the commentor's views and observations. DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and to providing ample opportunity for public comment on those actions.

The use of proposed alternative facilities associated with processing of neptunium-237 targets would have no impact on schedules or available funding for high-level radioactive waste programs at either Hanford or the INEEL sites. At INEEL the tanks would not be used although certain facilities at the Idaho Nuclear Technology Engineering Center (INTEC) would be used to treat the wastes resulting from processing the irradiated targets. These are reliable systems that would process a maximum of 1,050 cubic meters of low-level radioactive waste over the 35-year nuclear infrastructure operational period. The higher activity waste would be treated as a solid form via a stand-alone vitrification system, separate from any tank waste treatment system. At Hanford, the existing high-level radioactive waste facilities would also not be used, and as analyzed in the PEIS, no existing or planned high-level radioactive waste facilities would be used to treat the wastes resulting from processing the irradiated targets.

Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

Commentor No. 281: Brian Berglin (Cont'd)

impacts.” As I mentioned before, available 400 Area and commercial facilities would be used for waste disposition. Therefore, DOE does not intend to send any waste generated at FFTF to the Hanford burial trenches. And by the way, wastes disposed of in Hanford’s burial trenches must meet specific criteria for burial and be appropriately packaged before being accepted for burial in the trenches, which are operated in accordance with federal regulations.

Heart of America claims that “USDOE deliberately violates NEPA (the law requiring this EIS) by saying they will disclose plans for these wastes in a future document instead of right now.” This is another example of Heart of America rhetoric. What the PEIS does say is that DOE intends that waste be managed independent of the existing Hanford site waste management infrastructure by using commercially available facilities. Contrary to statements made at earlier public meetings, use of commercial facilities is consistent with current DOE policy and is already in practice at other sites. It further discusses the Waste Minimization and Management Plan for FFTF that was developed in consultation with the Washington State Department of Ecology and the Oregon Office of Energy. This Plan identifies a program and process for incorporating pollution prevention and waste minimization practices into FFTF’s restart and operations planning, if FFTF is selected to restart. The process laid out in this plan would involve key stakeholders, including the states of Washington and Oregon, in waste management, waste minimization and pollution prevention decisions. Are these the actions of an agency trying to ignore the public’s concern with waste generation? I don’t think so.

Heart of America also claims that the PEIS does not look at safety or environmental impacts from adding more wastes. This again is untrue. The PEIS addresses the radiological and chemical impacts on workers and the public from waste management activities. The amount of wastes that would be generated are very small and would be safely managed in full compliance with state and federal laws, as they are now, and pose no threat to the public or the environment. The humanitarian benefits to the general population from the production of medical isotopes clearly outweighs the small impact of the waste that would be produced. I am confident that FFTF can safely and competently support these missions and that the wastes generated would likewise be safely and appropriately managed.

**281-2
(Cont'd)**

Response to Commentor No. 281

Commentor No. 282: Dan Arrigoni

Good Evening, my name is Dan Arrigoni and I am a citizen of the Pacific Northwest.

I am pleased to have the opportunity to provide my comments to DOE regarding the PEIS alternative to operate the FFTF.

I have become very frustrated with newspaper articles that have been published in Pacific Northwest regarding the DOE alternative to operate the FFTF. It seems that unreliable sources have purposely and unfairly influenced the media with propoganda designed to scare and mislead the public into supporting an anti-nuclear agenda.

This is why I find a recent article published in the Oregonian so refreshing. I am impressed that they sought out factual information so they could fairly present the virtues of operating the FFTF to the public.

I would like to read this article into the record that was published on August 29, 2000, prior to the public hearing in Portland.

READ ARTICLE

In closing, I urge everyone in this room to follow the Oregonian's lead and accept your responsibility to seek out factual information seriously.

The opportunity to provide the public with progressive cancer treatments is too important to throw out based on the self-centered bias of a few individuals.

Dan Arrigoni
417. W. 12th Ave.
Kennewick, WA 99337
(509) 586-0818

282-1

Response to Commentor No. 282

282-1: DOE notes the commentor's views and observations as well as those expressed in the Oregonian newspaper article.

Commentor No. 283: Bill Dautel

Good evening, my name is Bill Dautel and I am speaking tonight as a citizen of the Pacific Northwest.

Recently, I read a citizen's guide that was distributed by an anti-nuclear activist group called Heart of America Northwest. These anti-nuclear activists claim that they serve to "educate" the citizens of the Pacific Northwest on a number of topics addressed in this guide. This material is so chock full of misquotes, distortions, and outright fabrication that it appears that the sole purpose is only to scare and mislead the citizens of the Pacific Northwest into supporting their anti-nuclear platform.

Because of the time limitation, I will only touch on one area of this so-called "educational" material and contrast this to the factual information stated in the PEIS. I am not asking you to change your position, I merely ask that you listen with an open mind. Then I challenge you to personally seek out the facts. It is only by this process that you will be able to form an informed position. The benefits of operating FFTF to alleviate the very real future health risks to you and your family are too important to throw them out based on heresay.

The area I would like to address tonight is the section of the Heart of America guide titled "Weapons-Grade Plutonium Could Come Through Puget Sound." The plutonium that they are referring to is unused mixed oxide fuel that has no future use in Germany but can be used to operate the FFTF reactor for 15 years. This fuel is essentially identical to FFTF fuel. As such it is not, nor could it ever be classified as "weapons-grade" plutonium.

They also claim that DOE has ignored transportation risk concerns in the PEIS and that citizens <quote> "demand that USDOE acknowledge that a ship fire in Puget Sound, with plutonium on board, could kill thousands and permanently leave a large area uninhabitable. Oppose any scheme to import plutonium fuel through any port to FFTF." <unquote> Maybe Heart of America Northwest hasn't read the Table of Contents of the

283-1

Response to Commentor No. 283

283-1: DOE notes the commentor's views and observations.

Commentor No. 283: Bill Dautel (Cont'd)

PEIS yet. Otherwise, they would discover that an entire appendix is dedicated to impacts of transportation.

If you read this section, you will discover that public and environmental safety is paramount. You will also discover that it is unlikely that DOE will even ship the fuel to Puget Sound, not because of any risk, but because it costs more to sail to the west coast than to sail directly to an eastern port. Charleston Naval Station has been the primary port for receiving foreign fuel for the past five years and was the port selected for detailed analysis in the PEIS.

The activist material claims that a ship fire could kill thousands and leave a large area uninhabitable. Have they supplied you with an independently reviewed risk analysis that explains just how this event could occur? I don't think so.

Let's examine the facts. First, the FFTF fuel is designed to operate at temperatures up to 1500 degrees fahrenheit and is not susceptible to damage from the DOT severe transportation fire temperature of 1475 degrees fahrenheit. Additionally, FFTF fuel has been safety tested and shown not to leak under these conditions. Second, the fuel is transported in certified high integrity casks. These casks are subject to stringent regulatory safety testing to verify beyond doubt that they will not leak during severe transportation accident conditions, including fire. Third, certified purpose-built ships would be used to transport the fuel casks from Europe to the U.S. These ships are constructed with double hulls to assure that they can withstand a collision without penetrating the inner hull. Every part of the ship is protected by an automatic fire system which will quickly detect, isolate, and suppress a fire should one break out in any one of the separate compartments. The individual holds can also be deliberately flooded with water, and, if all the holds were flooded the ship would still remain afloat. These levels of safety are what contribute to the low level of risk to transport the fuel. In fact, the accident risk in the PEIS was determined to be less than 10^{-12} latent cancer fatalities or 1 in a trillion.

**283-1
(Cont'd)**

Response to Commentor No. 283

Commentor No. 283: Bill Dautel (Cont'd)

Let me put this in perspective. The risk of dying from radiation exposure received from flying round trip cross-country is approximately 1 in a million. Mightly small. The risk from fuel transportation is a million times less. So I ask you, is this the enormous risk that results in thousands of deaths as claimed by Heart of America Northwest? Hardly!! In my view this is a blatant insult to the intelligence of the public and undermines the entire NEPA process. The transportation of nuclear fuel is completely safe.

Thank you for this opportunity to comment.

**283-1
(Cont'd)**

Response to Commentor No. 283

Commentor No. 284: Raging Grannies of Seattle



(left to right)

BACKS:
 Kathleen Kelley
 Carol Hoyt
 Shirley Morrison
 Elaine Birn
 Caroline Canafax
 Roberta Brumbaugh
 Hinda Kippus
 Carolyn Hale

MIDDLE:
 Rita Selin
 Rosy Betz-Zall
 Sally Gwin
 Kay Thode

FRONT:
 Karen Schneider-Chen
 P. Anna Johnson
 Georgie Kunkel
 Ruth Lianos



RAGING GRANNIES of SEATTLE

P. O. Box 22048, Seattle, WA 98122
www.raginggrannies.com

"The Raging Grannies will wake you up... make you laugh...and send you out to change the world with a great big smile on your face."

TOM RAWSON, teacher & folk singer

"It's a worthwhile event, Raging Grannies will be there...outrageous and hard-hitting."

SEATTLE WOMEN
 ACT UP FOR PEACE

"hello from a Belgian grandpa! Does your male equivalent exist? We are ready here in Belgium to join your movement!"

PAUL MAWFF, Belgium

"They sing out their no-holds-barred messages. Audiences and media alike love them. Their effectiveness is truly inspiring."

PETE SEIGER, folk singer
 "One of the more interesting poorest groups at the WTO meeting in Seattle."

PAUL HAWKEN
 author of *Naked Capitalism*
Creating the Next Industrial Revolution

"Long live Raging Grannies! God bless you. Merci beaucoup."

JEANNOT, Marseille, France

Response to Commentor No. 284

Commentor No. 284: Raging Grannies of Seattle (Cont'd)

testimony from Seattle Raging Grannies

Sung to Solidarity forever

HANFORD

The chosen site of Hanford
 Is for radioactive waste
 It mixes in our water
 And we all can have a taste
 The river called Columbia
 Is about to get some too
 Nuclear soup for me and you

Leaking tanks forever
 Leaking tanks forever
 Leaking tanks forever
 Plutonium makes us strong

We have so little money
 For cleaning up the mess
 We're spending it on armaments
 That bring us happiness
 So what's a little poison
 When you mix it in your tea
 It builds our economy

Leaking tanks forever
 Leaking tanks forever
 Leaking tanks forever
 Plutonium makes us strong

STOP WASTING MONEY ON FFTF

Yes: Pack up Your Troubles!

Stop wasting money on FFTF
 Its "leak", clean, "leak"
 Clean up the messes you've already made,
 And don't make any more.

FFTF's not needed,
 To make those isotopes,
 So, shut down FFTF
 For diox and all,
 and clean, clean, clean.

FFTF is blowing in the wind

How many times must we come before you
 to tell you to shut that thing down?

How much clean-up could you have done
 with all that money & time?

How many years will you keep sanding &
 A reason for it to survive?

The answer my friends is all politics
 The answer is blowing in the wind

284-2

284-1

Response to Commentor No. 284

284-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford and the potential for contaminants in the Columbia River. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The proposed action described in the NI PEIS would not have an impact on Hanford cleanup activities. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to the groundwater. As indicated in analyses presented in Chapter 4 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

With respect to plutonium processing, no weapons material will be produced under the proposed action. All missions in this PEIS are for civilian purposes.

Hanford tank waste issues are not within the scope of this PEIS, as none of the alternatives considered would add to these waste volumes.

284-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. DOE also notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site.

Commentor No. 284: Raging Grannies of Seattle (Cont'd)

Why Do We Sing?

We sing to encourage respect for all people, to encourage casting aside prejudice... to help in the struggle to build a world we will be happy and proud to pass on to our precious grandchildren. We sing for a JUST world in which PEACE reigns.

What Are We Raging About?

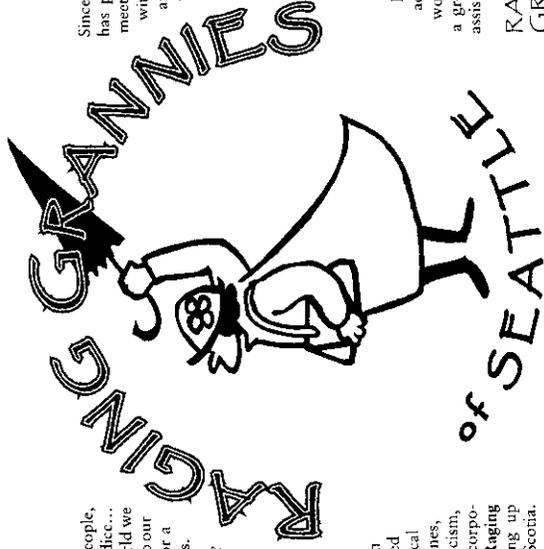
We are enraged about the poor conditions that people are forced to endure in their lives. We rage about the pollution on the earth, and we rage against corporate greed.

The Beginning

In Victoria, British Columbia, in 1986, several peace activists dressed up in outrageous hats and sang satirical songs to protest nuclear submarines, uranium mining, nuclear power, racism, militarism, clear-cut logging and corporate greed. They called themselves Raging Grannies. Groups promptly sprang up across Canada, all the way to Nova Scotia.

The idea spread across the border to Vermont and inspired the first U.S. Raging Grannies. Kathleen Kelley, a member of the Vermont group, called the first meeting of the Raging Grannies of Seattle.

Our debut performance, on February 12, 1996, was in Olympia at the President's Day rally sponsored by the Washington State Labor Council. The cold weather and pouring rain did not dampen our spirit as we sang...



Since 1996, Raging Grannies of Seattle has performed at hundreds of rallies, meetings and demonstrations. Together with Raging Grannies from Victoria and Vancouver, British Columbia, we took part in the demonstrations which prevented the World Trade Organization (WTO) from meeting in Seattle in November 1999.

For that, we received a great deal of media attention, national and international.

And Now...

We hope to see more and more Raging Grannies groups form all across the U.S. and throughout the world. If you are interested in starting a group in your area and need some assistance, please contact us.

**RAGING
GRANNIES
of SEATTLE**

P. O. BOX 22048
SEATTLE, WA 98122

www.raginggrannies.com

Oh, we're a gaggle of grannies,
Urging you off of your fannies.

We're raising our voice,

We want a new choice...

NO MORE WAR!

Response to Commentor No. 284

Commentor No. 285: Megan Cornish

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

NO START UPS WITHOUT EXISTING WASTES DISPOSED!
NO CORPORATE WELFARE FOR COMMERCIAL PURPOSES!
ELIMINATE CAUSES OF CANCER RATHER THAN CREATING
NUCLEAR WASTE FOR UNPROVEN CANCER TREATMENTS!
THE PRIMARY MISSION IS UNSTATED - MILITARY - ADMIT IT!
MONEY FOR SAFE JOBS, NOT NUCLEAR PRODUCTION!

Sincerely,

Name MEGAN CORNISH Address 2940 36th Ave S
 City SEATTLE State WA ZIP 98144

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 285-1 || 285-2

|| 285-1

|| 285-3

Response to Commentor No. 285

285-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The Hanford Site has a comprehensive waste minimization and pollution prevention program in place, as summarized in Section 3.4.11.8 of Volume 1, that would govern any proposed site activities.

285-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

285-3: DOE notes the commentor's views. However, the purpose of the NI PEIS is to evaluate the environmental impacts of a range of reasonable alternatives to maintaining and enhancing DOE's existing nuclear facility infrastructure to support production of isotopes for medical, research, and industrial uses, production of plutonium-238 for use in future NASA space exploration missions, and U.S. nuclear research and development needs for civilian application. No component of the proposed action is for the purpose of supporting any other defense or weapons-related mission.

Cancers are believed to be caused by a combination of hereditary and environmental factors, including radiological and chemical agents. In ongoing clinical testing, therapeutic radioisotopes have proven effective in treating cancers and other illnesses while minimizing adverse side effects, making their use an attractive alternative to traditional chemotherapy and radiation treatments.

Chapter 4, Volume 1, of the NI PEIS provides an estimate of waste generation and potential human health impacts associated with each of the alternatives proposed for the production of medical, industrial and research isotopes, plutonium-238, and nuclear research and development. Any additional wastes generated in support of these missions would be managed (i.e., treated, stored and disposed) in a safe and environmentally protective

Commentor No. 285: Megan Cornish (Cont'd)

Response to Commentor No. 285

manner and in compliance with all applicable Federal and state laws, regulations, and applicable DOE orders. In terms of potential human health impacts, the NI PEIS analysis indicates that the most likely impacts would not result in additional cancer fatalities among the population surrounding the DOE facilities that may be selected for use.

Consistent with the mandates under the Atomic Energy Act, DOE seeks to fulfill its responsibility to ensure that there is a reliable supply of isotopes in the U.S. to meet future demand. DOE does not subsidize commercial producers. DOE encourages the commercial sector to privatize the production of medical isotopes in certain instances, and does this by turning over production of certain isotopes to commercial entities once DOE has established that commercial production is economically viable. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

Commentor No. 286: Tom Burke

Thank you. My name is Tom Burke. I am a resident of Kennewick Washington and I would like to make a few comments relative to the potential restart of the Fast Flux Test Facility.

The FFTF was designed as a large test reactor and thus has many features that make it ideal for the multi-mission role proposed by the Nuclear Infrastructure PEIS. It has a test volume that is significantly larger than all other operational Department of Energy reactors combined and it has a much higher neutron flux density than any other DOE reactor. The FFTF produces neutrons in the high-energy spectrum; these are called fast neutrons (most reactors produce much lower energy, or thermal, neutrons). The fast neutrons produced in FFTF can be "moderated" to virtually any desired energy level. This is extremely important for supporting the variety of missions identified in the NI PEIS. For example, some medical isotopes can only be produced by irradiating targets with high-energy neutrons while others require thermal neutrons. Finally, the FFTF incorporates many features not found in other reactors. This includes, for example, the ability to install specially instrumented and controlled test assemblies into the core. This capability was demonstrated and used many times during the previous ten years of outstanding operation of the facility.

Let me say more about the outstanding design and operation of the FFTF. It is the only DOE reactor designed to modern commercial reactor standards. For example, it includes a containment building that was designed, constructed and tested to very stringent leak rate criteria. It incorporates a sophisticated reactor shutdown system designed with both diversity and redundancy in its operation. Finally, because emergency core cooling is provided by natural circulation of the coolant, no emergency powered equipment is required to perform this critical function. Due to these, and other design and safety features, the probability of a severe accident at the FFTF is much lower than at a typical commercial power reactor.

Prior to its initial operation, the Nuclear Regulatory Commission performed a thorough review of the FFTF design and Safety Analysis Report. This review concluded that the FFTF met modern reactor design and safety standards. Although the FFTF is not licensed by the NRC, this is the same review process that all commercial reactors undergo to obtain a license. It is expected that the NRC would be involved in restart of the facility in a similar manner.

During its ten years of operation, the FFTF achieved an impeccable operating and safety record, better than that compiled by commercial reactors over the same time period. The plant received many awards recognizing this industry standard setting operational and safety performance. This tradition of operational excellence is an ingrained quality in the experienced staff that is committed to continue this performance when the facility is restarted.

The FFTF is the only existing DOE reactor that can fully support all three of the important missions described in the Nuclear Infrastructure PEIS. The other existing facilities, even taken together, can only partially support these missions. The new reactor and new accelerator options may be able to meet most of the needs, but there are significant technical and cost issues and uncertainties associated with the concepts described in the PEIS. So the answer is clear. Restarting the FFTF is the only real option for successfully supporting the combination of missions described in the Nuclear Infrastructure PEIS.


 Thomas M. Burke
 7807 W. 12th Ave.
 Kennewick, WA
 99338

Response to Commentor No. 286

286-1

286-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

Canada is selling isotopes for one tenth
 tenth the cost, adding nothing to high level
 waste and taking nothing from cleanup funds.

287-1

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): Kathleen Myers DDS

Organization: _____

Home/Organization Address (circle one): Suite 728 Medical Dental

Blade

City: Seattle State: WA Zip Code: 98101

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Collette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 Email: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

287-1:

The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

The proposed action would not have an impact on the cleanup missions at the candidate sites. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws, regulations and applicable DOE orders.

Chapter 2—Written Comments and DOE Responses

Commentor No. 288: Anonymous

Draft PEIS Comment Form

I find the DOE's actions regarding restart of the FFTF to be utterly despicable. We do not need this. We do not need more waste.

288-1

The way the DOE has attempted to hide critical information from the public is equally despicable.

288-2

We need to clean up Hanford, not make it worse.

288-3

The DOE's actions has contributed to my growing belief that we no longer live in a democracy.

288-2

Please listen to the people not corporations and bought-off politicians. Do not restart FFTF.

288-1

Thank you.

Alternative 5 - permanent deactivation is the only safe option.

288-4

nuclear nonproliferation concerns were not even addressed in the EIS.

288-5

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Neann

Organization: _____

Home/Organization Address (circle one): 7557 4th Ave NE

City: Seattle State: WA Zip Code: 98145

Telephone (optional): _____

E-mail (optional): _____

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For more information contact: Corlette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free telephone: 1-877-562-4593 • Toll-free fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



Response to Commentor No. 288

288-1: Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

288-2: This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS. DOE made every effort to obtain, analyze, and disclose all required information to make a decision on expanding nuclear infrastructure. Further, DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives.

288-3: DOE notes the commentor's concerns regarding the existing cleanup mission. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Commentor No. 288: Anonymous (Cont'd)

Response to Commentor No. 288

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

The Hanford Site has a comprehensive waste minimization and pollution prevention program in place, as summarized in Section 3.4.11.8 of Volume, that would govern any proposed site activities.

- 288-4:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 288-5:** DOE prepared a separate Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such an ancillary document need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed this document to about 730 interested parties on September 8, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Nuclear Infrastructure Nonproliferation Impact Assessment in Appendix Q in the Final NI PEIS.

Commentor No. 289: Terry Dunsmore

Draft PEIS Comment Form

The DOE has a primary responsibility in Washington State -- to clean up the existing wastes at the Hanford facility. The citizens of Washington care very much about this issue, given the fact that it directly affects our health and the future of this region.

We deserve to have a say about the place where we live; we deserve the right to choose to have no further production at the Hanford facility. Washington is already inundated with CANCER-CAUSING wastes -- it is ludicrous to suggest that we need to poison a significant sector of the U.S. population in order to fund private research or NASA systems, when we should 'redirect our efforts' toward developing alternative energy systems.

Radiation causes cancer. This is unacceptable on every level, and I pray the D.O.E. considers alternative energy systems before this debate necessitates a reorganization of the infrastructure of the D.O.E.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Terry Dunsmore

Organization: _____

Home/Organization Address (circle one): 1129 15th Avenue #1

City: Seattle State: WA Zip Code: 98122

Telephone (optional): _____

E-mail (optional): _____

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For more information contact:曹elle E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free telephone: 1-877-562-4593 • Toll-free fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Response to Commentor No. 289

289-1

289-1: Worker and public health and safety are of paramount and primary importance to the DOE. Restoration of the Hanford Site and waste management activities are the primary missions at Hanford. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

The environmental impacts associated with operation of the FFTF and support facilities at Hanford during normal operations and from postulated accidents are presented and discussed in Section 4.3 of the NI PEIS. All impacts to human health and to ecological resources would be small in the immediate area of the Hanford Site and negligible at all distant locations.

289-2

289-2: The commentor's support of alternative energy systems is noted. Issues of research and development of alternative energy sources are beyond the scope of this Nuclear Infrastructure EIS. Other offices of DOE are responsible for the research and development of alternative energy sources. The stated missions to be addressed in this EIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and nuclear research and development, can currently only be met using nuclear reactor or accelerator technologies.



Commentor No. 290: J. L. Moore

Response to Commentor No. 290

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

With a confirmed 69 tanks leaking in Hanford, it's clear that the Columbia River is in danger of receiving many dangerous cancer causing agents. Starting up the FFTF reactor would add waste to those tanks - not to mention taking a lot of funds and focus away from cleaning up waste. What really bothers me about the DOE continuing to cite the FFTF as a possible candidate for the noble mission of curing cancer is the hypocrisy behind it. If you want to cause cancer, start the reactor up and produce more cancer causing waste. If you want to stop cancer, well an ounce of prevention is worth a pound of cure - so shut down FFTF and prevent more cancer causing radioactive materials from getting into the environment. But please stop lying and saying that FFTF is a viable source of radioisotopes when particle accelerators are a far superior method of production and when your OWN BLUE

290-1

290-2

290-3

290-4

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): J. L. Moore

Organization: _____

Home/Organization Address (circle one): 5409 NE 58th

City: Seattle State: WA Zip Code: 98105

Telephone (optional): _____

E-mail (optional): _____

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For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 1990 L Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

290-1: The restart of FFTF would not impact the schedule or available funding for existing cleanup activities at Hanford nor would it generate high-level radioactive waste. The additional radioactive waste that would be generated from the restart of FFTF (e.g., low-level radioactive waste) would not be stored in the high-level radioactive waste tanks located at Hanford. As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

290-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Chapter 2—Written Comments and DOE Responses

Commentor No. 290: J. L. Moore (Cont'd)

RIBBON MEDICAL ADVISORY COMMITTEE HAS
 RECOMMENDED THAT FFTF IS NOT A VIABLE
 LONG-TERM SOURCE OF RADIOISOTOPES! Please
 stop making this poison and putting it into
 the environment. No space mission or political rhetoric
 masquerading as a medical mission can justify the
 cancer that radioactive materials will cause.
 Please shut down FFTF - it's good karma.

Fold on lines and fasten with tape

Place
 stamp
 here

Colette E. Brown, NE-50
 U.S. Department of Energy
 19901 Germantown Road
 Germantown, MD 20874

290-4
 (Cont'd)

290-3

290-5

Response to Commentor No. 290

- 290-3:** Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.
- 290-4:** The Nuclear Energy Research Advisory Committee (NERAC) subcommittee for Isotope Research and Production Planning, reviewed various DOE and industry accelerators and nuclear reactors including FFTF. The review covered both the research and production capabilities in meeting a set list of isotopes. The commentor's reference to "blue ribbon medical advisory committee recommendation," is the above subcommittee's conclusion. The conclusions presented in the "NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000" regarding the suitability of the Fast Flux Test Facility (FFTF) to produce research isotopes in a timely and cost-efficient manner were made in the context of the facility producing research isotopes as its sole mission. DOE agrees that the FFTF's large size and configuration are not particularly well suited for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of the FFTF for the production of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production". In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates use of the FFTF when coupled with the other proposed missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without disturbing the existing missions of these facilities.

Commentor No. 290: J. L. Moore (Cont'd)

Response to Commentor No. 290

DOE has taken the expert panel and NERAC recommendations under consideration in developing the range of alternatives evaluated in the NI PEIS. These reports were made available to the public at the NI PEIS public information centers and on the internet at www.nuclear.gov.

290-5: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 291: Margaret Jean Tuthill

Response to Commentor No. 291

Draft PEIS Comment Form

I associate myself with the comments from City Council member Nick Deaton. The city of Seattle has gone on record as opposed to the re-start of the restart of the FFFTF nuclear reactor. I agree with the position of the City of Seattle. I associate myself also with the comments of City Council member Heidi Willis and Congressman Jim McDermott.

291-1

You have not told us what you will do with the waste that would be produced by the FFFTF.

291-2

Your own blue ribbon committee has said that FFFTF would not be suitable for production of medical isotopes. Why did Mr Brown not make that clear in her presentation?

291-3

Copy analyses of the risk from an accident is absurd sounding to me.

291-4

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- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Margaret Jean Tuthill

Organization: _____

Home/Organization Address (circle one): 920 E. Shelby St

City: Seattle State: WA Zip Code: 98102

Telephone (optional): (206) 328-4436

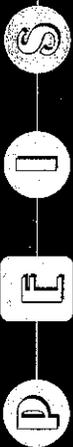
E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 18, 2000

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 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



- 291-1: DOE notes the commentor's opposition to Alternative 1, Restart FFFTF.
- 291-2: Management of wastes that would be generated under implementation of Alternative 1, Restart FFFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.
- 291-3: The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFFTF to produce research isotopes in a timely and cost-efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to

Commentor No. 291: Margaret Jean Tuthill (Cont'd)

Response to Commentor No. 291

support projected needs could be accomplished without impacting the existing missions of these facilities.

DOE has taken the Expert Panel and NERAC report recommendations under consideration in developing the range of alternatives evaluated in the NI PEIS. These reports were made available to the public at the NI PEIS public information centers and on the Internet at <http://www.nuclear.gov>.

- 291-4:** The NI PEIS accident risk analysis was conducted in a manner consistent with the “Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements” DOE Office of NEPA Oversight, May 1993. Sections 4.2-4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from implementation of the alternatives, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with each alternative would be small.

Commentor No. 292: Donn Colby

Draft PEIS Comment Form

As a physician, I know the importance of nuclear materials for medical research and clinical treatment. The DOE has looked for a private contractor to use PFF for the production of medical isotopes and has been unable to find one. Medical isotope production at Hanford is not commercially viable. There is no shortage of medical isotopes. More than enough are available from current sources, mostly foreign, which produce them cheaper than they could be produced at any US facility.

292-1

The primary mission at Hanford is now to clean-up the most contaminated nuclear site in the western world. Any new production mission will have to add to the load of nuclear waste at the site and will make clean up harder and more prolonged.

292-2

It is time, after years and years on stand-by, to develop a clean mission yet developed, to shut down the PFF.

292-3

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Donn Colby, MD

Organization: Washington Physicians for Social Responsibility

Home Organization Address (circle one): 318 17th Ave E

City: Seattle State: WA Zip Code: 98112

Telephone (optional): _____

E-mail (optional): doctordonn@hotmail.com

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For more information contact: Colette E. Brown, NE-50
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E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



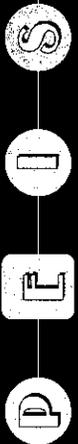
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Response to Commentor No. 292

292-1: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings.

DOE acknowledges that other manufacturers can produce certain isotopes at lower costs. In fact, the United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume I has been revised to clarify DOE's role and other producers' capabilities in fulfilling U.S. isotope needs.

292-2: DOE notes the commentor's concerns regarding ongoing activities to remediate the existing contamination at Hanford. Although beyond the scope of this NI PEIS, the Hanford Site environmental restoration activities are high priority to DOE and are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.



Commentor No. 292: Donn Colby (Cont'd)

Response to Commentor No. 292

Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

292-3: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 293: Marianne Sullivan

Draft PEIS Comment Form

Re starting FFTF diverting funding and attention from clean up at Hanford. We very concerned that we continue to debate this issue, meanwhile the Columbia River grows increasingly contaminated! The wildfires and release of plutonium this summer should be a wake up call to DOE and the public. We are on the brink of irreparable disaster at Hanford. Meanwhile DOE fails to meet clean up milestones.

To play on people's sympathies by granting FFTF status on the basis of providing medical support is dishonest and a ploy. The public does not trust DOE - you have a significant credibility problem. You've posted the most contaminated site in the western hemisphere. Two accidents in the last 3 years have exposed citizens to plutonium. In both cases DOE lied about the exposure. We are fed up with this! We don't want to live in fear of another accident at Hanford. Clean it up! Don't restart FFTF!!!

293-1

293-2

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Marianne Sullivan MPH

Organization: _____

Home/Organization Address (circle one): 514 N. 84th St

City: Seattle State: WA Zip Code: 98103

Telephone (optional): 206 789 1223

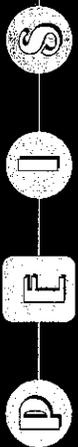
E-mail (optional): _____

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U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Response to Commentor No. 293

293-1: DOE notes the commentor's concerns regarding the existing cleanup mission and migration of contaminants to the Columbia River. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

The Hanford Site has a comprehensive waste minimization and pollution prevention program in place, as summarized in Section 3.4.11.8 of Volume 1, that would govern any proposed site activities.

No radioactive materials were "released" in the Hanford Wildfires of 2000. Wildfires did resuspend some materials already in the environment. The resuspended materials were low, slightly above natural background levels. The low levels required several days of analysis to quantify.

The Columbia River does not continue to grow increasingly contaminated from Hanford activities. Steady and consistent progress in restoring the Hanford Site is documented in annual reports. These are available at www.hanford.gov.

293-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

The Fast Flux Test Facility must be shut down NOW! You are wasting precious time and resources while the future of the Columbia River and public are put at risk. This is what you must put at the forefront of your decision making process in restarting FFTF:

- ① How many lives are at risk because millions of dollars have been diverted from cleanup to maintaining FFTF on hot standby?
- ② How many more jobs will be created by cleaning up the leaking tanks - unfired burial grounds instead of maintaining and restarting FFTF?
- ③ What precious ecological habitats are being knocked off balance because of the waste created and stored at Hanford from restarting FFTF?
- ④ How many risks are associated with transport of Plutonium to restart FFTF especially through a major port such as the Puget Sound?

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Erin C. Jeziorski

Organization: _____

Home/Organization Address (circle one): 17355 Columbian Way

City: Seattle State: WA Zip Code: 98108

Telephone (optional): 206/763-8815

E-mail (optional): _____

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For more information contact: Collette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
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E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

294-1

294-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF and concern for the future of the Columbia River. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

294-2

294-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The proposed alternatives would not have an impact on Hanford cleanup activities.

294-3

Ecology, EPA, and DOE agreed to a change in the Tri-Party Agreement to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on FFTF's future. Public meetings were held on this formal milestone change. The NI PEIS missions would not have an impact on Hanford cleanup activities.

294-4

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

The Hanford Site has a comprehensive waste minimization and pollution prevention program in place, as summarized in Section 3.4.11.8 of Volume 1, that would govern any proposed site activities.

Commentor No. 294: Erin Jeziorski (Cont'd)

Response to Commentor No. 294

The environmental consequences associated with each alternative were assessed in Chapter 4 of Volume 1 of the PEIS. The socioeconomic impacts associated with each alternative were presented in Chapter 3 of Volume 1.

294-3: The NI PEIS addressed wastes produced for each alternative, as well as cumulative impacts related to waste production. The Hanford waste management infrastructure was analyzed in the NI PEIS (see Section 4.8.3.4 of Volume 1). This analysis determined that it is unlikely that there would be major impacts (including those to ecological habitat) at Hanford because sufficient capacity would exist to manage the site wastes and none of the NI PEIS alternatives would generate more than a relatively small amount of additional waste at Hanford.

294-4: Alternative 1 does postulate that DOE might decide at some point to import mixed oxide fuel from Europe to fuel FFTF. At this time, however, DOE has not proposed to import this fuel through any specific port. If DOE ultimately decides to import fuel from Europe, it would perform a separate NEPA analysis to select a port. This review would address all relevant potential impacts of overseas and inland water transportation, shipboard fires, package handling, land transportation, as well as safeguards and security associated with the import of SNR-300 mixed oxide fuel through a variety of specific candidate ports on the east and west coasts. It would consider all public comments, including local resolutions, concerning the desirability of bringing mixed oxide fuel into the proposed alternative ports.

In the event that DOE decides to enhance its nuclear infrastructure, it would not expose any population to high, unacceptable risks under any alternative. Any transportation activities that would be conducted by DOE would comply with U.S. Nuclear Regulatory Commission and U.S. Department of Transportation regulations. Associated transatlantic shipment would comply with International Atomic Energy Agency requirements. In Section J.6.2, DOE reviewed the potential maximum impacts from the marine transportation of mixed oxide fuel from Europe to a representative military port, Charleston, South Carolina, and overland transportation to Hanford. Also in that section, a bounding analysis demonstrates that the maximum potential radiological risks to the surrounding public from mixed oxide fuel shipments would be extremely small (e.g., less than 1 chance in a trillion for a latent cancer fatality per shipment from severe accidents at docks and in channels and less than 1 chance in 50 billion for a latent cancer fatality per shipment from overland highway accidents).

Commentor No. 295: Margaret T. Swartzman

Response to Commentor No. 295

Draft PEIS Comment Form

Dear Secretary
 As Barbara Fitzhaber wrote you so articulately, the citizens of Washington and Oregon are angry that the tri-state agree to clean up nuclear waste at Hanford has not occurred and that money set aside for that have been sequestered - just to keep FFTF on standby. He raised the points that there is no compelling need for medical isotopes, Canadian sources should be sufficient. He criticized the draft EIS disregarding all international sources + domestic alternatives for plutonium-238.

I am strongly urging you to take option 3 and shut down the FFTF. Please include in the EIS the cost of clean up of the FFTF in start up costs! Please include and acknowledge the danger of transporting high grade plutonium through Puget Sound.

The lives and health of citizens are in your hands. Please do not let greed guide you in further delaying and channeling. There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Margaret T Swartzman

Organization:

Home/Organization Address (circle one): 4603 56th Plac NE

City: Seattle State: WA Zip Code: 98115

Telephone (optional): 206 526 5607

E-mail (optional): pswartzman@aholmail.com

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 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

7/12/00

295-1

295-2

295-3

295-4

295-5

295-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. Ecology, EPA, and DOE agreed to a change in the Tri-Party Agreement to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on FFTF's future. Public meetings were held on this formal milestone change.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

295-2: The NI PEIS evaluates the environmental impacts of a range of reasonable alternatives for maintaining and enhancing DOE's existing nuclear facility infrastructure to support production of isotopes for medical research, and industrial uses, production of plutonium-238 for use in future NASA space exploration missions, and U.S. nuclear research and development needs for civilian application. In addition to restarting the FFTF, the NI PEIS also evaluates alternatives that would either employ the use of existing facilities or rely on the construction of new facilities.

DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic

Chapter 2—Written Comments and DOE Responses

Commentor No. 295: Margaret T. Swartzman (Cont'd)

Response to Commentor No. 295

applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings.

The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

- 295-3:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 295-4:** Decommissioning FFTF, including associated costs and cleanup, is not within the scope of the NI PEIS. Before decommission activities were undertaken, DOE would prepare the appropriate environmental documentation to address the associated environmental impacts. Cost assessments would also be prepared.

DOE remains committed to cleaning up the Hanford Site independent of the ultimate decision on FFTF. The amounts of wastes associated with decommissioning FFTF would be small. The schedule for cleaning up these other wastes would not be affected if FFTF were restarted.

Commentor No. 295: Margaret T. Swartzman (Cont'd)

Response to Commentor No. 295

295-5: Alternative 1 does postulate that DOE might decide at some point to import mixed oxide fuel from Europe to fuel FFTF. At this time, however, DOE has not proposed to import this fuel through any specific port. If DOE ultimately decides to import fuel from Europe, it would perform a separate NEPA analysis to select a port. This review would address all relevant potential impacts of overseas and inland water transportation, shipboard fires, package handling, land transportation, as well as safeguards and security associated with the import of SNR-300 mixed oxide fuel through a variety of specific candidate ports on the east and west coasts. It would consider all public comments, including local resolutions, concerning the desirability of bringing mixed oxide fuel into the proposed alternative ports.

In the event that DOE decides to enhance its nuclear infrastructure, it would not expose any population to high, unacceptable risks under any alternative. Any transportation activities that would be conducted by DOE would comply with U.S. Nuclear Regulatory Commission and U.S. Department of Transportation regulations. Associated transatlantic shipment would comply with International Atomic Energy Agency requirements. In Section J.6.2, DOE reviewed the potential maximum impacts from the marine transportation of mixed oxide fuel from Europe to a representative military port, Charleston, South Carolina, and overland transportation to Hanford. Also in that section, a bounding analysis demonstrates that the maximum potential radiological risks to the surrounding public from mixed oxide fuel shipments would be extremely small (e.g., less than 1 chance in a trillion for a latent cancer fatality per shipment from severe accidents at docks and in channels and less than 1 chance in 50 billion for a latent cancer fatality per shipment from overland highway accidents).

Commentor No. 296: Mary Eccon Smith

Draft PEIS Comment Form

I am strongly opposed to Restarting the FFTF at Hanford. The draft ~~PE~~ EIS was not adequately looked at the dangers inherent in restarting the FFTF. In addition to this, I have seen no reputable source that states that this facility is needed for the production of medical isotopes. The physicians for Social Responsibility, a group of highly intelligent and reputable individuals, have given no reason opposing the restart of FFTF. I see no reason to make new waste at Hanford when we haven't cleaned up the mess we already have - especially for something we don't need. The draft statement also does not address the case of restarting the FFTF or what would happen with the waste - another concern I have is that the EIS did not take into consideration the medical blue ribbon recommendation that the FFTF was not a long term viable source of medical research radioisotopes. It escapes my logic as to why ~~you~~ the DOE would go against the blue ribbon committee unless there is some other reason someone is talking about.

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): Mary Eccon Smith

Organization: _____

Home/Organization Address (circle one): 2526 27th Ave NE

City: Seattle State: WA Zip Code: 98115-4630

Telephone (optional): _____

E-mail (optional): makeba2@earthlink.net

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toll-free telephone: 1-877-562-4593 • toll-free fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

Response to Commentor No. 296

- 296-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 296-2:** DOE notes the concerns expressed in the comment on the potential impacts of restarting the FFTF. Assessments of all potential environmental impacts associated with restart of the FFTF have been performed and the results presented in Section 4.3 of the NI PEIS. The assessments include detailed analyses of a wide spectrum of postulated accidents. The risks associated with operating the FFTF are shown to be small.
- 296-3:** DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian

Commentor No. 296: Mary Eccon Smith (Cont'd)

Response to Commentor No. 296

applications. As the NERAC report states: “In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production.” In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

296-4: Consistent with its mandates under the Atomic Energy Act, DOE is proposing enhancement of its nuclear facility infrastructure for the purposes of addressing three primary needs:

- 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;
- 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long term, assured supply; and
- 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. The FFTF at the Hanford Site was one of several existing DOE resources that were assessed for these missions.

Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. Waste management activities, such as treatment, storage, and disposal, are conducted via permits from the Washington State Department of Ecology. As stated in Section N.3.2

Commentor No. 296: Mary Eccon Smith (Cont'd)

Response to Commentor No. 296

implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

- 296-5:** The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. DOE mailed this document to about 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site <http://www.nuclear.gov> and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P in the Final NI PEIS.
- 296-6:** Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

Commentor No. 297: Nancy Hannah

Response to Commentor No. 297

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

FFTF will greatly impact the environment and the use of that product is not needed. If the medical community is in favor of this then why are they not stating this - Physicians in Social Responsibility are strongly against this. The danger to the citizens of Washington is too great - Clean up the waste already produced!

297-1

One of the arguments stated over & over is to reduce cost of health care - this ~~is~~ not be a major position because what may be ~~cost~~ cost reducing who - often has huge costs in the future with clean up

297-2

I am a downwinder - let's not do it again!

297-3

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Nancy Hannah

Organization: _____

Home Organization Address (circle one): 2526 27th Ave NE

City: Seattle State: WA Zip Code: 98115

Telephone (optional): _____

E-mail (optional): _____

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For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

297-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF. Chapter 4 of Volume 1 of the NI PEIS provides an impact analysis that includes an estimate of waste generation and potential human health impacts associated with each of the alternatives proposed for the production of medical, industrial and research isotopes. Any additional wastes generated in support of these missions would be managed in a safe an environmentally protective manner and in compliance with all applicable Federal and state laws, regulations, and applicable DOE orders. In terms of potential human health impacts, the NI PEIS analysis indicates that the most likely impacts would not result in additional cancer fatalities among the population surrounding the DOE facilities that may be selected for use.

DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

297-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies

Chapter 2—Written Comments and DOE Responses

Commentor No. 297: Nancy Hannah (Cont'd)

Response to Commentor No. 297

milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The proposed alternatives would not have an impact on Hanford cleanup activities. The Hanford Site has a comprehensive waste minimization and pollution prevention program in place, as summarized in Section 3.4.11.8 of Volume 1, that would govern any proposed site activities.

- 297-3:** DOE notes the commentor's concern for the long-term cleanup costs associated with the alternatives.

Commentor No. 298: R. G. Peterson

Response to Commentor No. 298

Draft PEIS Comment Form

Thank you for holding meetings at several locations. These are complex issues and benefit from advice and comment by many people. Thank you for taking everyone's comments into consideration.

My main concern is that we have a history of moving forward with technical processes when we are not clear how the whole life cycle of the materials produced and by products can be managed safely. The effect of the PEIS refers to vitrification of byproducts or waste, is of concern to me when we haven't yet been able to vitrify anything at Hanford and there have been problems with the contractor for the vitrification project, according to what I've read in the newspaper.

Those of you in Washington DC may not be aware of the sad record of Hanford's managers in not honestly reporting on the release of radiation in the recent wildfires in the Hanford area, and the an accident on the Hanford site a few years ago. When Hanford's managers first say there were no releases, then they discover there were - why should we trust them with new production of radioactive materials?

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): R. G. Peterson

Organization: _____

Home/Organization Address (circle one): 2633 14th Ave W, #1

City: Seattle State: WA Zip Code: 98119-2147

Telephone (optional): _____ I'm on your mailing list already, thanks!

E-mail (optional): _____

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 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

298-1

298-1: DOE notes the commentor's concern regarding vitrification of waste.

298-2

298-2: No radioactive materials were "released" in the Hanford Wildfires of 2000. Wildfires did resuspend some materials already in the environment. The resuspended materials were low, slightly above natural background levels.

In both cases referenced, the low levels required several days of analysis to quantify. Levels were much too low to detect with real-time monitoring instruments. Special analysis over several days were required to measure the environmental levels of contaminants encountered. Data was accurately reported to the public as it became available.

298-3

DOE will ensure that FFTF is safe to accomplish the stated missions. In the event that FFTF restart is selected in the Record of Decision, complete safety and operational readiness reviews will be performed prior to the restart. The FFTF Safety Analysis Report is routinely reassessed and updated when required to address any changes in plant configuration due to physical modifications or changes in plant operation procedures. The operational readiness review would assess the current updated Safety Analysis Report to ensure that the analyses bound the reactor-operating envelope. The analyses presented in this NI PEIS reflect the proposed changes to the reactor core (including fuel and irradiation targets) to perform the DOE missions.

298-3: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 299: Bud Taylor

Draft PEIS Comment Form

I support the Restart of FETF for the purposes of producing ^{238}Pu , therapeutic medical isotopes, testing of materials & fuels, neutron activation for research & analysis and for the burnup of existing weapons material stockpiles. The last purpose is in my opinion the most important single item, along with R&D for commercial nuclear fuel.

299-1

299-1: DOE notes the commentor's support for Alternative 1, Restart FETF. It should be noted that the research and development mission includes research for the burnup of weapons materials but not for the burnup of the materials themselves.

In future, I would prefer that DOE include all the key points identified in scoping hearings in their draft Environmental Impact Statements. This is a necessary precursor to meaningful public comment hearings. Issues that are left unspoken to become points of misunderstanding and misinformation that are exploited.

299-2

299-2: DOE notes the commentor's concerns and recognizes the necessity for clear representation of issues raised throughout the public participation process as a means of facilitating informed decisionmaking. Section 1.4 of Volume 1 of this NI PEIS, as supplemented by an expanded discussion provided in Appendix N, summarizes the prevailing issues and concerns raised during the scoping process to include identification of prevalent issues raised at individual scoping meetings. In fact, based on the scoping comments received, the scope of the NI PEIS was expanded in a number of areas as outlined in Section 1.4 and Appendix N. It should be noted, however, that NEPA and CEQ regulations do not require an agency to include and respond to each scoping comment as is required for public comments on a Draft EIS. While all comments received during the scoping periods are part of the Administrative Record for the NI PEIS, Section 1.4 and Appendix N are intended to provide a summary of the issues and associated trends identified during the scoping process rather than a tabulation of comments by specific issue. In preparing the NI PEIS, DOE carefully considered all scoping comments received from the public.

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- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Bud Taylor

Organization: _____

Home/Organization Address (circle one): 11029 Flament Ave N.

City: Seattle State: WA Zip Code: 98133

Telephone (optional): _____

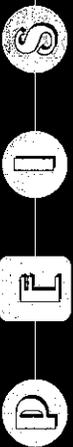
E-mail (optional): bud.taylor@dcch.wa.gov

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U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00



Commentor No. 300: Jim Pardu

Response to Commentor No. 300

Draft PEIS Comment Form

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

I STRONGLY support the Restart of FFTF for the production of Medical Isotopes and other Non Weapons programs and other programs. There is Reactor Research U238 production

300-1

300-1: DOE notes the commentor's support for Alternative 1, Restart FFTF. It should be noted that the reactor would be used to conduct nuclear research and to produce plutonium-238 and medical and industrial isotopes. It would not produce uranium-238.

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- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Jim Pardu

Organization:

Home/Organization Address (circle one): 40504

E Ridge Crest Dr

City: Benton City State: WA Zip Code: 99340

Telephone (optional): 509-967-9347

E-mail (optional):

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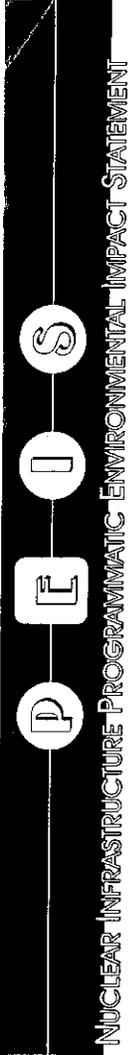
For more information contact: Colette E. Brown, NE-50
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E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Commentor No. 301: Sandra Gray

Response to Commentor No. 301



Draft PEIS Comment Form

I am a resident of Richland, Washington, and I am in favor of restarting FFTF for making medical and space isotopes. I have investigated the claims of some groups, such as Heart of America, and I find them to be unfounded. Please do not succumb to pressure from these anti nuclear groups to stop progress on this important mission - they want to deprive the American people and offer no alternative.

301-1

301-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

The FFTF has enjoyed a legacy of excellent design, proven during reactor operations and challenged in a variety of tests designed to push the limits. The facility has met or exceeded all expectations. The intangible force is the quality of the people associated with FFTF.

301-2

301-2: DOE notes the commentor's views and observations.

This facility is an excellent resource not only for Richland or for DOE, but for the American people. Put it to use!

301-1

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- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): SANDRA GRAY

Organization: _____

Home/Organization Address (circle one): 555 SAINT ST.

City: RICHLAND State: WA Zip Code: 99352

Telephone (optional): 509-375-6178

E-mail (optional): Z4ftig53@3-Cities.com

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For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



Commentor No. 302: Frank Zucker

Response to Commentor No. 302

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

*You've built up waste for fifty years
 in storage tanks with leaks and tears
 you claim you're cleaning up this waste
 with hearings now to find our taste
 yet you ignore us every time
 Even when we speak in rhyme
 Whenever you all come to town
 We always tell you, "Shut it down!"
 The Fast Flux Test Facility
 is of no use to you or me!
 The isotopes have other sources
 And NASA can use other forces
 So here are several hearing aids
 To help you hear all our tirades.
 When will you hear us as we speak?
 When all your tanks have rips and leaks?
 Before I turn this platform loose
 Apologies to Dr. Seuss*

302-1

302-2

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): Frank Zucker

Organization: _____

Home/Organization Address (circle one): _____

City: _____ State: _____ Zip Code: _____

Telephone (optional): _____

E-mail (optional): _____

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 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

302-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected. The Hanford Site has a comprehensive waste minimization and pollution prevention program in place, as summarized in Section 3.4.11.8 of Volume 1, that would govern any proposed site activities.

DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

302-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

The United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, including Canada, South Africa, and the former Soviet Union. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternative energy sources for space missions, although issues such as NASA research priorities are beyond the scope of the PEIS. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. Plutonium-238 sources are used only when they enable the missions or enhance mission capabilities.

Chapter 2—Written Comments and DOE Responses

Commentor No. 303 Alan E. Niehaus

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

I am a resident of Pasco Washington and I strongly support the restart of FFTF for isotope production. My father died from a class 4 stomach cancer some years ago. He had 1/3 of his stomach removed and was taking chemotherapy but to no prevail. My feelings are that if FFTF was operating in isotope research and production a cure could have been found and that he would be alive today. I strongly urge the restart of FFTF to improve the fight against cancer.

303-1

303-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
returning this comment form to the registration desk at the meeting or to the address below
calling toll-free and leaving your comments: 1-877-562-4593
faxing your comments toll-free to: 1-877-562-4592
commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Alan E. Niehaus

Organization:

Home Organization Address (circle one): 3906 Riverwood Ct.

City: Pasco State: Wa Zip Code: 99301

Telephone (optional): (509) 545-8944

E-mail (optional): ANNiehaus@AOL.com

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U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PBS@hq.doe.gov



Draft PEIS Comment Form

I am a Washington State resident who believes that FFTF should be restarted in order to produce the much needed medical isotopes so important in the treatment of cancer.

FFTF, in my opinion, is the logical choice for "American" produced isotopes.

What a shame it would be not to make good use of this existing facility.

As a taxpayer I would much rather see my dollars going into funding missions for reactors such as FFTF rather than seeing them abandoned and left standing like large "White Elephants".

Let's stop wasting our money building new. Let's stop wasting money and technology abandoning facilities rather than making use of them.

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Cheryl A. Anderson

Organization:

Home/Organization Address (circle one):

8925 W. Bonnie Ave.

City: Kennewick State: WA Zip Code: 99326

Telephone (optional): (509) 787-2210

E-mail (optional):

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NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

S

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304-1

304-1: DOE notes the commentor's support for Alternative 1, Restart FFTF and opposition to Alternative 3, Construct New Accelerator(s) and Alternative 4, Construct New Research Reactor.

Commentor No. 305: M. F. Duffield

Response to Commentor No. 305

Draft PEIS Comment Form

I support the restart of FFTF for isotope + Pu 238 Production

305-1

305-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): M. F. Duffield

Organization:

Home Organization Address (circle one): 1940 Pheasant

City: W. Rochland State: W.Va Zip Code: 99313

Telephone (optional): 509-962-2066

E-mail (optional): Duffy_2000@yahoo.com

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Draft PEIS Comment Form

The PEIS should also consider Infrastructure available to the various alternatives.

FFTF is the best alternative because it has the best infrastructure available. PNM is the strongest part of this infrastructure, as PNM is the nation's leading and premier lsb for nuclear isotope production and marketing.

What other option has the infrastructure in place to make isotope production marketable and profitable and successful? PPTF and PNM?

Thank You and please make the right choice, not the politically correct choice.

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Phil McGinness

Organization: Self

Home/Organization Address (circle one): 3030 W 4th, A-4

City: Kennett, IL State: WA Zip Code: 99336

Telephone (optional): 509-735-2073

E-mail (optional): manofgod@integrityonline.com

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For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

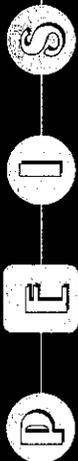


7/12/00

306-1

306-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 307: Al Rasmussen

Draft PEIS Comment Form

If nuclear production continues at Hanford, there will be additional accidents there. Some day there will be an accident in the port city nuclear materials are shipped through. Nobody knows when it will happen, but there can be little doubt that it will happen.

Seismologists cannot say when Seattle will suffer a major earthquake — much bigger than any in recorded history here — but they know it will happen. Volcanologists do not know when Mt. Rainier will next erupt, but they know it will happen again and again.

It is likely none of these things will happen during my lifetime, but there is one thing that could happen. Reason and responsibility can take hold to put an end to the danger and pollution and waste and expense of continuing nuclear production at Hanford. The FFTF reactor should not be restarted and it should be removed from hot standby. Stop it. Stop it now.

307-1

307-2

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): AL RASMUSSEN

Organization: _____

Home Organization Address (circle one): 5235-17th Ave NE, #1

City: Seattle State: WA Zip Code: 98105

Telephone (optional): _____

E-mail (optional): _____

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For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free telephone: 1-877-562-4593 • Toll-free fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



Response to Commentor No. 307

307-1: FFTF and fabrication/processing facilities at the Hanford Site can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.2-4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from implementation of the alternatives, including normal operations and a spectrum of accidents that included severe accidents. The spectrum of accidents reviewed included both design basis and beyond design basis seismic events. The environmental analysis showed that radiological and nonradiological risks associated with each of the alternatives is small. In addition, prior to restarting FFTF, a revised safety analysis report and probabilistic risk assessment which address the potential consequences of a variety of events, including earthquakes would be prepared.

Alternative 1 postulates that DOE might decide at some point to import mixed oxide fuel from Europe to fuel FFTF. At this time, however, DOE has not proposed to import this fuel through any specific port. If DOE ultimately decides to import fuel from Europe, it would perform a separate NEPA analysis to select a port. This review would address all relevant potential impacts of overseas and inland water transportation, shipboard fires, package handling, land transportation, as well as safeguards and security associated with the import of SNR-300 mixed oxide fuel through a variety of specific candidate ports on the east and west coasts. It would consider all public comments, including local resolutions, concerning the desirability of bringing mixed oxide fuel into the proposed alternative ports.

In the event that DOE decides to enhance its nuclear infrastructure, it would not expose any population to high, unacceptable risks under any alternative. Any transportation activities that would be conducted by DOE would comply with U.S. Nuclear Regulatory Commission and U.S. Department of Transportation regulations. Associated transatlantic shipment would comply with International Atomic Energy Agency requirements. In Section J.6.2, DOE reviewed the potential maximum impacts from the marine transportation of mixed oxide fuel from Europe to a representative military port, Charleston, South Carolina, and overland transportation to Hanford. Also in that section, a bounding analysis demonstrates that the maximum potential radiological risks to the surrounding public from mixed oxide fuel shipments would be small (e.g., less than 1 chance in a trillion for a latent cancer fatality per shipment

Commentor No. 307: Al Rasmussen

Response to Commentor No. 307

from severe accidents at docks and in channels and less than 1 chance in 50 billion for a latent cancer fatality per shipment from overland highway accidents).

307-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 308: Anonymous

Draft PEIS Comment Form

WHEN THEY CAN COMPLETELY NEUTRALIZE THE WASTE, WHEN ALL IS RETRIEVED & NEUTRALIZED THEN - MAYBE MEANWHILE WE SHOULD BE ABLE TO RESOLVE OUR NEEDS BY OTHER MEANS WHICH WE SHOULD ALREADY HAVE DONE BY NOW

GET ON IT!!!

308-1

308-1: DOE notes the commentor's concern regarding the wastes currently stored in the high-level radioactive waste tanks located at Hanford. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram funds designated for Hanford cleanup, regardless of the alternative(s) selected. FFTF restart would not generate high-level radioactive waste. The NI PEIS addresses wastes produced for each alternative, as well as cumulative impacts related to waste production. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and appropriate DOE orders.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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• faxing your comments toll-free to: 1-877-562-4592
• commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional):

Organization:

Home/Organization Address (circle one):

City: State: Zip Code:

Telephone (optional):

E-mail (optional):

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NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



As Sec. 2.3.1.1.3 says, 3/4 of proposed FFTF load is not for stated missions, but rather for R+D "activities." These can include nuclear weapons material production. Include the environmental impact of the deployment and use of these possible products of FFTF operation in the final EIS!

309-1

309-1: Section 2.3.1.1.3 of the NI PEIS identifies that for other than periodic increases up to 400 megawatts to support nuclear research and development activities, FFTF would be operated at a nominal 100 megawatts in order to extend the reactor life and significantly reduce the generation rate of spent fuel. The nuclear research and development activities that this discussion is referring to would be for civilian applications.

The purpose of the NI PEIS is to evaluate the environmental impacts of reasonable alternatives to enhancing DOE's existing nuclear facility infrastructure to support production of isotopes for medical, research, and industrial uses, production of plutonium-238 for use in future NASA space exploration missions, and U.S. nuclear research and development needs for civilian application. As discussed in Section 1.2 of Volume 1, plutonium-238 would be produced to support NASA's deep space missions. Plutonium-238 is not used to produce nuclear weapons. All missions considered in the NI PEIS are for civilian purposes.

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Norm Buske
 Organization: Nuclear-weapons-free America
 Home/Organization Address (circle one): 1528 W. 6th Ave #2
 City: Spokane State: WA Zip Code: 99204
 Telephone (optional): (509) 363-1135
 E-mail (optional): search@igc.org

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 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Commentor No. 310: Allen Seaman

Draft PEIS Comment Form

I am a supporter of the restart of FFTF. There is a need for the medical isotopes for cancer patients, and FFTF and produce them.

310-1

310-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



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• faxing your comments toll-free to: 1-877-562-4592
• commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Allen Seaman

Organization:

Home/Organization Address (circle one): 816 N Cedar Av.

City: Pasco State: WA Zip Code: 99361

Telephone (optional): 545-9653

E-mail (optional):

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U.S. Department of Energy • 19701 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



Commentor No. 311: Jeanne Welsch

Response to Commentor No. 311

Draft PEIS Comment Form

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

The cost savings for producing medical isotopes and the lives it would save the United States is reason alone to keep the FFTF facility and Startup production. Let's start the Fast Flux Test Facility.

311-1

311-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Jeanne Welsch

Organization:

Home/Organization Address (circle one): 247 Ada

City: Richland State: WA Zip Code: 99352

Telephone (optional): (509) 946-7264

E-mail (optional):

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7/12/00

Commentor No. 312: Mike Falagher

Response to Commentor No. 312

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

I support the Restart of
FFTF

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Mike Falagher

Organization: _____

Home Organization Address (circle one): 1110 W. Arthur

City: Kennecook State: WA Zip Code: 99336

Telephone (optional): _____

E-mail (optional): _____

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E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



312-1

312-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 313: Don Crnovich

Response to Commentor No. 313

Draft PEIS Comment Form

I would like to see the
restart of the FFTF.
Thank you.

313-1

313-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Don Crnovich

Organization: _____

Home/Organization Address (circle one): 1701 S Auburn

City: Kennebunk State: ME Zip Code: 99337

Telephone (optional): 1-509-582-9419

E-mail (optional): _____

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E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



7/12/00

Commentor No. 314: Kent R. Welsch

Response to Commentor No. 314

Draft PEIS Comment Form

I fully support the restart of FFTE for medical isotope production and any other missions of research & development.

314-1

314-1: DOE notes the commentor's support for Alternative 1, Restart FFTE.

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Kent R. Welsch

Organization: _____

Home/Organization Address (circle one): 1400 N. Montana

City: Kennewick State: WA Zip Code: 99336

Telephone (optional): (509) 736-5534

E-mail (optional): _____

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U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00



Commentor No. 315: Clayton Carr

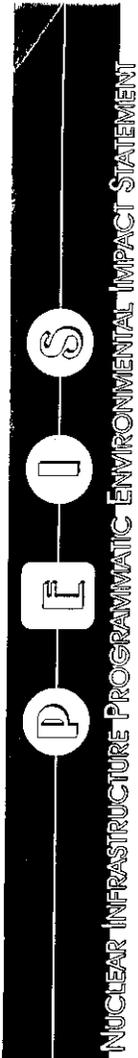
Response to Commentor No. 315

Draft PEIS Comment Form

I SUPPORT THE RESTART OF FFTF.
IT IS THE MOST COST EFFECTIVE MEANS OF
PRODUCING MEDICAL ISOTOPES.

315-1

315-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.



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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): CLAYTON CARR

Organization:

Home/Organization Address (circle one):

108 N. 30TH AVENUE

City: YAKIMA State: WA Zip Code: 98902

Telephone (optional):

E-mail (optional):

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For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 11991 Germantown Road • Germantown, MD 20834
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Commentor No. 316: Sally J. Serier

Response to Commentor No. 316

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

We need the Fast Flux Test Facility to produce medical isotopes. I support the restart of FFTE.

316-1

316-1: DOE notes the commentor's support for Alternative 1, Restart FFTE.

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calling toll-free and leaving your comments: 1-877-562-4593
faxing your comments toll-free to: 1-877-562-4592
commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Sally J. Serier

Organization:

Home/Organization Address (circle one):

City: Kennecott State: WA Zip Code: 99336

Telephone (optional):

E-mail (optional):

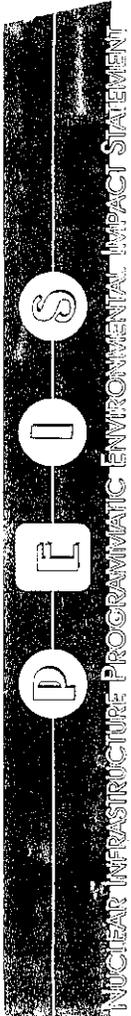
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For more information contact: Colette E. Brown, NE-50 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874



Commentor No. 317: Jane A. Boyd

Response to Commentor No. 317



Draft PEIS Comment Form

I, Jane A. Boyd, am in favor of restarting the Fast Flux Test Facility (FFTF) for the production of medical isotopes.

Jane A. Boyd

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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calling toll-free and leaving your comments: 1-877-562-4593
faxing your comments toll-free to: 1-877-562-4592
commenting via e-mail: Nuclear.infrastructure-PEIS@hq.doe.gov

Name (optional): Jane A. Boyd

Organization:

Home Organization Address (circle one): 321 Thayer Dr.

City: Richland State: WA Zip Code: 99352

Telephone (optional):

E-mail (optional):

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U.S. Department of Energy • 19931 Germantown Road • Germantown, MD 20884
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: NuclearInfrastructure.PEIS@hq.doe.gov



7/12/00

317-1

317-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 318: Kline Welsch

Draft PEIS Comment Form

We rely on other countries to produce medical isotopes when the United States could be the leader in production + research world wide and save precious lives.

"Restart FAST FLUX TEST FACILITY"

318-1

318-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Kline Welsch

Organization: _____

Home/Organization Address (circle one): 704 Cedar Ave.

City: Richland State: WV Zip Code: 99336

Telephone (optional): (509) 943-3271

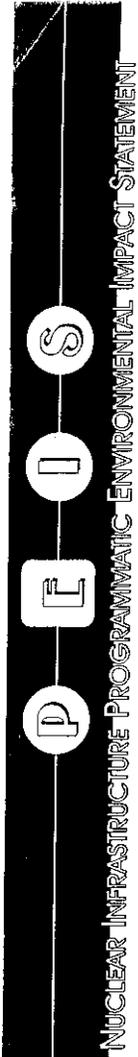
E-mail (optional): _____

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 E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00



Commentor No. 319: Bryon Christoffersen

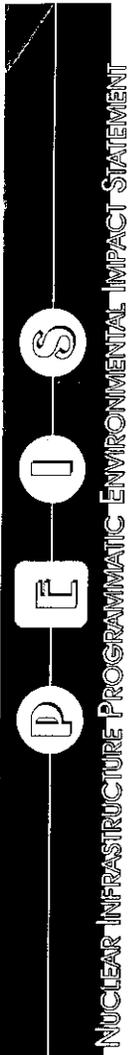
Response to Commentor No. 319

Draft PEIS Comment Form

I'm a resident of West Richland, WA and I would like to see the FFTF restarted and utilized for the DOE missions.

319-1

319-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.



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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): *BRYON CHRISTOFFERSEN*

Organization: _____

Home/Organization Address (circle one): *2702 BIRCHWOOD LANE*

City: *West Richland* State: *WA* Zip Code: *99353*

Telephone (optional): *(509) 967-9244*

E-mail (optional): *STEF@KRCOWT.COM*

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E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Commentor No. 320: Anonymous

Draft PEIS Comment Form

I am in favor of the
Restart of FFTF.

320-1

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): _____

Organization: Hamster

Home/Organization Address (circle one): NI-84

City: Richmond State: VA Zip Code: 23132

Telephone (optional): _____

E-mail (optional): _____

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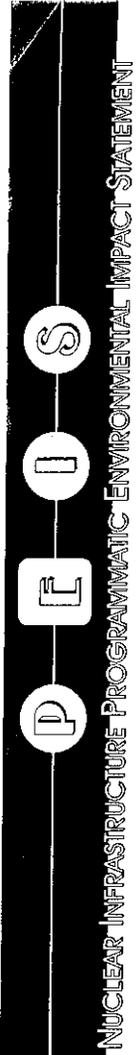
For more information contact: Colette E. Brown, NE-SO
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7/12/00

Response to Commentor No. 320

320-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.



Commentor No. 321: Anonymous

Response to Commentor No. 321

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

Genetic research is coming up with better ways to cure cancer. Medical therapeutic isotopes can be made from materials from Russia that are for sale + cheaper. We have not cleaned up the mess that has been created over the last 55 or more years. We are poisoning the ~~the~~ Columbia River. If the highest priority of the US Dept of Energy was clean up I believe it would already be done. There are other ways to fight cancer that does not create a lot more cancer causing material. We (the USA) said we would destroy our huge stock of nuclear weapons, so far this has not been happening. The Trident subs for example have bombs equal to eight Hiroshima bombs some are to be mothballed but others upgraded 4 times. These are not weapons. They are as destructive to ourselves as to any other persons, as well as animals + everything else on the planet. If we only had a it would be too many I don't know how many we have but it is a huge number, by the grace of God we have not destroyed ourselves yet I wish a ~~There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:~~ still livable for my grand-kids.

- attending public meetings and giving your comments directly to DOE officials
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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): _____
 Organization: _____
 Home/Organization Address (circle one): _____

 City: _____ State: _____ Zip Code: _____
 Telephone (optional): _____
 E-mail (optional): _____

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 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

321-1
321-2
321-3
321-1
321-3
321-4

- 321-1: The commentor's position on genetic research and opposition to the use of medical isotopes are noted. Potential benefits of genetic research are outside the scope of the NI PEIS. As discussed in Section 1.2.1 of Volume 1, one of the DOE's missions is to insure a reliable supply of radioisotopes for clinical applications and research.
- 321-2: DOE acknowledges that other manufacturers can produce certain isotopes at lower costs. In fact, the United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, including Canada, South Africa, and the former Soviet Union. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S isotope needs.
- 321-3: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The Hanford Site has a comprehensive waste minimization and pollution prevention program in place, as summarized in Section 3.4.11.8 of Volume 1, that would govern any proposed site activities.

More specific to the DOE missions presented in the NI PEIS, FFTF is located approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to the groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Commentor No. 321: Anonymous (Cont'd)

Response to Commentor No. 321

- 321-4:** The commentor's positions on nuclear disarmament and reduction of stockpiles of nuclear weapons are noted, although nuclear weaponry is outside of the scope of this NI PEIS. The nuclear infrastructure missions described in Section 1.2 of Volume 1 are unrelated to the national defense. Nuclear weaponry would not be produced under any of the nuclear infrastructure alternatives described in Section 2.5.

Commentor No. 322: Rosemary E. Brodie

8/30/00

**How many times must we return here to protest the restarting of the dangerous, and expensive Fast Flux Test Facility?
We have said it all already. What more is there to say?**

Medical isotopes? We killed that argument many times over in the past. Experts in the field say there is absolutely no need for an additional source of these isotopes. There are sources in this country and Canada as well.

Plutonium 238 for fuel of the space missions- Today's PI tells us even that is not needed.

Clean-up is where it's at!!!! Not more money down the tube for FFTF.

**Meanwhile, Keith Klein, Manager of Hanford says: "Are there going to be trade offs? Almost certainly. We do not have adequate funding to do it all. When we get those trade offs better defined - hopefully in the next few months - we will again be seeking your input"-
That's supposed to reassure us that all is well? We will come back as long as it takes.**

**How about this one: "We may decide to initiate negotiations that could result in changes to the Tripartite Agreement (TPA) butwe would conduct a formal public involvement process". - Are we being listened to?
PI does not seem to help.**

As public citizens we should not accept anything short of a thorough job of clean up.

**Everything that is physically possible - never mind financially possible!
Selling off a couple of TRIDENT subs might boost the kitty to pay for this.**

Rosemary E. Brodie
3842 NE 90th St
Seattle WA 98115

Response to Commentor No. 322

- 322-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF. Included in the PEIS are the results of analyses that show that the risks associated with operating the FFTF are very small.
- 322-2:** DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information.
- The United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.
- 322-3:** Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these

Commentor No. 322: Rosemary E. Brodie (Cont'd)

Response to Commentor No. 322

missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Section 1.2.2 of Volume 1 was revised to clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

- 322-4:** DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "...ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected. The Hanford Site has a comprehensive waste

Commentor No. 322: Rosemary E. Brodie (Cont'd)

Response to Commentor No. 322

minimization and pollution prevention program in place, as summarized in Section 3.4.11.8 of Volume 1, that would govern any proposed site activities.

Excessing U.S. defense assets to fund DOE activities is not within the scope of this PEIS.

Commentor No. 323: Richard O. Zimmerman

T. date 7/9/06/24

Date: August 30, 2000
 Location: Seattle, Washington
 Subject: Public Comment to the Draft Programmatic Environmental Impact Statement that includes the option to restart the FFTF.

Commenter: Dr. Richard Orin Zimmerman
 220 Orchard Way
 Richland, WA 99352

Thank you for the opportunity for the public to make comments on this important topic. My name is Dr. Rick Zimmerman and I am a resident of Richland Washington. I come in support of the Draft PEIS Alternative 1.

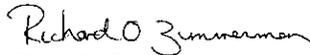
The medical community is in need of production level quantities of medical isotopes for cancer diagnosis and treatment. I am a cancer survivor of a form that has a 50% mortality rate. Just last week I had dinner with a friend who has cancer with a 95% mortality rate within two years. By the grace of God, she is at the 4-year mark since her diagnosis. One of the reasons for her survival is that new treatment regimes are being discovered and approved as she reaches the end of the effectiveness of an earlier prescribed treatment. She and many others need the medical isotopes option now to enjoy a quality of life without the abuses of existing treatments.

Alternative 1, restarting the FFTF, provides the fastest option to provide research and production scale quantities of the many needed forms of isotopes to the medical community. This in turn, helps those courageous cancer patients maintain their quality of life.

Additionally, I'd like to endorse the testimony of others at the earlier NOI hearings that provide compelling evidence to restart the FFTF.

1. FFTF is a facility ready, with staff in place, to undertake this mission.
2. Within years of restart, operational costs of the FFTF would be paid for by sales of isotope production. (A remarkable way for a government facility to operate without burden on the federal budget)
3. Cost savings through medical isotope use is projected to equal the current national financial burden of Medicare, which in 1999 was \$213 billion. (Talk about Return on Investment).

Thank you for your time, I trust this information will be useful.


 Richard Orin Zimmerman

Response to Commentor No. 323

323-1

323-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

323-2

323-2: DOE notes the commentor's views on the costs and benefits of the proposed production of medical radioisotopes in the FFTF. The estimated costs of the range of reasonable alternatives are presented in the Cost Report, summarized in Appendix P of the Final NI PEIS. However, the Cost Report is not a cost-benefit analysis. While it is reasonable to believe that the benefits of medical isotopes are substantial, the purpose of this NI PEIS is to describe the nuclear infrastructure missions (Section 1.2 of Volume 1), a range of reasonable alternatives for satisfying the mission requirements (Section 2.5 of Volume 1), and the environmental impacts that would result from implementation of the alternatives. According to 40 CFR Section 1502.23, if a cost-benefit analysis exists, it must be reported and summarized in the NI PEIS.

Commentor No. 324: Eldon L. Ball

Response to Commentor No. 324

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

I SERIOUSLY DOUBT THAT 55 YEARS AGO (8:30-45) THE JAPANESE CONSIDERED HIROSHIMA OR NAGASAKI AS NATIONAL ASSETS, OR THAT 10 YEARS AGO THE SOVIET UNION THOUGHT OF CHERNOBYL AS A "NATIONAL ASSET" OR THE PEOPLE OF PENNSYLVANIA FELT 3 MILE ISLAND WAS A "NATIONAL ASSET" WHEN IT NEARLY EXPLODED. HAS THE RISK OF WILD-FIRE BEEN ADEQUATELY CONSIDERED? IF ANY PLUTONIUM IS NEEDED, BUY IT FROM RUSSIA. THEY HAVE PLENTY IT WOULD GIVE WORK TO RUSSIANS. WE COULD THEN GET ON WITH LONG OVERDUE CLEANUP. IT COULD BE A WIN-WIN SITUATION ALSO. SHUT DOWN THE FAST FLUX TEST FACILITY PERMANENTLY. CONSIDER THIS ALTERNATIVE G. GET ON WITH THE TRI-PARTITE AGREEMENT & CLEANUP HANFORD ON THE SCHEDULE THAT WAS AGREED 10 YEARS AGO BY THE DEPT OF ENERGY. THE DOE HAS BEEN DRAGGING ITS FEET MUCH TOO LONG. STOP THE HEARINGS, GET ON WITH THE CLEANUP. THE DOE SUBCOMMITTEE FOR ISOTOPE RESEARCH CONCLUDED THAT "FFTF IS NOT A VIABLE SOURCE FOR MEDICAL RESEARCH ISOTOPES."

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): ELDON L. BALL

Organization: _____

Home Organization Address (circle one): 11244 GREENWOOD AVEN. #108

City: SEATTLE State: WA Zip Code: 98133

Telephone (optional): 206-366-8405

E-mail (optional): eldon.ball@juno.com

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For more information contact: Collette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

324-1

324-1: FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

324-2

An assessment of the risk of a wildfire indicated that, in the worst case, it could lead to a loss of offsite power, which the FFTF, because of its passive cooling capability, could withstand without overheating the core or leading to the release of any radioactivity.

324-3

324-2: DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

324-4

324-3: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

324-5

324-4: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Public meetings were held on this formal milestone change.

The alternatives delineated in the NI PEIS would not have an impact on Hanford cleanup activities. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions

Chapter 2—Written Comments and DOE Responses

Commentor No. 324: Eldon L. Ball (Cont'd)

Response to Commentor No. 324

described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

- 324-5:** DOE assumes the commentor is referring to the Fast Flux Test Facility (FFTF). The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost-efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

Commentor No. 325: Liesl Zappler Rogers

Response to Commentor No. 325

Draft PEIS Comment Form

It is inconceivable to me that the DOE would even consider starting up the FTFF at Hanford. The isotopes for cancer research as the draw to start the FTFF is ironic considering the cancer rate of the citizens in the Tri-cities area. The costs, the wastes, the risks to human & environmental health are far too great to even consider this start-up. I am proud that our city council members are opposed to the FTFF and I stand with them. There are other facilities to create these isotopes & there is no point in trying to cure cancer by starting up another potentially cancer causing facility and creating such a threat to the environmentally sensitive Pacific Northwest. Hanford has been listed to be cleaned up and that should be the focus of the activities there.

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- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Liesl Zappler Rogers

Organization: _____

Home/Organization Address (circle one): 7325 49th Ave NE

City: Seattle State: WA Zip Code: 98115

Telephone (optional): _____

E-mail (optional): _____

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For more information contact: Collette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



325-1

325-1: DOE notes the commentor's opposition to Alternative 1, Restart FTFF. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FTFF), including normal operations and a spectrum of accidents that included severe accidents.

325-2

The environmental analysis showed that radiological and nonradiological risks associated with restarting FTFF would be small.

325-3

As discussed in Section 3.4.9.3 of Volume 1, the question of whether residents in the Hanford area are subject to elevated cancer rates is unresolved. Existing studies and data suggest that cancer mortality rates in counties adjacent to the Hanford Site are not elevated. Prevailing winds at the Hanford Site blow toward Grant County, Washington from the south (14.2 percent of the time) and south-southwest (11.5 percent of the time) directions. Hence, Grant County would be expected to bear a major burden of wind borne contamination from the Hanford Site.

325-4

However, if an excess cancer mortality risk is present in Grant County, it was too small to be identified at the county-level of resolution in the survey and available National Cancer Institute data discussed in Section 3.4.9.3. Epidemiological studies in Benton and Franklin counties provided no conclusive evidence of elevated congenital defects in the two counties.

325-2:

DOE notes the commentor's opposition to Alternative 1, Restart FTFF.

325-3:

This PEIS provides estimates of the human health impacts associated with a range of reasonable alternatives (including restart of FTFF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FTFF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FTFF would be small.

Commentor No. 325: Liesl Zappler Rogers (Cont'd)

Response to Commentor No. 325

325-4: Restoration of the Hanford Site and waste management activities are the primary missions at Hanford.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

**Commentor No. 326: Hyun Lee
Heart of America Northwest**

Response to Commentor No. 326

Draft PEIS Comment Form

I oppose FFFTF restart because

1) Restart of FFFTF will lead to generation of what the Draft EIS refers to as "excess high activity waste" that will sent to the evaporator tank feed existing treatment and vitrification for disposal. This waste will be stored in Hanford's FMEF until 2007 when vit-photos will essentially be operable. This violates state and Federal hazardous waste laws which allow only a few months of storage before waste must be disposed of. This is highly violative state and federal law.

2) Just the possibility of FFFTF restart has delayed Hanford cleanup 2 buildings in the 300 Area (325 & 306F) which are being kept quiet for FFFTF support are highly contaminated. It has a long history of methane and radon release during both the 60's & 70's.

3) Shipping FFFTF wastes to "commercial disposal facilities" violates existing USDFE policy that requires wastes to be sent only to NRC licensed facilities. This is the only US facility in Hanford that accepts disposal of FFFTF wastes of US Energy would violate the Compact between states (which Congress adopted) for the storage, shipping of FFFTF wastes there would require USDFE to CERCLA consent.

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Hyun Lee

Organization: Heart of America Northwest

Home/Organization Address (circle one): 1305 4th Ave, SW 208

City: Seattle State: WA Zip Code: 98101

Telephone (optional): 206 382 1014

E-mail (optional): hyun@heartofamericanorthwest.org

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U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

7/12/00

326-1

326-2

326-3

326-4

326-1: DOE notes the commentor's opposition to Alternative 1, Restart FFFTF.

326-2: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

The use of proposed alternative facilities associated with processing of neptunium-237 targets would have no impact on schedules or available funding for high-level radioactive waste programs at Hanford. The higher activity waste would be treated as a solid form via a stand-alone vitrification system, separate from any tank waste treatment system. Therefore, the existing Hanford high-level radioactive waste facilities would not be used, and as analyzed in the PEIS, no existing or planned high-level radioactive waste facilities would be used to treat the wastes resulting from processing the irradiated targets.

326-3: Hanford Site environmental restoration activities, including those involving the Hanford 300 Area, are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The consideration of FFFTF for the NI PEIS mission has not impacted any Hanford cleanup projects, except for a Tri-Party Agreement change involving the FFFTF status. The Department of Ecology, EPA, and DOE agreed to the change to place the milestones for FFFTF's permanent

Chapter 2—Written Comments and DOE Responses

Commentor No. 326: Hyun Lee (Cont'd)
Heart of America Northwest

Response to Commentor No. 326

deactivation in abeyance until the DOE reaches a decision on FFTF's future. Public meetings were held on this formal milestone change. The DOE missions would also have no impact on future Hanford cleanup activities.

The 306-E facility is not contaminated and is being proposed as a location to conduct activities that involve no radioactive materials. While the 325 Building has an inventory of radionuclides associated with ongoing activities at the facility, the building is not contaminated in worker accessible areas. Operations at the 325 Building are conducted in accordance with applicable federal and state regulations and appropriate DOE Orders.

The 300 Area Revitalization Plan (DOE 1999) provides for continued multi-program R&D operations in the 300 Area, including operation of various laboratories, office facilities, and services. It also provides for consolidation (but not complete elimination) of radiological operations, with support for Hanford Site facility transition and environmental restoration efforts. The plan does not require closure of the 325 and 306 E buildings as long as they are needed for active research projects. Operation of these facilities would not violate any existing agreements between DOE and stakeholders or other legal obligations, nor would it affect ongoing or planned environmental restoration and facility transition activities.

326-4: DOE Order 435.1 "Waste Management" gives responsibility to the DOE Field Element Managers to approve exemptions for use of non-DOE facilities for the storage, treatment or disposal of DOE radioactive waste based on certain requirements. One of these requirements is that the facility must have the necessary permits, licenses, and approvals for the specific waste.

As discussed in DOE's "Commercial Disposal Policy Analysis for Low Level and Mixed Low-Level Wastes" dated March 9, 1999, there are three commercial low-level radioactive waste disposal facilities (i.e., Envirocare of Utah; Barnwell, South Carolina; and U.S. Ecology, Richland, Washington) which are currently operating and licensed to receive low-level radioactive waste. Envirocare of Utah also has a permit to receive RCRA hazardous wastes. DOE has and is currently disposing of low level radioactive waste and mixed low-level radioactive waste at Envirocare of Utah and has sent low-level radioactive waste to Barnwell, South

Commentor No. 326: Hyun Lee (Cont'd)
Heart of America Northwest

Response to Commentor No. 326

Carolina. In June 1995, U.S. Ecology submitted an unsolicited proposal to DOE for the disposal of DOE waste at the U.S. Ecology facility. In November 1995, the State of Washington informed U.S. Ecology and DOE that the State would allow the disposal of DOE waste at the facility subject to certain conditions.

Commentor No. 327: D. Doyle

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

We have a scant ten to twenty five years before the high level liquid nuclear waste slurry begins to enter the Columbia river from Hanford. In the mean time, activity continues at Hanford to extract the PFGE sludge. Any action on site should be directed to protecting our river and our ecology until chemical threats in the groundwater from the tanks and K-basins are eliminated.

327-1

327-1: DOE notes the commentor's concerns regarding the existing cleanup mission and migration of contaminants to the Columbia River. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

The Hanford Site has a comprehensive waste minimization and pollution prevention program in place, as summarized in Section 3.4.11.8 of Volume 1, that would govern any proposed site activities.

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): D. Doyle
 Organization: None
 Home/Organization Address (circle one): 1615 Summit Ave E. #5
Seattle WA 98102
 City: Seattle State: WA Zip Code: 98102
 Telephone (optional): _____
 E-mail (optional): this.is.seathy.danielle@yahoo.com

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 Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



Commentor No. 328: Anonymous

Response to Commentor No. 328

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

The 3 major reasons that the PEIS is giving to restart the FFTF. ① Medical Isotopes: to help fight cancer. My response: We must realize that we can't cancer. Our environment is making us sick!!! If we start the FFTF we will make more people sick. We need to stop looking for a CURE & start looking for a cause - which isn't too hard to find. ② We can't drink our water because of WASTE!!! ③ We have deadly air because of WASTE!!! If we're dead, money, jobs & politics are going to do us any good?

I am a breast cancer survivor, and I know it's because of the environment. I implore you - think

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

of our future. Lets stop thinking about ourselves.

Name (optional): _____
 Organization: _____
 Home/Organization Address (circle one): _____

 City: _____ State: _____ Zip Code: _____
 Telephone (optional): _____
 E-mail (optional): _____

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 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

328-1

328-2

- 328-1: The commentor's position regarding restart of FFTF is noted. The PEIS provides estimates of the human health impacts associated with a range of reasonable alternatives (which includes restart of FFTF) for the production of isotopes for medical uses, research and development, and as sources for radioisotope power systems. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.
- 328-2: No food, water, or air restrictions are in place outside the Hanford Reservation as a result of Hanford activities.

Commentor No. 329: Anonymous

Draft PEIS Comment Form

Information about the specific isotopes involved is not adequate. The isotopes are not listed, nor the amounts needed, nor the other sources. Also, future needs are not adequately addressed

329-1

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
• returning this comment form to the registration desk at the meeting or to the address below
• calling toll-free and leaving your comments: 1-877-562-4593
• faxing your comments toll-free to: 1-877-562-4592
• commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional):

Organization:

Home/Organization Address (circle one):

City: State: Zip Code:

Telephone (optional):

E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Response to Commentor No. 329

329-1: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

For the purposes of analyses in the NI PEIS, a representative set of isotopes was selected on the basis of the recommendations of the Expert Panel, medical market forecasts, reviews of medical literature, and more than 100 types of ongoing clinical trials that use radioisotopes for the treatment of cancer and other diseases. This set includes both reactor- and accelerator-produced isotopes, and is listed in Table 1-1 of Volume 1 along with a brief description of their medical and/or industrial applications. Although these isotopes are a representative sample of possible isotopes which could be produced, DOE expects that the actual isotopes and specific amounts produced as a result of the proposed action would vary from year to year in response to the focus of clinical research and the specific market needs occurring at that time.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

The PEIS provides "negative" risk statistics relative to all facets of EFTF operation and product handling. These are normally in terms of latent cancer fatalities.

If cancer effects are pertinent, then the TOTAL effects MUST BE estimated. The PEIS needs to estimate the number of cancer lives SAVED.

For example, the conclusion of the EIS might conclude:

For each year of EFTF operation
 #of new cancers: 10^{-6} #of cancer patients saved: 1000

↳ whenever the number, the contrast needs to be shown.

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- calling toll-free and leaving your comments: 1-877-562-4592
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): William A. Dautel

Organization: _____

Home Organization Address (circle one): 2360 Mark Ave

City: Richland State: WA Zip Code: 99352

Telephone (optional): (509) 627-6284

E-mail (optional): 4dautels@oirt.com

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For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
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7/12/00

330-1

330-1: Medical isotope production has been identified as one of the purposes and needs (Chapter 1 of Volume 1) for which DOE action is necessary. The NI PEIS addresses the impacts of the production of radioisotopes for this purpose. Although the 12 million medical procedures a year utilizing radioisotopes result in significant health benefits to the public, the impact of the use of the radioisotopes is not within the scope of the environmental impacts of the production of the isotopes.

Commentor No. 331: Magna Sundstrom

Draft PEIS Comment Form

As a citizen of the Northwest it baffles me that you would consider ANYTHING at the Hanford nuclear reservation that would add more waste. The contamination problems are so bad we already are seeing the beginning effects of the nuclear arms race. During my involvement in this issue I have seen two high level waste tanks start leaking, two releases of Strontium-90 detected, one of Tritium and one of plutonium. This all during a year and a half restart of FFTF with only acid to his problem of waste and slow clean up. The bottom line is we need to be focusing solely on clean up. Hanford is the 2nd most contaminated site in the world I am not willing to wait around for his to bleed up in our faces. **CLEAN UP HANFORD**
DO NOT RESTART THE FFTF REACTOR!

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- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Magna Sundstrom

Organization: _____

Home/Organization Address (circle one): 18313 187th Ave. NE Apt. 1314

City: Bellevue State: WA Zip Code: 98011

Telephone (optional): _____

E-mail (optional): _____

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U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
toll-free telephone: 1-877-562-4593 • toll-free fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Response to Commentor No. 331

331-1: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

331-1

DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

331-2

Management of wastes that would be generated under implementation of Alternative 1 (Restart FFTF) is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

331-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 332: Tamara Travers

Response to Commentor No. 332

Draft PEIS Comment Form

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Shut the FFTF Reactor down
 Hanford is already the most contaminated
 site in the western hemisphere,
 second only to Chernobyl. We need to
 clean up the waste of a already
 mine produced rather than
 producing more waste, while we
 can't afford to clean up the waste
 we already have. There are 67
 high-level nuclear waste tanks
 looking toward the Columbia
 river, threatening are health even
 more. FFTF was supposed to have
 been shut down 5 years ago, according
 to the Tri-Party Agreement. Please,
 shut FFTF down for good and turn
 your focus to clean up!

332-1

332-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

332-2

332-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Public meetings were held on this formal milestone change.

~~please send me a response to my comments~~

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): Tamara Travers

Organization: _____

Home/Organization Address (circle one): 1605 Woodlawn Ave N

City: Seattle State: WA Zip Code: 98103

Telephone (optional): (206) 810-9168

E-mail (optional): _____

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For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

Chapter 2—Written Comments and DOE Responses

Commentor No. 333: Marjorie Rhodes

Draft PEIS Comment Form

many non-governmental organizations and individuals oppose restarting of the nuclear reactor. When people organize and work together we can make a difference, as we proved here in Seattle Nov 30, 1999. If people coming together could shut down the WTO we can also shut down nuclear power plants through mass demonstrations which educate the public. Listen to the people and not the special interests.

Let's not have anymore hidden facts or other cover-ups by the Dept. of Energy. There are people watching who will expose these cover-ups.

Also your hand-outs are blatantly biased in favor of corporate interests. Why? Your hand-outs even look like slick propaganda typical of corporate interests.

P.S. The use of paper for these hearings is shameful disregard for the environment.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Marjorie Rhodes

Organization: 8521 177th NE

Home/Organization Address (circle one): _____

City: Seattle State: WA Zip Code: 98115

Telephone (optional): _____

E-mail (optional): None

COMMENTS MUST BE POSTMARKED BY September 18, 2000

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U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free telephone: 1-877-562-4593 • Toll-free fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Response to Commentor No. 333

333-1: DOE notes the commentor's opinion regarding opposition to the restart of FFTF. It is DOE policy to encourage public input on matters of regional, national and international importance. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the environmental impact analysis of DOE's proposed alternatives for meeting mission requirements. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

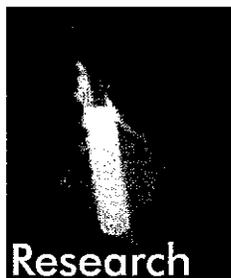
This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS. DOE made every effort to obtain, analyze, and disclose all required information to make a decision on expanding nuclear infrastructure. All references used in preparing the NI PEIS are cited in the reference section of each chapter and appendix. DOE has made these references and other material relevant to review of the NI PEIS available to the public in the designated public reading rooms.

The handouts provided during the public hearings were intended to convey pertinent information on the DOE missions and options for accomplishing them, as well as to provide other relevant background material, in a clear and concise manner for the benefit of the public. The handouts are not intended to promote any particular alternative or corporate, institutional, or government interest in the decisions to be made but rather to communicate the reach and importance of such decisions to the public as a whole.

The commentor's concern for the use of paper for the public hearings is noted. DOE is committed to the principles of waste minimization and pollution prevention, and all public informational materials and this NI PEIS are printed with soy ink on recycled paper. Electronic publishing via the Internet is also used extensively by DOE for NEPA analyses and many other types of documents in order to reduce publication costs and material usage. However, it is customary to provide copies of fact sheets, public comment forms, hearing evaluation forms, and other information materials as a convenience to the public and to ensure that those attending are as fully informed as possible as to the matters on which public input is being solicited. The provision of such materials at

333-1

Isotopes for Medicine and Science



This DOE paper reads like an advertisement from corporate America.

Overview

DOE produces and sells hundreds of stable and radioactive isotopes for commercial uses, medical applications, and research purposes throughout the United States and to approximately 25 other countries. Products and services are provided that are not readily available commercially but are required by domestic and international customers for a variety of purposes. Program goals are to:

- Provide a reliable supply of quality products and services based on customers' needs
- Develop new isotopes and isotope application technologies to meet future national needs
- Manage and operate the Office of Isotopes for Medicine and Science in a cost-effective manner that best serves the interests of customers and the U.S. taxpayer

Description

The Office of Isotopes for Medicine and Science operates by using a revolving fund and maintains financial viability through sales revenues and annual appropriations from Congress. DOE is the only U.S. source of many important isotopes.

- Isotopes for research are made available at prices that support a reasonable return to the Government but do not discourage their use.
- Commercial isotopes are sold on a cost-recovery basis.

In fiscal year 1999, this program served a total of 380 customers, generating revenues of \$10.1 million.

Facilities and Capabilities

This program maintains production sites at several of DOE's national laboratories, including Oak Ridge, Los Alamos, Brookhaven, and Sandia. These laboratories offer unique isotope production and separation facilities and processes such as reactors, associated hot cells, and accelerators.

Mission and Visions

The mission of the U.S. Department of Energy's (DOE's) Office of Isotopes for Medicine and Science is to meet the national need for a reliable supply of isotope products and services for medicine, industry, and research. Its vision is to ensure the reliable supply and development of isotopes to meet customers' changing needs through cost-effective use of unique Government facilities to complement and encourage private sector capabilities.

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19001 Germantown Road • Germantown, MD 20874
Toll-free telephone: 1-877-552-6593 • Toll-free fax: 1-877-562-6592
E-mail: NucleaInfrastructure-PEIS@hq.doe.gov



08/15/00

public hearings is in part in response to feedback from other public hearing attendees. Of course, persons attending the hearing could elect to forgo handouts and public comment forms. A presentation was provided by DOE at the start of the hearings and poster boards were on display as alternative means of communicating key points of information. Comments by attendees could be made orally to a comment recorder or submitted via one of the other means provided (i.e., U.S. mail, e-mail, a toll-free fax number, and a toll-free phone number) in lieu of a completed comment form.

333-2: As referenced in DOE's response to the commentor's previous comment 333-1), the fact sheet handouts are not biased. In particular, the fact sheet questioned by the commentor is intended to provide a summary of the mission drivers behind the medical and industrial isotope production mission and to serve as an aid to the public in understanding one of the three missions identified in the PEIS. Fact sheets for the other two missions were also provided for information purposes.

Commentor No. 333: Marjorie Rhodes (Cont'd)



Isotope Uses

Isotopes save lives: they help doctors diagnose illnesses and treat diseases. They also make our lives safer. A radioisotope is used in smoke detectors; another detects explosives in luggage at airports. Radioisotopes are used in devices for manufacturing many of the products we use regularly including plastic wrap, radial tires, and coffee filters.

Medicine

Nearly every aspect of medicine involves the use of isotopes.

- Radioisotopes are used in a process called nuclear imaging to diagnose various diseases in certain organs. An estimated 10 million nuclear-imaging procedures are performed each year just in the United States.
- Radioisotopes are used to identify cardiac conditions, to locate cancers, and to treat health problems including cardiovascular disease, leukemia, and other types of cancers.
- Thirty percent of all biomedical research involves the use of radioisotopes. At least 80 percent of all new drugs approved for use today result from research using radioisotopes. Medical researchers are now using radioisotopes to find cures for AIDS, Parkinson's disease, and diabetes.

08/15/00

Industry

There is a wide range of industrial applications for radioisotopes including such diverse activities as:

- Production quality control
- Product testing
- The manufacture of fuel for nuclear power plants

Isotopes are also used to detect cracks and leaks in underground pipes and gas lines and to ensure the strength of high-rise buildings and bridges. Smoke detectors use a small amount of the isotope americium-241 to trigger an alarm when smoke is present.

Agriculture

Radioisotopes are also used in agriculture to:

- Produce higher-yielding food crops
- Preserve food products
- Trace fertilizer uptake in plants
- Develop seeds with improved disease resistance and product yields
- Extend the shelf life of certain foods
- Produce the shrink wrap used to package food

These processes do not make food radioactive.

Advanced Nuclear Medicine Initiative

The Advanced Nuclear Medicine Initiative will support peer-reviewed research to further advance nuclear medicine technology in the United States. Three major elements comprise this initiative.

- 1) Sponsor nuclear medical science using a peer-review selection process. DOE's support is in two forms: direct research grants, and making isotopes available for research at prices that researchers can afford.
- 2) Encourage the training of individuals in nuclear medicine methods by establishing scholarships and fellowships for nuclear medicine specialists and by sponsoring summer internships at appropriate institutions.

page 2

Response to Commentor No. 333

3) Initiate a focused program to apply alpha-emitting isotopes available in the United States from DOE to fight a spectrum of malignancies, including most common cancers, and infectious diseases, such as meningitis and AIDS. Additional applications may include treatment of other immune disorders and of rheumatoid and degenerating joint diseases.

Privatizing Isotope Activities

DOE is seeking opportunities for private industry to assume control of some or all of its isotope production and distribution activities. This could reduce annual appropriation requirements, enhance U.S. economic competitiveness, create private sector jobs, and reduce the costs to the U.S. taxpayer.

Internet Addresses

- U.S. Department of Energy
Catalog of Radioactive and Stable Isotopes:
www.ornl.gov/isotopes/catalog.htm
- Society of Nuclear Medicine:
www.snm.org
- National Institutes of Health:
www.nih.gov
- U.S. Nuclear Regulatory Commission:
www.nrc.gov
- U. S. Department of Energy:
www.doe.gov
- U.S. Department of Energy
Office of Nuclear Energy, Science and Technology:
www.ne.doe.gov
- International Atomic Energy Agency:
www.iaea.org

08/15/00

FAST FACTS

Thousands of lives and millions of dollars are saved every year because of medical isotope procedures.

- One of every three persons admitted to U.S. hospitals undergoes a medical procedure that uses medical radioisotopes including the diagnosis and treatment of heart disease, arthritis, cancer brain scans, bone scans, diagnosis of AIDS, Alzheimer's, and many other maladies.
- Isotope use is critical to ensuring structural safety for dams, aircraft, bridges, and piping.
- The Department of Energy is seeking opportunities for private industry to assume control of some or all of its production and distribution activities.

ISOTOPES FOR MEDICINE AND SCIENCE

page 3

Commentor No. 333: Marjorie Rhodes (Cont'd)

Medical and Industrial Isotope Production

The U.S. Department of Energy (DOE) is responsible for ensuring a reliable supply of isotopes not available in the marketplace and a supply of commercial isotopes that can only be produced in unique DOE facilities. With the anticipated increase in demand for medical and industrial isotopes, DOE is evaluating the capabilities of its existing facilities and determining its future ability to meet these obligations.

DOE Office of Isotopes for Medicine and Science

The mission of DOE's Office of Isotopes for Medicine and Science is to meet the national need for a reliable supply of isotope products and services for medicine, industry, and research. Isotopes are produced by DOE only where there is no U.S. private sector capability or when the private sector's production capacity is insufficient to meet U.S. needs. DOE encourages private sector investment in new isotope production ventures and will sell or lease its existing facilities and inventories for commercial purposes.

Medical Isotope Uses

Nearly every aspect of medicine involves the use of isotopes, including diagnosis, treatment of several major diseases, and biomedical research.

Diagnostic Isotopes

Diagnostic isotopes are used for imaging internal organs. Unlike conventional radiology, imaging with isotopes reveals organ function and structure and provides more accurate diagnostic information.

An estimated 10 million nuclear-imaging procedures are performed each year in the United States. In these procedures, a patient is given a specific isotope in the form of a radiopharmaceutical. A camera can then trace the radiopharmaceutical through the body, providing pictures of alterations caused by disease. For example, during brain scans, an

isotope traces brain activity to give doctors a clear picture of whether the brain is functioning normally.

Therapeutic Isotopes

Therapeutic isotopes play an important role in effectively treating diseases. For example, isotopes are used in radiotherapy to destroy cancerous cells, to help arteries stay unlogged after coronary angioplasty, and to alleviate arthritis pain.

A recently developed technique being used in several trial studies is called cell-directed localized radiation therapy. This therapy, also referred to as "smart bullets," uses isotopes linked to cancer-seeking antibodies. The antibodies act as "homing" materials that seek and attach themselves to cancer cells and in the process deliver the isotope to the cancer cell. This directed therapy results in effectively killing the cancer cell but not the surrounding cells, thus minimizing the debilitating side effects seen with chemotherapy or full body radiation.

Biomedical Research

Thirty percent of all biomedical research involves the use of isotopes. At least 80 percent of all new drugs approved for use today result from research using isotopes. Medical researchers are now using isotopes in the search for cures for AIDS, Parkinson's disease, and diabetes.

Industrial Isotope Uses

Industrial isotope applications fall into three broad categories: nucleonic instrumentation, irradiation and radiation processing, and radioactive tracers.

Nucleonic Instrumentation

Nucleonic instruments contain radioactive isotopes. Some of these instruments are used for detecting and/or measuring quantities of pollutants, explosives, drugs, ores, petroleum, and natural gases. As an example, smoke detectors use a small amount of americium-241 to trigger an alarm when smoke is present.

333-2



Response to Commentor No. 333

Other instruments are used for nondestructive testing of materials. For example, iridium-192 is used to detect cracks and leaks in underground pipes and gas lines or in high-rise buildings, bridges, or aircraft.

Irradiation and Radiation Processing

Traditionally, medical products are sterilized in autoclaves at high temperatures and pressures. However, high heat can damage some medical products and equipment. Cobalt-60 is used to sterilize instruments that cannot be sterilized by other methods.

Radioactive Tracers

Isotopes can be used as tracers to follow atoms or molecules during studies. For example, isotopes are used to trace fertilizer and nutrient uptake in plants, to study chemical synthesis reactions, and to monitor the movement of materials through an industrial plant. Numerous isotopes are used as tracers in these applications.

Future Demand for Medical Isotopes

In 1998, an Expert Panel convened by DOE was asked to provide its analysis of the current and future medical isotope demands. The Expert Panel also developed a list of isotopes for DOE to consider for production. The Expert Panel findings include the following.

- The growth rate of medical isotope usage could be significant over the next 20 years. A 7-14 percent increase is predicted for therapeutic applications and a 7-16 percent increase is expected for diagnostic applications. This projected growth in demand for isotopes is contingent on continued Government support for basic research and technological improvements in nuclear medicine.

- Due to the development of new uses of medical isotopes and the limited number of facilities to produce isotopes, shortages of some major isotopes are expected.
- There is not a reliable supply of research isotopes produced at a reasonable cost. Without an adequate supply of high-quality, exotic isotopes, nuclear medicine cannot develop.
- The United States is over dependent on foreign isotope production.
- DOE's infrastructure for producing medical isotopes is diminishing due to changes in missions and aging facilities. It is unlikely that the existing infrastructure can support the rising demand for medical isotopes.

Based on its findings, the Expert Panel recommended that DOE and the National Institutes of Health develop the capability to produce a diverse supply of isotopes for medical use in quantities sufficient to support research and clinical activities. Such a capability would prevent shortages of isotopes, reduce American dependence on foreign isotopes, and stimulate biomedical research. They further recommended that this capability be built around either a reactor, an accelerator, or a combination of both so that isotopes for clinical and research applications can be supplied reliably.

Commentor No. 334: Eunice Heaston

NI PEIS Toll-Free Telephone

8/31/00

Eunice Heaston
602-977-9178

Please restart the FFTF.

|| 334-1

Response to Commentor No. 334

334-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 335: Marilyn Savage
United Staff Nurses Union



UNITED STAFF NURSES UNION
UFCW Local 141



31620 23rd Avenue S. • Suite 304 • Federal Way, WA 98003 • (253) 946-1141 • 1-800-468-3856 • Fax (253) 946-1297

United Food and Commercial Workers Local 141, United Staff Nurses Union, is a state wide local union that represents registered nurses in 24 hospitals, clinics, and home health agencies throughout the State of Washington. Founded in 1989, the union's mission is not only to provide collective bargaining representation for registered nurses, but also to work with other health care providers to advocate for quality, affordable, and accessible health care for consumers.

The nurses we represent are a diverse group of professionals providing care to patients in traditional hospitals as well as community settings. Some of these community settings are home health and hospice care. We care for patients who are diagnosed with cancer everyday. We see first hand the suffering that some must endure, not only from the disease that has ravished them, but from the treatment that, hopefully, benefits them. We watch as cancer racks their bodies with pain, and chemotherapy or radiation treatments cause unbearable side effects.

It is for these reasons that we support the use of the Fast Flux Test Facility for the production of medical isotopes for cancer treatment and research. We know that many research projects have been stalled or stopped because of a shortage of isotopes. We also know that continued research will benefit cancer patients.

We urge the Secretary of Energy, Bill Richardson, and the Department of Energy to restart the Fast Flux Test Facility for the vital mission of the production of medical isotopes for the treatment of cancer and cancer research.

Marilyn Savage
President

•••

Response to Commentor No. 335

335-1

335-1: DOE notes the commentor's support for Alternative 1, Restart FFTE.

Commentor No. 335: Marilyn Savage (Cont'd)
United Staff Nurses Union

**Support of Medical Isotope Production at
 the Fast Flux Test Facility**

- Whereas, One in three Americans die each year by cancer, and
- Whereas, The use of medical isotopes in the treatment of cancer and heart disease is showing very encouraging and dramatic results. These new treatments use radioisotopes to target and destroy the diseased cells and minimize the damage to healthy cells. The cost of medical isotope treatment is often much less than conventional treatment and with less debilitating results, and
- Whereas, Serious concerns among scientists and medical professions that the United States does not have the capability to produce enough radioisotopes to meet the rapidly increasing demand, and is dependent on foreign supplies as over 90% of the isotopes currently used in the United States, and
- Whereas, Private companies that produce new cancer treatments hesitate to invest millions of research dollars unless the isotopes they want to use may not be reliably available, and
- Whereas, The existing Fast Flux Test Facility (FFTF) can reliably produce a diverse selection and large quantities of high quality isotopes, and
- Whereas, The FFTF is a significant research asset and is the Department of Energy's newest and most sophisticated research reactor with the potential to play a major role in supporting critical scientific research, medical isotope production for treatments of cancer and heart disease, basic testing, research associated with the transmission of genetic diseases, NASA space mission energy needs, and other scientific research, and
- Whereas, The United States has the aging and diminishing reactor inventory for scientific research and testing, while at the same time the United States is experiencing an increasing demand for the production of isotopes for medical and industrial applications; therefore,

BE IT RESOLVED that the United Staff Nurses Union support a restart of the Fast Flux Test Facility to serve as a multi-purpose research and isotope production reactor.

(Signed)

(Date)

Response to Commentor No. 335

Commentor No. 335: Marilyn Savage (Cont'd)
United Staff Nurses Union

Response to Commentor No. 335

**Support of Medical Isotope Production at
the Fast Flux Test Facility**

- Whereas, One in three Americans are touched by cancer, and
- Whereas, The use of medical isotopes in the treatment of cancer and heart disease is showing very encouraging and dramatic results. These new treatments use radioisotopes targeted specifically to the diseased cells and minimize the damage to healthy cells. The cost of medical isotope treatment is often much less than conventional treatments and with less debilitating results, and
- Whereas, Serious concern exists in the scientific and medical professions that the United States does not have the capability to produce enough radioisotopes to meet the rapidly increasing demand, while we depend on foreign supplies as over 90% of the isotopes currently used are imported, and
- Whereas, Private companies that develop new cancer treatments hesitate to invest millions of research dollars up front when the isotopes they want to use may not be reliably available, and
- Whereas, The existing Fast Flux Test Facility (FFTF) can reliably produce a diverse selection and large quantities of high quality isotopes, and
- Whereas, The FFTF is a significant national asset as it is the Department of Energy's newest and most sophisticated nuclear reactor with the potential to play a major role in supporting critical national missions such as medical isotope production for treatments of disease, non-proliferation fuel testing, research associated with the transmutation of nuclear waste, NASA space mission energy needs, and other scientific research; and
- Whereas, The United States has an aging and diminishing reactor inventory for scientific research and testing, while at the same time the United States is experiencing an increasing demand for the production of isotopes for medical and industrial applications; therefore

BE IT RESOLVED that the USFN Local 91 support a restart of the Fast Flux Test Facility to serve as a multi-mission research and isotope production reactor.

Michael J. Sullivan
(Signed)

8-24-00
(Date)

Commentor No. 335: Marilyn Savage (Cont'd)
United Staff Nurses Union

**Support of Medical Isotope Production
 at the Fast Flux Test Facility**

- Whereas, One in three Americans are touched by cancer, and
- Whereas, The use of medical isotopes in the treatment of cancer and heart disease is showing very encouraging and dramatic results. These new treatments use radioisotopes targeted specifically to the diseased cells and minimize the damage to healthy cells. The cost of medical isotope treatment is often much less than conventional treatments and with less debilitating results; and
- Whereas, Serious concern exists in the scientific and medical professions that the United States does not have the capability to produce enough radioisotopes to meet the rapidly increasing demand, while we depend on foreign supplies as over 90% of the isotopes currently used are imported; and
- Whereas, Private companies that develop new cancer treatments hesitate to invest millions of research dollars up front when the isotopes they want to use may not be reliably available; and
- Whereas, The existing Fast Flux Test Facility (FFTF) can reliably produce a diverse selection and large quantities of high quality isotopes; and
- Whereas, The FFTF is a significant national asset as it is the Department of Energy's newest and most sophisticated nuclear reactor with the potential to play a major role in supporting critical national missions such as medical isotope production for treatments of disease, non-proliferation fuels testing, research associated with the transmutation of nuclear waste, NASA space mission energy needs, and other scientific research; and
- Whereas, The United States has an aging and diminishing reactor inventory for scientific research and testing, while at the same time the United States is experiencing an increasing demand for the production of isotopes for medical and industrial applications; therefore

BE IT RESOLVED that the ~~(United Staff Nurses Union)~~ ^(USNU) support a restart of the Fast Flux Test Facility to serve as a multi-mission research and isotope production reactor.

Robert K. Frenn
 (Signed)

8-23-00
 (Date)

Response to Commentor No. 335

Commentor No. 335: Marilyn Savage (Cont'd)
United Staff Nurses Union

**Support of Medical Isotope Production
at the Fast Flux Test Facility**

- Whereas, One in three Americans are touched by cancer, and
- Whereas, The use of medical isotopes in the treatment of cancer and heart disease is showing very encouraging and dramatic results. These new treatments use radioisotopes targeted specifically to the diseased cells and minimize the damage to healthy cells. The cost of medical isotope treatment is often much less than conventional treatments and with less debilitating results; and
- Whereas, Serious concern exists in the scientific and medical professions that the United States does not have the capability to produce enough radioisotopes to meet the rapidly increasing demand, while we depend on foreign supplies as over 90% of the isotopes currently used are imported, and
- Whereas, Private companies that develop new cancer treatments hesitate to invest millions of research dollars up front when the isotopes they want to use may not be reliably available, and
- Whereas, The existing Fast Flux Test Facility (FFTF) can reliably produce a diverse selection and large quantities of high quality isotopes; and
- Whereas, The FFTF is a significant national asset as it is the Department of Energy's newest and most sophisticated nuclear reactor with the potential to play a major role in supporting critical national missions such as medical isotope production for treatments of disease, non-proliferation fuels testing, research associated with the transmutation of nuclear waste, NASA space mission energy needs, and other scientific research; and
- Whereas, The United States has an aging and diminishing reactor inventory for scientific research and testing, while at the same time the United States is experiencing an increasing demand for the production of isotopes for medical and industrial applications; therefore

BE IT RESOLVED that the (USNU Local 141) support a restart of the Fast Flux Test Facility to serve as a multi-mission research and isotope production reactor.

Marilyn Savage RN
(Signed) *President*

8-12-2000
(Date)

Response to Commentor No. 335

Commentor No. 336: Joan Claybrook Public Citizen



Buyers Up • Congress Watch • Critical Mass • Global Trade Watch • Health Research Group • Litigation Group
Joan Claybrook, President

Comments of Public Citizen's Critical Mass Energy & Environment Program
on the Department Of Energy's *Draft* Programmatic Environmental Impact Statement
for
Accomplishing Expanded Civilian Nuclear Energy Research and Development and
Isotope Production Missions in the United States, Including the Role of the
Fast Flux Test Facility (DOE/EIS-0310D)

August 30, 2000

Thank you for the opportunity comment on the U.S. Department of Energy's (DOE) draft programmatic environmental impact statement (PEIS) on the nuclear infrastructure including resuming operation of the Fast Flux Test Facility (FFTF) at the Hanford Nuclear Reservation. I am Wenonah Hauter, Director of Public Citizen's Critical Mass Energy Project, a non-profit research, lobbying, and advocacy organization founded by Ralph Nader in 1971.

The Nuclear Infrastructure *Draft* PEIS evaluates the environmental impacts of several options:

- No Action
1. Restart the Fast Flux Test Facility;
 2. Use only existing operational facilities;
 3. Construct one or two new accelerators;
 4. Construct a new research reactor;
 5. Permanently deactivate the FFTF.

As we noted in our previous comments, conducting a PEIS on the production of isotopes in the FFTF was an unnecessary waste of taxpayer money. Instead of seeking new missions for the reactor, the DOE should have used its resources to permanently decommission the plant, which if restarted would pose a threat to the public's health and safety. Once again the Department of Energy is squandering taxpayer dollars looking to restart a dangerous reactor or construct new reactors and accelerators. The options that DOE has put forth are unneeded, uneconomical and unsafe. Accordingly, Public Citizen supports option 5 to permanently deactivate the fast flux test facility.

The FFTF was closed in 1983 because new missions could not be identified. In 1993, an independent review team reported that no combination of missions would be financially viable over the next ten years. Despite these findings, the DOE has prolonged the inevitable and used this process to propose other nuclear boondoggles.

Ralph Nader, Founder

215 Pennsylvania Ave SE • Washington, DC 20003 • (202) 546-4996 • www.citizen.org

Response to Commentor No. 336

336-1: DOE notes the commentor's opposition to enhancing its existing nuclear facility infrastructure. Consistent with its mandates under the Atomic Energy Act, DOE is seeking to maintain and enhance its infrastructure for the purposes of addressing three primary needs: 1) to support the increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and for which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Section 1.2. of Volume 1 has been revised to clarify the purpose and need of the proposed action.

The NI PEIS evaluates the environmental impacts of a range of reasonable alternatives for accomplishing this mission. In addition to restarting the FFTF, the NI PEIS also evaluates alternatives that would either employ the use of existing facilities or rely on the construction of new facilities. Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed action are relatively low and are discussed in detail in Chapter 4 of Volume 1 (e.g. Sections 4.3.1.1.9, 4.3.1.1.10, 4.3.1.1.11) and Appendixes H, I, and J in Volume 2 of the Final NI PEIS.

DOE notes the commentor's opposition to Alternative 1, Restart FFTF, Alternative 3, Construct New Accelerator(s); and Alternative 4, Construct New Research Reactor.

336-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

336-3: The restart of FFTF or use of any of the other proposed alternative facilities would not have an impact on the schedule or available funding for existing cleanup activities at Hanford, INEEL, or ORR. As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure

336-1

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336-1

Commentor No. 336 : Joan Claybrook (Cont'd)

The absence of any credible mission for the FFTF is instructive. We do not need to restart this dangerous reactor, nor do we need the proposed alternatives of new reactors or accelerators. According to Dr. Janet Eary, Director of the University of Washington's Nuclear Medicine Department, "I see no shortage of radioactive isotopes for medical research and no need to restart this nuclear reactor to produce medical isotopes." Additionally, the continued production of radioactive waste either by the FFTF or one of the proposed alternative facilities will undermine DOE's clean up goals and further contaminate our air, water and land.

I'd specifically like to address the purported necessity of producing isotopes for food irradiation, the danger of creating more sealed sources of radiation, and the hazard to the public and the environment of restarting the reactor.

First, merely because the U.S. regulatory agencies have legalized irradiation does not mean consumers will buy irradiated food. Nothing is more important to most Americans than the health and safety of their families. Consumers are increasingly concerned about protecting their health. No long term studies have been done on the effects of food irradiation, and there is ample evidence that the process destroys vitamins and produces carcinogenic chemical compounds in food.

There is overwhelming evidence that Americans are skeptical of food irradiation. A 1997 poll conducted by CBS News found that 73 percent of the public opposes irradiation, and 77 percent of the public would not eat irradiated food. While the food and nuclear industries are telling the U.S. Food and Drug Administration (FDA) to stop requiring irradiated foods to be labeled, it is unlikely that they will be successful.

The FDA has received thousands of cards and letters demanding that it continue to require the labeling of irradiated food. A 1999 poll, jointly sponsored by the American Association of Retired Persons (AARP) and the Center for Science in the Public Interest (CSPI), found that 86 percent of Americans want irradiated food to be labeled.

However, even the economic interests that are promoting food irradiation do not necessarily believe that the use of radioactive isotopes Cesium 137 and Cobalt 60 is the best way to irradiate food. A large percentage of the industry intends to use the electron beam (also known as the e-beam) for irradiating food. The e-beam produces the same dangerous products in food as do radioactive isotopes, but it does not require the transport and use of radioactive material. The e-beam process utilizes an electronic machine called a linear accelerator to produce a stream of electrons moving at an extremely high speed. The beam disrupts the DNA structure of micro-organisms, rendering them sterile, it also creates chemical products ranging from formaldehyde and benzene to unnamed chemical compounds.

Titan Corporation, the leading provider of e-beam technology with its SureBeam subsidiary registered an initial public offering to spin off SureBeam. According to papers filed with the Securities and Exchange Commission the company states, "We have

336-1

336-3

336-4

Response to Commentor No. 336

operations. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

336-4: The availability of radioisotopes for the purposes of food irradiation is not the focus of DOE's proposed action. Although radiation sterilization of food is a possible application for certain industrial radioisotopes, including cesium-137 and cobalt-60, DOE does not anticipate a similar need for increased production of radioisotopes used for these purposes.

Although not within the scope of the NI PEIS, DOE recognizes the importance of improving control of radioactive sources, and is working with EPA and NRC on developing a nation-wide disposition system for orphaned sources of radiation.

336-5: DOE notes the commentor's concerns regarding the existing cleanup mission and migration of contaminants to the Columbia River. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Commentor No. 336: Joan Claybrook (Cont'd)

a history of losses and we may not achieve or sustain profitability." The company has incurred operating losses in each quarter of its existence.

In addition, Food Technology Services, a Florida based company that irradiates food with gamma radiation, has lost \$9.2 million since it was founded in 1985.

Despite an unprecedented number of meat recalls this summer and numerous incidents of food-borne illness, the public is not clamoring for irradiated food. Test marketing results have been mixed at best - irradiated meat has yet to earn the public trust. Even with massive marketing campaigns and extensive advertising sales are slow.

Restarting the FFTF for the purpose of creating Cesium 137 or Cobalt 60 is completely unnecessary. Nor should food irradiation be used as a justification for moving ahead with the alternatives of a new reactor or accelerator. There is simply no public demand for irradiated food and the existing technologies and corporations are unable to turn a profit.

Second, the idea of creating more sealed sources of radiation is ludicrous, given the amount of money that the Environmental Protection Agency (EPA) is spending on locating "orphaned" radiation sources. EPA's Orphaned Source Initiative (OSI) is completing a nationwide survey to identify the location of lost radiation sources in the US, and is planning a one-year pilot "cesium source round-up" to remove radiation sources from the public domain. Unfortunately, while sealed radiation sources are licensed, their final disposition is not tracked. These orphaned radiation sources gain entrance into metal recycling facilities and cause catastrophic contamination of recycled metals.

The fact that DOE is attempting to engage in producing large numbers of sealed radiation sources for medical and industrial purposes is contrary to EPA's effort at rounding-up all radiation sources. Why is no coordination taking place between these two agencies?

Third, I would like to address the impact on human health and the environment of restarting the FFTF. At the Hanford nuclear reservation in Washington state, there are over 300 tanks boiling cesium and burping hydrogen while leaking radioactive wastes into the Columbia river. It seems absolutely ludicrous that the DOE would attempt to restart this controversial, accident prone nuclear reactor, which would likely compound the waste problems at Hanford.

According to the public-interest organization Columbia River United, Hanford has spewed over 444 billion gallons of radioactive and chemical waste into the soil of the Hanford site. Hundreds of billions of gallons of wastewater were discharged directly into the Columbia River. Soil and groundwater contamination has resulted in massive underground plumes of deadly materials moving toward and in some cases already reaching the Columbia River. The largest plumes contain nitrate and tritium. Other large plumes include uranium, strontium 90, and chromium. Contaminants include carbon

336-4
(Cont'd)

336-5

Response to Commentor No. 336

As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. The radioactive waste that would be generated from the restart of FFTF (e.g., low-level radioactive waste) would not be dispositioned in the Hanford waste tanks.

The potential health and environmental impacts associated with operation of the Hanford facilities during normal operations and from postulated accidents are presented in Section 4.3 of the PEIS. All impacts to human health and to ecological resources would be small in the immediate area and negligible at all distant locations.

The 200 Area Plateau at Hanford contains 177 underground waste storage tanks. None of the tanks currently generate a sufficient heat load to boil. Cesium and other high-heat load radionuclides were removed from the waste tanks years ago. Tanks that generate hydrogen gas have had engineered features installed to make the tanks safe from a flammable gas standpoint.

There have been no serious safety-related accidents or release of hazardous or radioactive material causing significant injury or harm to workers, or posing any threat or harm to the offsite public at FFTF during its operational lifetime.

No food or water restrictions are in place outside the Hanford Reservation as a result of Hanford activities.

Operations of FFTF have been and will continue to be conducted under Washington State discharge permits. Any future operations of the facility would therefore not contribute to any of the referenced conditions.

336-6: FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that

Commentor No. 336: Joan Claybrook (Cont'd)

tetrachloride, sodium dichromate, technitium-99, and ferro-cyanide. The groundwater in the area is unusable.

Furthermore, while all nuclear reactors are inherently dangerous, some reactors are more dangerous than others. The reactor that the DOE proposes to restart is a sodium cooled "fast-breeder." Fast Breeder reactors are even more dangerous than the 103 light water reactors that are currently operating in the U.S. for several reasons:

- The FFTF uses sodium rather than water to cool the reactor. Sodium burns when exposed to air and explodes upon contact with water.
- Rapid increases in power, like the power excursion that blew apart the Chernobyl reactor, occur much more rapidly in fast breeder reactors than they do in conventional light water reactors.
- "Fast breeder" reactors are particularly susceptible to power instability due to the fact that they operate at higher power density.

The U.S. experience with "fast breeder" reactors argues against restarting the Fast Flux Test Facility. In November 1955, the first U.S. "power reactor" ever to produce electricity, the EBR-1, (experimental breeder reactor) melted down during testing. Rather than scrambling the reactor, the operator mistakenly hit the button for slow shut down, and in the few seconds it took to press the correct button, approximately half of the reactor core melted down. The public was not made aware of this meltdown until Lewis Strauss, head of the Atomic Energy Commission, and the man who claimed nuclear power would be "too cheap to meter," was confronted by the Wall Street Journal and had to admit his ignorance of the accident.

Not to be dissuaded by the meltdown of the EBR-1, The Power Reactor Development Corporation, a consortium of 35 utilities headed by Detroit Edison forged ahead with the first commercial fast breeder reactor. The Fermi reactor was to be a scaled up version of the EBR-1 with a small dense core made up of 14,700 uranium fuel pins. On October 6, 1966 the Fermi reactor also melted down.

The U.S. is not the only country to experience accidents with fast breeder reactors:

- France's Superphenix was permanently shut down in 1987 after leaking 20 tons of sodium. The \$10 billion dollar reactor only operated for 278 days in its 11-year history.
- The Japanese Monju fast breeder reactor was shutdown in 1995 after three tons of sodium leaked, causing the reactor to over heat and burn holes in cooling pipes. In the aftermath of the accident, the plant manager was so distraught that he committed suicide.

336-5
(Cont'd)

336-6

Response to Commentor No. 336

would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small. Prior to an FFTF restart, a revised safety analysis report and a probabilistic risk assessment would be prepared which would address any changes in plant configuration, operating conditions, and procedures. The revised safety analyses would be subjected to a thorough independent review process.

Commentor No. 336: Joan Claybrook (Cont'd)

- Both the British and the Germans have terminated their breeder reactor programs.

The DOE's misguided attempt to re-start this dangerous nuclear reactor or its proposed alternatives of new reactors and accelerators is little more than a welfare program for the nuclear establishment. Restarting the FFTF will create a new nuclear waste stream at the Hanford reservation at a time when the DOE's efforts should be focused on the dangerous mess they've already created.

|| 336-6
|| (Cont'd)

|| 336-1

|| 336-3

Response to Commentor No. 336

Commentor No. 337: William Heaston

NI PEIS Toll-Free Telephone

8/31/00

Dr. William Heaston
602-977-9178

Please restart the FFTF.

|| 337-1

Response to Commentor No. 337

337-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 338: Anonymous

Response to Commentor No. 338

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Public Hearing Evaluation Form

Please place a check mark in the box next to the public hearing attended:

- August 22, 2000
American Museum of Science and Energy
300 South Tulane Avenue
Oak Ridge, Tennessee 37830
- August 25, 2000
Westcoast Idaho Falls Hotel
475 River Parkway
Idaho Falls, Idaho 83402
- August 28, 2000
Hood River Inn
1108 E. Marina Way
Hood River, Oregon 97031
- August 29, 2000
Oregon Museum of Science and Industry
1945 SE Water Avenue
Portland, Oregon 97214
- August 30, 2000
Washington State Convention and Trade Center
800 Convention Place
Seattle, Washington 98101
- August 31, 2000
Best Western Tower Inn and Conference Center
1515 George Washington Way
Richland, Washington 99352
- September 6, 2000
Crystal Gateway Marriott
1700 Jefferson Davis Highway
Arlington, Virginia 22202

Please circle the appropriate number:

	Very Good	3	2	Poor
Your Level of Knowledge about the PEIS before the Hearing	5	4	3	2
Your Level of Knowledge about the PEIS after the Hearing	5	4	3	2
Time and Date of Hearing	5	4	3	2
Location of Hearing	5	4	3	2
Registration Process	5	4	3	2
Clarity of Displays and Handouts	5	4	3	2
Clarity of Presentations	5	4	3	2
Relevancy of Issues and Concerns Addressed	5	4	3	2
Opportunities for Discussion	5	4	3	2
DOE Officials' Willingness to Listen	5	4	3	2
Knowledge/Responses from Staff Attending	5	4	3	2

How could the public hearing format and materials be improved? *The lottery didn't work in Portland. The PEIS is a poor piece of work - independent. You folks don't know your answers to questions - Shame on you since you created it.*

Was the public hearing helpful to you? *Only to hear each other speak on so eloquently.*

Please continue on the other side if you run out of space. Please return your completed evaluation form to the registration desk or mail or fax to the address below.

THANK YOU - YOUR FEEDBACK IS IMPORTANT TO US

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4595
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



338-1

338-1: This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS. Further, DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives. DOE made every effort to obtain, analyze, and disclose all required information to make a decision on expanding nuclear infrastructure.

Commentor No. 339: Anonymous

Response to Commentor No. 339

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Public Hearing Evaluation Form

Please place a check mark in the box next to the public hearing attended:

- August 22, 2000
American Museum of Science and Energy
300 South Tulane Avenue
Oak Ridge, Tennessee 37830
- August 25, 2000
Westcoast Idaho Falls Hotel
475 River Parkway
Idaho Falls, Idaho 83402
- August 28, 2000
Hood River Inn
1108 E. Marina Way
Hood River, Oregon 97031
- August 29, 2000
Oregon Museum of Science and Industry
1945 SE Water Avenue
Portland, Oregon 97214
- August 30, 2000
Washington State Convention and Trade Center
800 Convention Place
Seattle, Washington 98101
- August 31, 2000
Best Western Tower Inn and Conference Center
1515 George Washington Way
Richland, Washington 99352
- September 6, 2000
Crystal Gateway Marriott
1700 Jefferson Davis Highway
Arlington, Virginia 22202

Please circle the appropriate number:

	Very Good	4	3	2	Poor
Your Level of Knowledge about the PEIS before the Hearing	5	4	3	2	1
Your Level of Knowledge about the PEIS after the Hearing	5	4	3	2	1
Time and Date of Hearing	5	4	3	2	1
Location of Hearing	5	4	3	2	1
Registration Process	5	4	3	2	1
Clarity of Displays and Handouts	5	4	3	2	1
Clarity of Presentations	5	4	3	2	1
Relevancy of Issues and Concerns Addressed	5	4	3	2	1
Opportunities for Discussion	5	4	3	2	1
DOE Officials' Willingness to Listen	5	4	3	2	1
Knowledge/Responses from Staff Attending	5	4	3	2	1

How could the public hearing format and materials be improved?
 Depth
 full staff - Admin. People
 not the best choice to create
 isotopes - admit that health records have been
 Was the public hearing helpful to you?
 Yes - I allow it to conduct
 no others against NIFE

339-1
339-2

Please continue on the other side if you run out of space. Please return your completed evaluation form to the registration desk or mail or fax to the address below.

THANK YOU -- YOUR FEEDBACK IS IMPORTANT TO US

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free telephone: 1-877-567-4893 • Toll-free fax: 1-877-567-4892
 E-mail: Nuclear-Infrastructure-PEIS@hq.doe.gov



7/27/00

339-1: Although a few radioisotopes can be produced by separating them from existing stockpiles of transuranic materials or other long-lived radioisotopes, the two primary means for producing radioisotopes is through the use of nuclear reactors or particle accelerators.

339-2: DOE does not falsify health records. Human health effects information presented in the NI PEIS is based on data collected at the candidate sites: ORR, INEEL, and Hanford. Data used to quantify offsite consequences were extracted from reports (available to the public) concerned with operational releases at candidate facilities. (See for example, DOE/RL-99-41, Radiological Air Emissions Report for the Hanford Site Calendar Year 1998).

These reports are generated in response to DOE's requirements for radiological control. DOE Order 231.1, Environment, Safety, and Health Reporting, requires an annual radiation dose summary that evaluates doses to members of the public and workers. DOE's radiological control requirements meet the legal requirements of 10 CFR 835. There are provisions for enforcement actions should the requirements of 10 CFR 835 not be met. In 1996, DOE established the DOE Radiological Health and Safety Policy (DOEP 441.1, April 26 1996). Accuracy of radiological records is among the goals of this policy: the policy states in part "Ensure radiological measurements, analyses, worker monitoring results and estimates of public exposures are accurate and appropriately made."

Chapter 2—Written Comments and DOE Responses

Commentor No. 340: Linda Parks

NI PEIS Toll_Free Telephone

8/30/00

Linda Parks
Walla Walla, WA
509_526_3387

I am a senior disabled person. I have no car to be able to make the meeting in Richland about restarting the Hanford reactor. However, I adamantly dislike the thought of restarting it. I am very much against restarting any nuclear reactors. Please make my feelings a part of the fight against restarting it. Thank you.

340-1

Response to Commentor No. 340

340-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 341: Mike Kaiser

NI PEIS Toll_Free Telephone

8/31/00

Mike Kaiser
Benton City, WA
509_547_2911

I support the restart of FFTF for missions stated in the draft. I think that is the most viable option. Hope you consider that. Thank you.

341-1

Response to Commentor No. 341

341-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 342: Jim Dobson

NI PEIS Toll_Free Telephone

8/31/00

Jim Dobson
Seattle, WA
Also speaking for Sue Zigi

We emphatically want to say no against reopening the FFTF nuclear reactor in Hanford. It is stupid, dumb, and immoral. Thank you.

342-1

Response to Commentor No. 342

342-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 343: Doug Palmricky

NI PEIS Toll_Free Telephone

8/31/00

Doug Palmricky
Kennewick, WA
509_586_0567

I would like to support FFTF medical isotope production. It is a terrific facility out there, should be, and a lot of money has been spent on it. I think we should utilize all the things that are there for that particular endeavor.

343-1

Response to Commentor No. 343

343-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 344: Barb Hosford

NI PEIS Toll_Free Telephone

8/31/00

Barb Hosford
Hood River, OR
541_386_7020

I would like to call and voice my concerns against the startup of Hanford. And if it could be logged on as a vote I would consider that a positive thing. I am very alarmed that this could possibly start up again. So I am totally against it.

344-1

Response to Commentor No. 344

344-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Public Hearing Evaluation Form

Please place a check mark in the box next to the public hearing attended:

- August 22, 2000
American Museum of Science and Energy
300 South Tulane Avenue
Oak Ridge, Tennessee 37830
- August 30, 2000
Washington State Convention and Trade Center
800 Convention Place
Seattle, Washington 98101
- August 25, 2000
Westcoast Idaho Falls Hotel
475 River Parkway
Idaho Falls, Idaho 83402
- August 31, 2000
Best Western Tower Inn and Conference Center
1515 George Washington Way
Richland, Washington 99352
- August 28, 2000
Hood River Inn
1108 E. Marina Way
Hood River, Oregon 97031
- September 6, 2000
Crystal Gateway Marriott
1700 Jefferson Davis Highway
Arlington, Virginia 22202
- August 29, 2000
Oregon Museum of Science and Industry
1945 SE Water Avenue
Portland, Oregon 97214

Please circle the appropriate number:

	Very Good				Poor					
	5	4	3	2	1	5	4	3	2	1
Your Level of Knowledge about the PEIS before the Hearing	5	4	3	2	1					
Your Level of Knowledge about the PEIS after the Hearing	5	4	3	2	1					
Time and Date of Hearing	5	4	3	2	1					
Location of Hearing	5	4	3	2	1					
Registration Process	5	4	3	2	1					
Clarity of Displays and Handouts	5	4	3	2	1					
Clarity of Presentations	5	4	3	2	1					
Relevancy of Issues and Concerns Addressed	5	4	3	2	1					
Opportunities for Discussion	5	4	3	2	1					
DOE Officials' Willingness to Listen	5	4	3	2	1					
Knowledge/Responses from Staff Attending	5	4	3	2	1					

How could the public hearing format and materials be improved? *You need to have DOE representatives who can convey the information in plain English. The use of jargon & acronyms is confusing - perhaps purposefully so?*

345-1

Was the public hearing helpful to you? *No, it's a waste of time. I am of the opinion that DOE knows that I oppose restart & FTF and know that they are not making cleanup happen. I am glad other sites will have yet to feel their heads. DOE helpful. Only in my duty as a citizen responding to our comments is your duty as government!*

345-2

345-3

345-1

Please continue on the other side if you run out of space. Please return your completed evaluation form to the registration desk or mail or fax to the address below.

THANK YOU - YOUR FEEDBACK IS IMPORTANT TO US

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 toll-free telephone: 1-877-502-4502 • toll-free fax: 1-877-502-4502
 Email: NuclearInfrastructure-PEIS@hq.doe.gov



7/27/00

345-1: DOE notes the commentor's concerns and agrees that information presented at public hearings should be verbally conveyed and written in plain language. This is in accordance with the spirit of the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR 1500 through 1508 and 10 CFR 1021, respectively) which stipulate that NEPA documents be written in plain language. It is DOE's public participation policy to verbally present information and to provide handouts and other informational materials that are easily understood by the public and which avoid the use of jargon. The use of acronyms is avoided to the extent possible or they are spelled out the first time used, and essential technical terms or concepts are defined through the use of more common terms of understanding. Also, DOE made every effort to respond to each question asked during the public hearings. DOE is committed to the continual improvement of the public participation process and regrets if any member of the public felt that any information presented at the public hearings, either verbally or in written form, was unclear or otherwise unhelpful, or that any question went unanswered.

345-2: DOE notes the commentor's opposition to Alternative 1, Restart FTF.

345-3: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. A Tri-Party Agreement change was made to place the milestones for FTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Public meetings were held on this formal milestone change.

Commentor No. 346: Anonymous

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Public Hearing Evaluation Form

Please place a check mark in the box next to the public hearing attended:

- August 22, 2000
American Museum of Science and Energy
300 South Tulane Avenue
Oak Ridge, Tennessee 37830
- August 30, 2000
Washington State Convention and Trade Center
800 Convention Place
Seattle, Washington 98101
- August 25, 2000
Westcoast Idaho Falls Hotel
475 River Parkway
Idaho Falls, Idaho 83402
- August 31, 2000
Best Western Tower Inn and Conference Center
1515 George Washington Way
Richland, Washington 99352
- August 28, 2000
Hood River Inn
1108 E. Marina Way
Hood River, Oregon 97031
- September 6, 2000
Crystal Gateway Marriott
1700 Jefferson Davis Highway
Arlington, Virginia 22202
- August 29, 2000
Oregon Museum of Science and Industry
1945 SE Water Avenue
Portland, Oregon 97214

Please circle the appropriate number:

	Very Good			Poor
Your Level of Knowledge about the PEIS before the Hearing	5	4	3	2 1
Your Level of Knowledge about the PEIS after the Hearing	5	4	3	2 1
Time and Date of Hearing	5	4	3	2 1
Location of Hearing	5	4	3	2 1
Registration Process	5	4	3	2 1
Clarity of Displays and Handouts	5	4	3	2 1
Clarity of Presentations	5	4	3	2 1
Relevancy of Issues and Concerns Addressed	5	4	3	2 1
Opportunities for Discussion	5	4	3	2 1
DOE Officials' Willingness to Listen	5	4	3	2 1
Knowledge/Responses from Staff Attending	5	4	3	2 1

How could the public hearing format and materials be improved? _____

Was the public hearing helpful to you? Not very. I believe the push for more isotopes is not a viable way to cure cancer. It creates good paying jobs. There is more cancer created than cured from Hanford.

346-1

346-2

Please continue on the other side if you run out of space. Please return your completed evaluation form to the registration desk or mail or fax to the address below.

THANK YOU - YOUR FEEDBACK IS IMPORTANT TO US

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free telephone: 1-877-565-4893 • Toll-free fax: 1-877-565-4892
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/27/00

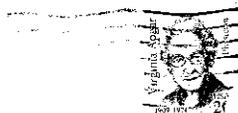
Response to Commentor No. 346

346-1: DOE notes the commentor's position. Public hearings are critical to the public participation process and provide valuable information to DOE. However, in ongoing clinical testing, therapeutic radioisotopes have proven effective in treating cancers and other illnesses while minimizing adverse side effects, making their use an attractive alternative to traditional chemotherapy and radiation treatments.

346-2: The NI PEIS provides an estimate of the potential human health impacts associated with a range of reasonable alternatives considered for the production of radioisotopes for medical and industrial uses, research and development, and as heat sources for radioisotope power systems (see Sections 1.2 and 2.5 of Volume 1). The methodology used in the analysis of health effects, which is detailed in Appendixes H through J, is based upon our current knowledge of the health impacts that may result from exposure to low doses of ionizing radiation and chemical agents. Sections 4.3 through 4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from implementation of any of the reasonable alternatives (some of which include use of facilities at Hanford), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with Hanford operations in support of the nuclear infrastructure would be small.

Commentor No. 350: John Jay Fichter

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

1274+1207 [Barcode]

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

- 1) The money should be spent to clean up Hanford
- 2) It's dangerous
- 3) the Hanford Reach is National Monument
- 4) We don't need it

Name John Jay Fichter
Address 1135 SE 45th Avenue
City, state Portland OR 97215 Zip _____

Response to Commentor No. 350

350-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

350-2: The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

350-3: FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

350-4: On June 9, 2000, the President issued a proclamation that established the 78,900 hectares (195,000 acres) Hanford Reach National Monument (65 FR 37253). The proclamation recognized the unique character and biological diversity of the area, as well as its geological, paleontological, historic and archaeological significance. However, it should be noted that the 400 Area, within which the FFTF is located, does not fall within the monument boundaries and its operation would not impact the values for which the monument was established. If fact, as shown on Figure 3-6 of the NI PEIS, the 400 Area is located within an area that has been designated as industrial. The Hanford Reach National Monument is discussed in Section 3.4.1.1.1 of the NI PEIS.

Commentor No. 350: John Jay Fichter (Cont'd)

Response to Commentor No. 350

350-5: DOE notes the commentor's opposition to the use of FFTF for the expansion of its nuclear facility infrastructure. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs:

- 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;
- 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and
- 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

Commentor No. 352: June and Ed Hemmingson

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

2074+1207 [Barcode]

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

Government has not shown the ability to deal with nuclear power & the radiation it produces we do not wish to leave nuclear waste for our children

Name June & Ed Hemmingson
Address 3440 NW Eagle View
City, state Albany, OR Zip 97321

352-1

352-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTE.

352-2

352-2: DOE notes the commentor's concern regarding waste generation. It should be noted that nuclear power generation is not within the scope of the NI PEIS. The NI PEIS does address the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and appropriate DOE orders.

Commentor No. 355: Katie Bailey

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

0474+1207 [barcode]

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

*of concerns for safety of neighboring area
and possible movement downstream the
Columbia*

*Also hasn't Chernobyl taught you
that whatever we might blow up over there just
blow back over here? (with the wind)*

Name *Katie Bailey*
Address *PO Box 1396*
City, state *Truettville, OR 97062* zip *97062*

Response to Commentor No. 355

355-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

355-2: Hanford facilities can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with Alternative 1 would be small.

FFTF operated for more than 10 years with no discernible impact to the environment. Air emissions from the facility were in accordance with applicable permit and regulatory requirements and were well below federal and state air standards. Wastewater discharges were also in accordance with applicable permit and regulatory requirements. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner in compliance with applicable Federal and state laws and appropriate DOE orders.

Commentor No. 356: Joanna Bailey

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290



Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

*It will contaminate our
air & soil as in the past,
& don't give the American people
your untruthful rhetoric.*

Name Joanna Bailey
Address 2837 NE 14th Ave
City, state Portland, OR Zip 97212

356-1

356-2

Response to Commentor No. 356

356-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

356-2: The concerns expressed in the comment with respect to NI PEIS Alternative 1 are noted. FFTF operated for more than 10 years with no discernible impact to the environment. Air emissions from the facility were in accordance with applicable permit and regulatory requirements and were well below federal and state air standards. Wastewater discharges were also in accordance with applicable permit and regulatory requirements. Wastes generated were managed in a safe and environmentally protective manner in compliance with applicable federal and state laws and appropriate DOE Orders.

Restart and operation of the FFTF would result in small impacts to the biosphere. All air emissions and wastewater discharges to the environment would be in accordance with applicable permit and regulatory requirements. The releases of air pollutants and contaminated liquids associated with FFTF operations are addressed in detail in Section 4.3 of the NI PEIS. The release of criteria air pollutants would result in concentrations well below Federal and state air standards (Table 4-13); the releases of radioactivity and hazardous chemicals into the environment would have a negligible effect on human health (Tables 4-17 and 4-19); and no discernible impacts to groundwater or surface water quality would result from water discharges (Section 4.3.1.1.4).

Commentor No. 360: Anonymous

Response to Commentor No. 360

Draft PEIS Comment Form

We need FFTE, please restart it. This would reduce U.S. dependence on foreign sources for isotopes that could be produced at FFTE. Also, studies being conducted for the use of "smart bullet" isotopes for the treatment of cancer and other health problems appears promising.

360-1

360-1: DOE notes the commentor's support for Alternative 1, Restart FFTE.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
returning this comment form to the registration desk at the meeting or to the address below
calling toll-free and leaving your comments: 1-877-562-4593
faxing your comments toll-free to: 1-877-562-4592
commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional):

Organization:

Home/Organization Address (circle one):

City: State: Zip Code:

Telephone (optional):

E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19501 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



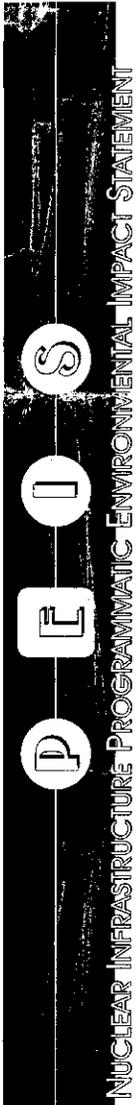
7/12/00

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 361: Charles F. Hubbard

Response to Commentor No. 361



Draft PEIS Comment Form

MY COMMENTS ARE: 1. PERMANENTLY DEACTIVATE FFTF. 2. CONSTRUCT A NEW RESEARCH REACTOR. 3. REPROCESS SPENT FUEL FROM COMMERCIAL AND MILITARY REACTORS. 4. DEVELOP A PROCESS TO UTILIZE THE SURPLUS SURPLUS WARHEAD INVENTORY AS A FUEL SOURCE. 5. SPEED UP THE CLEAN-UP AT THE NATIONAL NUCLEAR SITES (HANFORD, OAK RIDGE, ETC.)

DOE HAS THE REPUTATION OF SPENDING MUCH AND DOING LITTLE. FIX THIS.

MY RESUME INCLUDES FIELD ENGINEER WORK AT WPPSS II AND FFTF. (1977)

361-1

361-2

361-3

361-4

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): CHARLES F. HUBBARD BS (EE) 1967 UAFI

Organization: _____

Home/Organization Address (circle one): 632 SW THORNBERY DR.

City: OAK HARBOR State: WA Zip Code: 98277

Telephone (optional): 360-240-0488

E-mail (optional): hubberds@gte.net

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19001 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



361-1:

DOE notes the commentor's support for Alternative 4, Construct New Research Reactor. It should be noted that permanent deactivation of FFTF is a part of this alternative.

361-2:

DOE notes the commentor's interest in the reuse of nuclear fuel and surplus plutonium, although issues of fuel reprocessing and surplus plutonium disposition are beyond the scope of this Nuclear Infrastructure PEIS. U.S. policy dating back to the Ford Administration has prohibited the commercial, chemical reprocessing and separation of plutonium from spent nuclear fuel. The "Surplus Plutonium Disposition Final Environmental Impact Statement" (DOE/EIS-0283, November 1999) Record of Decision (January 2000, 65 FR 1608) (see description in Volume 1, Section 1.7) includes the reuse of some surplus plutonium from dismantled weapons in mixed oxide fuel (MOX).

361-3:

DOE notes the commentor's concern regarding the need to expedite cleanup at DOE facilities. The restart of FFTF or any of the other proposed alternative facilities would not impact the schedule or available funding for existing cleanup activities at Hanford, INEEL, or ORR.

361-4:

DOE notes the commentor's concern relating to the cost of DOE programs.

Commentor No. 363: F. P. Brown

Response to Commentor No. 363

Draft PEIS Comment Form

Please restart the Fast Flux Test Facility in Washington. We need this facility and we need to reduce our dependency on foreign countries.

363-1

363-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): F.P. Brown

Organization: Retired

Home/Organization Address (circle one): F.P. Brown Box 64

Robert Lee Texas

City: Robert Lee Texas State: TX Zip Code: 76945

Telephone (optional): 915-453-2093

E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592 E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 364: Dorothy L. Brown

Response to Commentor No. 364

Draft PEIS Comment Form

I feel there is a great need to have the fast flux facility restarted.

364-1

364-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Dorothy L. Brown

Organization:

Home/Organization Address (circle one):

Dorothy L. Brown Box 64

City: Robert Lee State: TX Zip Code: 76945

Telephone (optional): (915) 453-2093

E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592 E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 365: Daniel E. Simpson



Daniel E. Simpson

Nuclear Consulting

118 Hillview Drive
Richland, Washington 99352
USA

August 27, 2000

Ms. Collette Brown
DOE Office of Space and Defense Power Systems, NE-5B
19901 Germantown Road
Germantown, MD 20874-1290

Comments on DOE Draft NI PEIS:

Reference: DRAFT Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility. DOE/EIS-00100. July 2000.

Please accept these comments on the reference NI PEIS. I conclude that restart and operation of the FFTF should be a key element of the subject program, together with utilization of existing thermal neutron reactor irradiation facilities to the extent of their capability and availability.

1. This report indicates that Alternative 1: "Restart FFTF", provides the greatest Mission Effectiveness of the alternatives evaluated. The report did not evaluate the national VALUE of the Mission Effectiveness of the alternatives, nor the cost. The report stated that cost will be considered in alternative selection, but is not a required environmental impact consideration.

(A recent news report states that a cost analysis "confirms that the Fast Flux Test Facility is the most effective means for meeting the entire suite of missions proposed by the Department of Energy." The quote is attributed to Senator Slade Gorton in reference to the cost analysis).

2. The NI PEIS report indicates no environmental impact bar to any of the alternatives. All could be carried out within the bounds of sound practice and applicable standards and regulations.

3. This report clearly indicates that national mission needs would be best met by a combination of a fast neutron reactor and one or more thermal reactors available for irradiation services. FFTF restart is the obvious path to fast reactor availability. ATR is an excellent thermal irradiation reactor facility, but limited in availability due a priority mission. It would be logical to utilize the irradiation capability of Candu reactors, in cooperation with Canada, up to the limits of capacity. When thermal irradiation needs exceed the Candu plus DOE facility available capacity, construction of the new research reactor becomes logical.

4. A key reason for providing both fast reactor and thermal reactor irradiation facilities is to produce the wide variety of isotopes for which there is a need. Some isotopes are most efficiently produced in

365-1

365-2

365-3

365-4

Response to Commentor No. 365

365-1: DOE notes the commentor's support for Alternative 1, Restart FFTF, along with the use of existing thermal neutron reactor irradiation facilities, it is assumed that the commentor is referring specifically to ATR and HFIR to the extent of their capability and availability. Under Alternative 1 ATR and HFIR would continue to perform their present missions; however, they would not undertake any new missions as outlined in the NI PEIS.

365-2: The estimated costs of the range of reasonable alternatives are presented in the Cost Report, summarized in Appendix P of the Final NI PEIS. However, the Cost Report is not a cost-benefit analysis. While it is reasonable to believe that the benefits of medical isotopes are substantial, the purpose of this NI PEIS is to describe the nuclear infrastructure missions (Section 1.2 of Volume 1), a range of reasonable alternatives for satisfying the mission requirements (Section 2.5 of Volume 1), and the environmental impacts that would result from implementation of the alternatives. According to 40 CFR Section 1502.23, if a cost-benefit analysis exists, it must be reported and summarized in the NI PEIS.

365-3: This comment is noted. Analyses in the NI PEIS indicate that all of the alternatives assessed in the NI PEIS can be conducted within the bounds of sound practice and applicable standards and regulations.

365-4: As stated in EIS Volume 1, Section 2.6.1, the use of CANDU reactors was considered, but dismissed because this would not meet the programmatic issue of enhancing the United States infrastructure to support the stated missions.

DOE notes the commentor's recommendation to use FFTF for fast neutron produced radioisotopes and to use a new research reactor for thermal neutron produced radioisotopes should existing facility capacities prove insufficient. This combination of facility use is not a specific PEIS alternative. However, in the process of reaching a decision the Secretary may consider, as appropriate, combinations of PEIS alternatives. All isotopes capable of being produced in a thermal reactor can be produced in the FFTF reactor.

365-5: The NI PEIS evaluates alternative ways of achieving the program objectives on a programmatic basis. Therefore, both reactors and accelerators were considered in the evaluation of irradiation facilities. DOE acknowledges that all of the alternatives are not equally effective in meeting the program objectives.

Commentor No. 365: Daniel E. Simpson (Cont'd)

Response to Commentor No. 365

the high energy neutron flux of a fast reactor; many others are most efficiently produced by thermal neutrons. FFTF target assemblies can be configured to accomplish thermal energy neutron irradiations, but fast neutron irradiation is its natural role. The new research reactor described in the report is well designed for thermal neutron irradiation for isotope production, and is a logical choice to expand production if existing facility capacities, including FFTF, are insufficient.

365-4
(Cont'd)

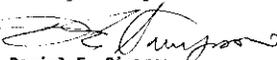
5. It appears from the information provided that particle accelerators are not inherently ideal for isotope production. This approach, it seems, would be complex and uncertain and would not be a logical choice for the production missions.

365-5

6. In conclusion, thorough analyses by DOE have shown that restart of the FFTF and operation as a neutron irradiation facility is in the national interest. Furthermore, a long period of operation in this service can be expected with confidence. The FFTF was conceived, designed, and built to develop advanced technology for civilian nuclear program needs. It was subject to high standards and exacting criteria for safety and operational performance. The safety of the design and the adequacy of the safety analysis were confirmed by detailed independent review by the Nuclear Regulatory Commission staff and the national Advisory Committee on Reactor Safeguards. The FFTF remains today a modern facility, with a demonstrated record of safe and successful operation. Its design for irradiation of diverse materials and components in the reactor core provides inherent flexibility that fits well with missions of isotope production; both the facility design and its management procedures are consistent with such uses. In particular, there are well-developed procedures for safety analysis, review, and approval of irradiation target specimens.

365-1

Thank you for your consideration.


Daniel E. Simpson

Commentor No. 366: James Chung

From: James.Chung@fluor.com%internet
 [SMTP:JAMES.CHUNG@FLUOR.COM]
 Sent: Thursday, August 31, 2000 7:10:59 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: FFTF Environmental Impact Statement
 Auto forwarded by a Rule

Dear Sir or Madam,

It is with great concern that I write this e_mail to you regarding the decision to re_start the FFTF. The draft EIS has all the pertinent facts included, but will the facts alone determine your decision?

366-1

If logic dictated our actions then FFTF would never have been put in standby mode in the first place. The arguments for re_starting the FFTF, and thereby correcting our past mistakes, have been promulgated more thoroughly and eloquently than that which follows. Nevertheless, I will reiterate the key point. Nuclear Sciences are vital to our National Security, National Energy Policy, Medical Science, Global Economic Sustainability, and Global Climate stability.

366-2

There are many legitimate and sound reasons to re_start the FFTF. Often these technical arguments are drowned out in a cacophony of emotional and illogical voices whose sole purpose is to feel a sense of accomplishment by ridding our nation of the specter of radioactivity and all things nuclear. I believe that the followers in the anti_nuclear movement are honestly ignorant of the scientific merit of nuclear technology, these people are genuine in their fear and mistrust of things nuclear. The leaders of these movements however, are not to be excused for their part in furthering and exploiting this ignorance.

366-1

Response to Commentor No. 366

366-1: DOE notes the commentor's views and observations.

366-2: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 366: James Chung (Cont'd)

Please, let us not be swayed by the strident cries of those who opinions are formed in ignorance and misinformation. Instead, why not decide to re_start FFTF based solely on the facts. Thank you for your thoughtful consideration.

366-2

Sincerely,

James Chung
2105 Kuhn Street
Richland, WA 99352
509.943.8357

Response to Commentor No. 366

Commentor No. 367: Carolyn Keeler

From: Carolyn Keeler[SMTP:CHEELER@UIDAHO.EDU]
 Sent: Thursday, August 31, 2000 6:39:00 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: making Plutonium_238
 Auto forwarded by a Rule

Ms. Colette Brown

I am a concerned citizen in Idaho. We do not want any production of Plutonium in our state.

367-1

Reprocessing is not acceptable and should not be considered at INEEL or any other facility

367-2

Building 666 is a decrepit and highly contaminated building and should be decommissioned in a manner that is protective of human health and the environment _ AND THE WATER IN IDAHO! How can you live with yourself knowing that the aquifer in Idaho that is being contaminated under that building is running into the Snake River and then into the Columbia?

367-3

On top of that Plutonium_238 production is unnecessary, NASA doesn't even need it and its use too risky to produce.

367-4

Using ATR at INEEL would interfere with its current mission of producing medical and industrial isotopes that is at least beneficial to humans instead of deadly.

367-5

Also, please consider extending the comment deadline 30 days.

367-6

Thanks for listening.

Dr. Carolyn Keeler

Response to Commentor No. 367

- 367-1:** The commentor's position concerning the production of plutonium in Idaho is noted. Under Alternatives 1 through 4, the Fluorinel Dissolution Processing Facility is a candidate facility for the production of plutonium-238 to support NASA's deep space missions. Plutonium-238 is not used to make nuclear weapons.
- 367-2:** DOE would not conduct any reprocessing to produce weapons grade plutonium under any of the alternatives considered under this PEIS. The alternatives include processing of target materials used to produce isotopes for medical and industrial uses, plutonium-238 for space missions, and nuclear materials research and development. Sections 4.3.1.1.13; 4.3.2.1.13; 4.3.3.1.13; and 4.4.3.1.13 were revised to clarify the waste management approach for waste resulting from processing of target materials for plutonium-238 production.
- Building CPP-666 is divided into two parts, the Fuel Storage Facility and the Fluorinel Dissolution Process Facility (FDPF). The FDPF is under consideration in this PEIS for storage of neptunium-237 oxide, preparation of neptunium-237 targets, and separation of plutonium-238 from irradiated targets. This facility will meet the criteria to conduct these operations safely with further analysis and/or minor modifications.
- 367-3:** DOE notes the commentor's concerns regarding groundwater contamination and the potential for its migration to the Snake and Columbia River systems. Although beyond the scope of this NI PEIS, activities to remediate existing contamination of the Snake River Plain aquifer attributable to INEEL sources are ongoing and of high priority to DOE. INEEL has a comprehensive waste minimization and pollution prevention program in place as summarized in Volume 1, Section 3.3.11.8 that would govern any proposed site activities. Analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.2.1.4, 4.4.2.1.4, 4.5.2.2.4, and 4.6.2.2.4) addressing use of the FDPF indicate that there would be no discernible impacts to groundwater or surface water quality at INEEL from normal operation of FDPF in support of the proposed activities.
- 367-4:** DOE notes the commentor's opposition to the production of plutonium-238 for use in future NASA space exploration missions. Section 1.2.2 of Volume 1 was revised to clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Commentor No. 367: Carolyn Keeler (Cont'd)

Response to Commentor No. 367

Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed production of plutonium-238 are relatively low and are discussed in detail in Chapter 4 of Volume 1 and Appendixes H, I, and J of Volume 2 in the Final NI PEIS. For over 30 years, radioisotope power systems have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. However, potential health and safety impacts associated with future launches of spacecraft utilizing plutonium-238 are not within the scope of the NI PEIS analysis, but would be addressed in the specific NEPA documentation prepared by NASA in support of such missions.

- 367-5:** As stated in EIS Volume 1, Section 2.3.1.2, ATR would continue to meet its medical and industrial radioisotope production mission for the no action and most other alternatives considered where ATR is not used for the production of plutonium-238. If ATR were to be used as a production facility for plutonium-238 (options 1, 2, 3, 7, 8, and 9 under Alternative 2), it would support medical and industrial radioisotope production to the extent possible. DOE would try to minimize the impact of the new mission on current medical and industrial radioisotope production.
- 367-6:** DOE notes the commentor's request for extension of the public comment period. The Council on Environmental Quality's (CEQ) "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act" (40 CFR 1506.10(c)) require that a minimum of 45 days be allowed for public comment on the Draft NI PEIS. As stated in the Notice of Availability (65 FR 46443 et seq.), the public comment period began on July 28, 2000 and continued to September 18, 2000. In preparing the Final PEIS, DOE has assessed and considered both oral and written comments received on the Draft PEIS during the public comment period and has responded to these comments in the Final PEIS. Volume 3 of the NI PEIS contains public comments received on the NI PEIS and DOE responses to those comments. Moreover, late comments were considered to the extent practicable.

Commentor No. 368: Samuel E. Snider

From: Sam and Jane
 Snider[SMTP:SJSNIDER@MICRON.NET]
 Sent: Thursday, August 31, 2000 8:49:52 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Plutonium_238
 Auto forwarded by a Rule

Please consider halting any further efforts to reprocess plutonium_238 at the INEEL in Idaho. The production of such substance appears to be unneeded and far too risky. The danger to the environment far outweighs any possible benefit that could come from the results of such efforts. Thank you.

Samuel E. Snider
 SJSnider@micron.net

368-1**368-2****Response to Commentor No. 368**

-
- 368-1:** DOE notes the commentor's opposition to the production of plutonium-238 at INEEL for use in future NASA space exploration missions. Section 1.2.2 of Volume 1 was revised to clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.
- 368-2:** Sections 4.2-4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from implementation of the alternatives, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with each alternative would be small.

Commentor No. 369: Peter B. Roth

From: Peter Roth
[SMTP:PETERBROTH@NOCHARGE.ZZN.COM]
Sent: Thursday, August 31, 2000 9:47:34 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF Restart
Auto forwarded by a Rule

Dear Collette Brown/Secretary Richardson,

Please accept the following as public comments on the Draft Environmental Impact Statement on the Nuclear Infrastructure EIS.

As a citizen of the Pacific Northwest, I am deeply concerned about the United States Department of Energy's proposal to restart Hanford's Fast Flux Test Facility Nuclear Reactor. I wish to have my values incorporated into the formal administrative record and taken into consideration when adopting the final record of decision. I also want you to respond to my concerns before you make your record of decision.

369-1

First of all, I do not want any plutonium produced in this world. It is such an extremely toxic substance that it is not worth using it for any purpose (especially when alternatives to its use exist)! In addition, considering Hanford's overwhelming problems, including the crisis with tank waste treatment, as well as the damage caused by and radiation released from the Hanford wildfire, restarting FFTF is absolutely unacceptable. We must deal with the waste already at Hanford and focus on the clean_up mission. FFTF maintenance has already gobbled up \$100 million in clean_up money and distracted from desperately needed clean_up. Tank wastes are already seeping towards the Columbia River. More wastes must not be added to those tanks. Clean_up must be the only priority. We must save the Columbia River.

369-2

369-3

369-4

369-3

Response to Commentor No. 369

369-1: DOE notes the commentor's concerns. This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. DOE prepared a separate Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. DOE mailed this document to about 730 interested parties on September 8, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Nuclear Infrastructure Nonproliferation Impact Assessment in Appendix Q in the Final NI PEIS. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

369-2: DOE notes the commentor's opposition to enhancing its existing nuclear facility infrastructure to support production of plutonium-238 for use in future NASA space exploration missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration

Commentor No. 369: Peter B. Roth (Cont'd)

Also, I object to the fact that you are asking citizens to comment on an incomplete study. You have not told us how you will deal with non_proliferation issues or additional waste from FFTF. Should FFTF be restarted, that decision will be illegal under Federal law and will be overturned! Do the right thing, shut down FFTF now and save the future of the Columbia River!

Sincerely,

Peter B. Roth
7415 _ 5th Ave NE #208
Seattle WA 98115_5370

369-1

369-5

369-1

369-6

Response to Commentor No. 369

missions may be lost. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed production of plutonium-238 are relatively low and are discussed in detail in Chapter 4 of Volume 2 and appendixes H, I, and J of Volume 2 in the Final NI PEIS. Potential health and safety impacts associated with future launches of spacecraft utilizing plutonium-238 are not within the scope of the NI PEIS analysis, but would be addressed in the specific NEPA documentation prepared by NASA in support of such missions.

369-3: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford and migration of contamination towards the Columbia River. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

FFTF is located approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to the groundwater. Further, none of the proposed activities considered by this PEIS will be added to the tank wastes.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

In regards to the Hanford wildfire of 2000, the DOE Richland Operations Office, the State of Washington Department of Health, and U.S.

Commentor No. 369: Peter B. Roth (Cont'd)

Response to Commentor No. 369

Environmental Protection Agency performed environmental monitoring on and around the Site to assess potential radiological impacts. The wildfire did not cause a release of radioactive materials from any Hanford facility but did result in resuspension of radioactive materials which were already in the environment. The low levels of radioactive materials that were resuspended were slightly above natural background levels and required several days of analysis to quantify. Information on this event has been made available to the public and can be accessed at <http://www.Hanford.gov/envmon/indes.html>. This site also provides a link to information on the independent offsite air monitoring that was conducted by the U.S. Environmental Protection Agency.

- 369-4:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.
- 369-5:** Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.
- 369-6:** See response to comment 369-4. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Commentor No. 370: Roger H. Webb

From: RogerHWebb@aol.com%internet
[SMTP:ROGERHWEBB@AOL.COM]
Sent: Friday, September 01, 2000 1:44:12 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Cc: Mjcontini@aol.com%internet; PamAWebb@aol.com%internet;
roger_h_webb@rl.gov%internet
Subject: Public Comment on FFTF PEIS
Auto forwarded by a Rule

2115 Blue Jay Lane
West Richland, WA 99353
(509) 967_6600
e_mail: rogerhwebb@aol.com

August 31, 2000

Ms. Colette E. Brown, U.S. Department of Energy,
Office of Space and Defense Power Systems,
NE_50, 19901 Germantown Road,
Germantown, Maryland 20874_1290

Subject: Public Comments on the NI PEIS for the FFTF

Ms. Colette E. Brown:

Thankyou for the opportunity to make comments on the Nuclear Infrastructure Programmatic Environmental Impact Statement for the Fast Flux Test Facility (FFTF) dated July 24, 2000. My name is Roger Webb, and I am an engineering consultant in the nuclear industry as well as an 11_year resident of the Tri_Cities. I have a B.S. in Nuclear Engineering and am a registered professional engineer in the state of Washington. I am submitting my comments electronically as I have a schedule conflict with the available public comment opportunities.

Although I can expand upon my comments if needed, I am submitting a brief and concise set of comments to limit volume in the federal records:

Response to Commentor No. 370

Commentor No. 370: Roger H. Webb (Cont'd)

D Medical isotopes have proven overwhelmingly beneficial for the health and welfare of our families and friends and a solid source is needed. Anyone who has had personal experience with a family member or friend that could have been saved from death, diagnosed for specific life_enhancing treatments, or given isotope life_enhancing treatments but was not could and most likely would testify for the restart of the FFTF. The issue of restarting the FFTF is fundamentally political and economical, but the overwhelming benefits provided to peoples lives cannot and must not be limited to some political game. After all, what is the monetary value of ours or our loved ones lives?

D The restart of the FFTF to generate medical isotopes will accelerate the medical isotope technology for continued improvements in the quality of people's lives. Additionally, restart of the FFTF as an existing facility will surely save lives and money. Clearly, restart of the FFTF will take 3 years and the building of a new facility will take approximately 10 years. From a safety and performance point_of_view, the FFTF has a proven track_record of excellent and safe performance and is expected to have a remaining lifetime of at least 35 years to support said missions.

D The restart of the FFTF will provide a long_term economic diversification multiplication effect for the Tri_Cities, Washington state, and the whole United States. Cleanup of legacy Hanford waste will continue to be a priority for the Department of Energy and as this is completed, economic diversity will be reduced. Restart of the FFTF will result in the development of core medical isotope technology and health business and treatment centers in the Tri_Cities and across the nation as well as internationally. In a nutshell, restart of the FFTF to support the generation of medical isotopes will provide our great country with the foundation of being internationally reknown in the area of medical isotope technology.

Response to Commentor No. 370

370-1 **370-1:** DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 370: Roger H. Webb (Cont'd)

I request that you have FFTF declared the preferred alternative in final PEIS and that you do so with a quick record of decision to restart to save cancer patient lives.

370-1
(Cont'd)

Very Truly Yours,

Roger H. Webb, P.E.
(submitted via e_mail)

Response to Commentor No. 370

Commentor No. 371: Marjorie Worthington

From: George Worthington
[SMTP:GBWORTH@EARTHLINK.NET]
Sent: Thursday, August 31, 2000 10:59:59 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Comments on Draft PEIS
Auto forwarded by a Rule

I attended the August 30, 2000 public hearing in Seattle, Washington, and listened to arguments for and against the restart of the Hanford FFTF reactor. The hearing clarified my long held conviction that proponents of plans to activate the reactor are in some way connected with _ or buying into the arguments of the "military and industrial complex" against which Dwight Eisenhower warned citizens of this country over nearly 50 years ago.

Have we not yet learned that it is in our best interest to serve ourselves, our fellow occupants of this fragile planet, and future generations by cleaning up the messes with which we have polluted our environment, and concentrating on finding less harmful ways to harness energy, to share and cooperate with each other in more creative ways?

We must start with our own communities, and keep our promises.. Cleanup at Hanford is an imperative. PLEASE honor the Tri_Party agreement, shut down FFTF, and put all efforts into CLEANUP at Hanford.

Marjorie Worthington
Enumclaw, WA 98022

371-1

371-2

371-3

371-4

Response to Commentor No. 371

371-1: DOE notes the commentor's concerns related to the use of its facilities for defense purposes. DOE made clear in its presentations and discussions during the public hearings that the missions being addressed were non-defense. It is hoped that DOE's openness and desire for public input were evident to the public attending the hearings. The purpose of this NI PEIS is to evaluate the environmental impacts of reasonable alternatives to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238 for NASA space missions, and civilian nuclear research and development. As evaluated under Alternative 1 in this NI PEIS, FFTF would be restarted to accomplish these nondefense-related missions. Other unrelated nuclear energy and defense-related considerations are beyond the scope of this NI PEIS. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

371-2: The restart of FFTF or any of the other proposed alternative facilities would not impact the schedule or available funding for existing cleanup activities at Hanford, INEEL, or ORR. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and appropriate DOE orders.

371-3: DOE notes the commentor's interest in alternative energy sources, although issues of research and development of alternative energy sources are beyond the scope of this Nuclear Infrastructure PEIS. The DOE missions to be addressed in this EIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies.

371-4: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and concerns regarding the existing cleanup mission at

Commentor No. 371: Marjorie Worthington (Cont'd)

Response to Commentor No. 371

Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Prior public meetings were held on this formal milestone change.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected. If the decision is made to shutdown the FFTF, then cleanup dollars will be needed to deactivate the facility, which could impact the overall Hanford cleanup schedule.

Commentor No. 372: Del Ballard

From: del ballard[SMTP:DEL_BALLARD@PRODIGY.NET]
Sent: Friday, September 01, 2000 12:46:52 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Cc: senator_murray@murray.senate.gov%internet
Subject: Support for Restart of FFTF
Auto forwarded by a Rule

Colette Brown, Document Manager

Reference DOE/EIS_0310D, Draft IN PEIS

I strongly support the option to restart the FFTF at Hanford, Washington, to meet all isotope production and research requirements. Reports have shown that the FFTF can meet all of the nations needs relative to production of Plutonium 238, to make isotopes for medicine, and provide an excellent tool for research and development.

This "newest and most modern" of existing DOE reactors is a proven and dependable facility. Why think of starting from scratch to construct new facilities at immense expense to the taxpayers when we have an existing facility. I know from personal experience while working my entire professional career on Government projects that inevitably such high technology facilities cost more and take longer to place in operation than initially estimated. Such increased costs and delays would very likely be true of any new reactor or accelerator.

I believe that the medical isotope technology field will grow to be a major health contributor for the nation and the world. FFTF has the capacity for the production of the many and varied types of isotopes needed. Some isotopes that will surely be needed and used in the future, such as copper 67, cannot be produced in the proposed new research reactor. The FFTF, and the fast neutrons it produces, has that capability.

372-1

372-2

Response to Commentor No. 372

- 372-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.
- 372-2: DOE notes the commentor's support for restarting FFTF for enhancing its existing nuclear facility infrastructure for medical isotope production.
- 372-3: DOE notes the commentor's opinion.

Commentor No. 372: Del Ballard (Cont'd)

Estimates have show that the construction cost of a new small, and less productive, reactor will be almost twice that of restarting the FFTF_ when adding on the cost of FFTF deactivation. The slightly higher annual operating cost of the FFTF over a new reactor will be well worth the price.

372-3

FFTF exists and is paid for _ lets use it!!

372-1

Del Ballard, PE, Civil Engineer.
(509) 946_6401

Response to Commentor No. 372

Commentor No. 373: Craig L. Bennett

From: craigben@concentric.net%internet
[SMTP:CRAIGBEN@CONCENTRIC.NET]
Sent: Friday, September 01, 2000 11:35:53 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF EIS comments
Auto forwarded by a Rule

Leaves

Ms. Colette Brown
DOE Office of Space & Defense Power Systems, NE_50

My name is Craig L. Bennett and I am a former cognizant safety engineer for the Reactor and Heat Transport systems of the FFTF and also a former FFTF Reactor Core Management Nuclear Engineer. I have been in the Nuclear Business since 1955 with General Electric, Battelle Northwest, Westinghouse Nuclear Fuel Division, and finally Westinghouse Hanford Company when I retired in 1996.

I am wholeheartedly in favor of restart of the FFTF, it is the safest, most stable reactor I've been around and worked on. I believe it should be kept in operation and used for Medical Isotope production and continued testing of fuels and materials for the next generation of fast reactors. It's a good place to convert excess weapons grade plutonium to a peaceful use. I have NO problems living here in the Tri_Cities, WA nearby operating reactors.

373-1

Response to Commentor No. 373

373-1: DOE notes the commentor's support for Alternative 1, Restart FFTF, although it should be noted that conversion of excess weapons grade plutonium is not one of the stated missions for which it would be restarted.

Commentor No. 374: Dan Moore

NI PEIS Toll_Free Telephone

8/31/00

Dan Moore
1740 12th Ave South
Seattle, WA 98144

Calling to urge you to add my comment regarding Hanford. Expressing my opposition to restarting of the FFTF reactor and urging the Department of Energy to honor the Tri_Party Agreement and shut down FFTF once and for all. My opinion is in the interest of public health of the communities around Hanford and through the Northwest. Thank you for your time. Please send me a written comment regarding your actions on this. Thank you.

374-1

374-2

Response to Commentor No. 374

-
- 374-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.
- 374-2:** DOE notes the commentor's and concerns regarding the existing cleanup mission at Hanford and the Tri-Party Agreement milestones. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this Agreement. A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Public meetings were held on this formal milestone change.

Commentor No. 375: Theresa Howell

NI PEIS Toll_Free Telephone

8/31/00

Theresa Howell
128½ Rogers Street, NW
Olympia, WA 98502
360_705_8614

I actually just heard that there was a hearing but I missed it in Seattle. I actually grew up in Eastern Washington near the Tri_Cities in a small farming town. I just wanted to let you know that I feel it is really extremely important that we clean up Hanford and not just do it now, but we should have done it years ago. We shouldn't be putting any more waste in the State of Washington at all. We have the most hazardous waste of any other state in the nation and that is ridiculous. That is right near my home town, so you should not add any more waste. You should clean it up as soon as possible. Like, it just seems really crazy that the places that ship the waste to us get to comment about the state of the environment and the State of Washington and that scares me. Scares me because the [area] of eastern Washington and the Columbia River are the most beautiful places, and I mean it is great. If you can send me information about your process and what your final decision is going to be that would be great. That was probably the same amount of testimony time that you gave everyone at the public hearing. Hopefully that works for you. Thank you.

375-1

375-2

375-1

375-3

Response to Commentor No. 375

375-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The proposed activities delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

375-2: DOE notes the commentor's concern regarding waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and appropriate DOE orders.

375-3: Although not within in the scope of the NI PEIS, DOE notes the commentor's concerns regarding river transportation of waste to the Hanford Site and cleanliness of the Columbia River. In general, hazardous wastes are not shipped to Hanford by barging on the Columbia River. There are two exceptions to this: 1) transport of Trojan Nuclear Reactor components for disposal in a commercial disposal site, and 2) transport of decommissioned submarine reactor compartments for burial at Hanford.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to the groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Commentor No. 375: Theresa Howell

Response to Commentor No. 375

DOE notes the commentor's questions regarding the NEPA process and request for information. As requested, the commentor has been added to the program mailing list and will receive a notice announcing the availability of the Final NI PEIS and the Record of Decision, when published. DOE is required under the National Environmental Policy Act (NEPA) (42 U.S.C. 4321 et seq.) to prepare an environmental impact statement when its actions could significantly affect the quality of the human environment. Also in compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Public Hearing Registration Form

Please place a check mark in the box next to the public hearing attended:

- | | |
|--|--|
| <input type="checkbox"/> August 22, 2000
American Museum of Science and Energy
300 South Tulane Avenue
Oak Ridge, Tennessee 37830 | <input type="checkbox"/> August 30, 2000
Washington State Convention and Trade Center
800 Convention Place
Seattle, Washington 98101 |
| <input type="checkbox"/> August 25, 2000
Westcoast Idaho Falls Hotel
475 River Parkway
Idaho Falls, Idaho 83402 | <input type="checkbox"/> August 31, 2000
Best Western Tower Inn and Conference Center
1515 George Washington Way
Richland, Washington 99352 |
| <input type="checkbox"/> August 28, 2000
Hood River Inn
1108 E. Marina Way
Hood River, Oregon 97031 | <input type="checkbox"/> September 6, 2000
Crystal Gateway Marriott
1700 Jefferson Davis Highway
Arlington, Virginia 22202 |
| <input checked="" type="checkbox"/> August 29, 2000
Oregon Museum of Science and Industry
1945 SE Water Avenue
Portland, Oregon 97214 | |

Please provide the following information (which will be used to update our mailing list and to mail future PEIS-related documents)

___ Mr. ___ Mrs. ___ Mr. & Mrs. Ms. ___ Dr.

Name: Kelly Caldwell

Title (if applicable): _____

Organization (if applicable): active in many, representing none

Home/Organization Address (circle one): 2615 SE 35th Ave

City: Portland State: OR Zip Code: 97202

Home Phone: 503-231-4114 Work Phone: _____

Fax: _____

E-Mail Address: caldwellkelly@hotmail.com

To receive a copy of the following documents as they become available, please place a check mark on the appropriate line(s):

- Draft Nuclear Infrastructure Programmatic Environmental Impact Statement (PEIS), Summary only (about 50 pages)
 - Draft Nuclear Infrastructure PEIS and Summary (about 1,100 pages)
 - Final Nuclear Infrastructure PEIS, Summary only
 - Final Nuclear Infrastructure PEIS and Summary
 - Record of Decision
- Please take me off your mailing list
- To receive those documents checked above on CD-ROM

For more information contact: Colette E. Brown, NE-60
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/27/00

Commentor No. 376: Kelly Caldwell (Cont'd)

Choose Alt 5

376-1

Nuclear Research should not be our priority.

Clean-up & research for clean & sustainable energy

376-2

~~we~~ should be our real priorities. Explore solar power.

Response to Commentor No. 376

376-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

376-2: DOE notes the commentor's interest in the Hanford cleanup and sustainable energy sources. The current Hanford cleanup mission is high priority to DOE. Implementation of the nuclear infrastructure alternatives would have no impact on the schedule or available funding for existing cleanup activities. Exploration of solar power and research and development of other alternative energy sources are beyond the scope of this Nuclear Infrastructure PEIS. The DOE missions to be addressed in this PEIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies.

Commentor No. 377: Laura Paxten

NI PEIS Toll_Free Telephone

9/1/00

Laura Paxten
3239 NW Vonn Street
Portland, OR
503_227_4815

I would like the DOE to permanently and immediately take the Fast Flux Test Facility offline for the Hanford nuclear facility. I am a citizen in Portland, Oregon. I am a registered voter. I agree with Mark Hatfield, former senator, whose letter appeared in the Oregonian today. I do not want Hanford started up in any way. Thank you.

377-1

Response to Commentor No. 377

377-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.

Commentor No. 378: Brian J. Lutenegger

7460 River Shore Lane
Champlin, MN 55316

September 2, 2000

VIA FACSIMILE

Colette E. Brown
U.S. Department of Energy
NE-50
19901 Germantown Road
Germantown, MD 20874-1290

Dear Colette E. Brown:

I wish to comment regarding the draft PEIS, the DOE plan for expanded production of PLU-238 for future space missions. While, in general, I support space exploration, I question the safety of the nuclear-powered spacecraft involved in many of these flights.

NASA is simply not doing enough to develop alternative (solar) power sources for space missions. The European Space Agency (ESA) has now developed high-efficiency solar cells for use in deep space missions. NASA should be designing its own solar cells or working jointly with the ESA to implement their panels in NASA space missions.

The plutonium production/fabrication process for space nuclear power missions has recently led to several worker contamination accidents. An expansion of production will only worsen this problem. And expanding the number of launches of nuclear powered space devices from Cape Canaveral on rockets with 10% failure rates will only increase the possibility of a deadly mishap.

378-1

378-2

378-1

Response to Commentor No. 378

- 378-1:** DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternative energy sources for space missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch.
- 378-2:** Plutonium-238 processing facilities can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Sections 4.2-4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from plutonium-238 processing, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that the radiological and nonradiological risks associated with plutonium-238 processing would be small.

Commentor No. 378: Brian J. Lutenegger (Cont'd)

• Page 2

September 2, 2000

Furthermore, the massive cost of expanded production of plu-238 cannot be justified at a time when DOE admits it needs over \$300 billion to clean-up existing problems at DOE facilities.

Finally, the military is promoting the use of nuclear power in space for space-based weapons technology. Using nuclear power for space war will have severe environmental implications for life on Earth. We simply cannot afford to take this risk for our children's future.

Thank you for your attention.

Sincerely,

Brian J. Lutenegger

378-3

378-4

Response to Commentor No. 378

378-3: DOE notes the commentor's opinion and concern about funding available for cleanup at DOE facilities.

378-4: DOE notes the commentor's concern for the use of nuclear power in space-based weapons, although issues such as the use of nuclear power sources in space-based weapons systems are beyond the scope of this Nuclear Infrastructure PEIS. None of the proposed actions are defense or weapons related. The plutonium-238 produced would be for civilian NASA space exploration missions, not for defense missions.

**Commentor No. 379: William Hyde
Automotive Research Corporation**

09/02/00 SAT 15:40 FAX 2085255256

AUTOMOTIVE RESEARCH ARE

001

Draft PEIS Comment Form

I strongly urge the AEF to NOT waste public money and trying to subsidize the nuclear power industry, as we are moving closer to the production of electric field space electrical power systems. These generators utilize the space at the electric field to produce electricity and do not require the production of a force via thermal means to produce electricity. The beginnings of this work is contained in U.S. Patent # 4,897,572 which is a mechanical version which has been since upgraded to a solid state version. There is some information on the internet but I can't vouch for its accuracy as I have not read it. We plan to manufacture this electrical power generator to replace current electrical generation systems including nuclear and are talking to NASA about their long distance space missions.

Strongly urge either NO ACTION or Alternative 5.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): William HYDE, ARE Division MGR.
 Organization: AUTOMOTIVE RESEARCH CORPORATION
 Home/Organization Address (circle one): 1685 WHITNEY ST.

City: Idaho Falls, IDA State: ID Zip Code: 83402
 Telephone (optional): (208) 525-5256
 E-mail (optional): NOT AVAILABLE

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



7/12/00

Response to Commentor No. 379

379-1

379-1: DOE notes the commentor's interest in alternative energy production methods and alternative power sources for future space missions, although issues of research and development of alternative energy sources are beyond the scope of this Nuclear Infrastructure PEIS. NASA establishes the need and requirements for space missions and research priorities. The DOE missions to be addressed in this PEIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies.

379-2

379-2: DOE notes the commentor's support for either the No Action Alternative or Alternative 5, Permanently Deactivate FFTF.

Commentor No. 379: William Hyde (Cont'd)

Response to Commentor No. 379

09/02/00 SAT 15:41 FAX 2085255256

AUTOMOTIVE RESEARCH ARE

002



Automotive Research

1685 Whitney
Idaho Falls, Idaho 83402
(208) 523-1400
525-5256

A/AE

INNOVATIVE
ENGINEERING

Scit. J, 2000

President Clinton
Vice President Gore

RE, RESURRECTION of Nuclear Power

Dear President Clinton, Vice President Gore;
We are in the middle of a TOTAL
Energy Revolution. The mechanical Technology
in U.S. Patent # 4,897,572 Produced the
First electrical power from the electric
field force and since has been advanced
to a solid state version.

I strongly urge that you save
the public money for better causes. instead
of resurrecting nuclear power.

I thank both of you for protecting
this important Energy Technology over the years.

Sincerely
William Hyde

Commentor No. 380: David Hensel

09/22/2000 08:34 2082548636

HENSEL/ROBINSON

PAGE 01

David Hensel
 PO Box 1104
 313 S. 200E.
 Driggs, Id.
 83422
 208-354-8636 voice/ fax
hensel@tetonvalley.net

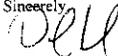
Dear Ms. Brown,

I am writing to voice my opposition to reprocessing plutonium, whether it is done at the INEEL or any other facility. In 1992, President Bush officially halted reprocessing, in an effort to stem the flow of plutonium and to encourage other nations not to engage in this activity. I realize that the proposed facility will not produce weapons grade plutonium. The technology is nearly identical to the one used to produce P-239. One of the most disturbing similarities is the fact that alone with the plutonium the facility will produce hundreds of thousands of gallons of highly radioactive and hazardous waste. The US currently has millions of gallons of this waste that is leaking into the environment. The DOE has no viable cleanup plans for the existing waste. It makes no sense to produce more waste.

Especially when more plutonium is not needed or wanted. The DOE attempts to justify this reprocessing by claiming the material is needed to power space probes. NASA has stated that they do not need anymore P-238.

Another shortcoming of the DOE plans are using Building 666, at the INEEL, which is one of the most contaminated buildings in America. Building 666 should be treated as the pile of nuclear waste that it is and be decommissioned in a manner that is protective of human health and the environment.

Thank you for taking the time to read my comments.

Sincerely

 David Hensel

380-1

380-2

380-3

380-4

Response to Commentor No. 380

380-1: As stated in the comment, the proposed facility will not produce weapons grade plutonium. Unlike plutonium-239, plutonium-238 is not used in nuclear weapons. The technology that is discussed in the NI PEIS would be used to chemically separate plutonium-238 and neptunium from irradiated targets and not from irradiated or spent nuclear fuel, whereas reprocessing separates weapons grade plutonium-239 from irradiated nuclear fuel. As discussed in the separate nonproliferation impact assessment report, use of this technology to produce plutonium-238 from irradiated targets will not create a nonproliferation threat. DOE is committed to full compliance with and support of the U.S. policy prohibiting reprocessing. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

380-2: The use of any of the proposed alternative facilities for the stated missions would not have an impact on the cleanup missions at Hanford, INEEL, or ORR. The NI PEIS addresses the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and appropriate DOE orders. Waste generation is detailed in Chapter 4 of the NI PEIS for each of the alternatives.

380-3: A May 22, 2000, correspondence from NASA to DOE identified that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a

Commentor No. 380: David Hensel (Cont'd)

Response to Commentor No. 380

September 22, 2000 letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

- 380-4:** Building CPP-666 is divided into two parts, the Fuel Storage Facility and the Fluorinel Dissolution Process Facility (FDPF). The FDPF is under consideration in this PEIS for storage of neptunium-237 oxide, preparation of neptunium-237 targets, and separation of plutonium-238 from irradiated targets. This facility will meet the criteria to conduct these operations safely with further analysis and/or minor modifications.

Commentor No. 381: Ellen Glaccum

SENT BY: GLACCJM ; 9-10-20:23; 208 622 5431 => 3014289713; # 1 / 1

Ellen Glaccum
 Box 1173
 Kelchum, ID 83340
 208-622-5431/726-9532(Tom's fax)

Ms. Colette Brown
 DOE
 Office of Space & Defense Power Systems
 fax 1-877-562-4592

Dear Ms. Brown:

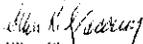
I am writing you with regard to the DOE's plan to produce PU-238. I have VERY strong feelings about this misguided scheme. First and foremost -- PU-238 production is unnecessary. I assume said production is destined for NASA which recently has stated that it will NOT need more PU-238.

Also, given that reprocessing technology has been responsible for huge volumes of liquid waste contaminated with radioisotopes as well as toxic chemicals creating monumental cleanup problems at INEL, Hanford and Savannah River why, in God's name, would any rational human being propose to create more? It's about time that DOE concentrate on cleaning up its toxic legacy, not create more.

With regard to specific problems at INEL, there is no way we should be getting back into the reprocessing business. Remember that this facility sits atop the Snake River Aquifer in a highly unstable (both volcanic and earthquakes) geological area. The two facilities DOE is considering for possible production sites are both unacceptable. Building 666 is old and is scheduled for demolition (rightfully so) by DOE. The Advanced Test Reactor is currently producing medical and industrial isotopes and producing PU-238 would prevent said production. Finally, the state of Idaho has an agreement to remove, not produce, dangerous nuclear waste.

In short, this is yet another unnecessary, expensive, hazardous, stupid, DOE scheme. I strongly urge the DOE to concentrate on cleaning up the mess it's made over the past 50 years and forget about these sorts of bogus, un-needed, garbage-producing, pork-barrel ventures, such as the production of PU-238.

Sincerely,


 Ellen Glaccum

cc: Senators Craig & Crapo, Representatives Simpson & Chawoweth, Governor Kempthorne

Response to Commentor No. 381

381-1: DOE notes the commentor's opposition to enhancing its existing nuclear facility infrastructure to support production of plutonium-238 for use in future NASA space exploration missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost.

The May 22, 2000, correspondence from NASA to DOE identifies that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

The technology that is discussed in the NI PEIS would be used to chemically separate plutonium-238 and neptunium from irradiated targets and not from irradiated or spent nuclear fuel, whereas

381-1

381-2

381-1

381-3

381-4

381-5

381-2

381-1

Commentor No. 381: Ellen Glaccum (Cont'd)

Response to Commentor No. 381

reprocessing separates weapons grade plutonium-239 from irradiated nuclear fuel. As discussed in the separate nonproliferation impact assessment report, use of this technology to produce plutonium-238 from irradiated targets will not create a nonproliferation threat. DOE is committed to full compliance with and support of the U.S. policy prohibiting reprocessing.

Use of any of these facilities for the stated missions would not impact cleanup missions at DOE sites.

- 381-2:** The use of proposed alternative facilities associated with processing of neptunium-237 targets would have no impact on schedules or available funding for high-level radioactive waste programs at either Hanford or INEEL. At INEEL, the tanks would not be used although certain facilities at the Idaho Nuclear Technology Engineering Center (INTEC) would be used to treat the wastes resulting from processing the irradiated targets. These are reliable systems that would process a maximum of 1,050 cubic meters of low-level radioactive waste over the 35-year nuclear infrastructure operational period. The higher activity waste would be treated as a solid form via a stand-alone vitrification system, separate from any tank waste treatment system. At Hanford, the existing high-level radioactive waste facilities would not be used, and as analyzed in the PEIS, no existing or planned high-level radioactive waste facilities would be used to treat the wastes resulting from processing the irradiated targets.

The Settlement Agreement (i.e., Spent Fuel Settlement Agreement, dated October 16, 1995) between U.S. DOE and the State of Idaho established schedules for the treatment of existing high-level radioactive waste, transuranic waste, mixed waste and removal of spent nuclear fuel from the state. This agreement is not applicable to newly generated wastes.

- 381-3:** An extensive discussion of the geology and associated geologic hazards of INEEL and vicinity is provided in Volume 1, Section 3.3.5 of this NI PEIS. The hydrogeology of the site, to include the Snake River Plain aquifer, is described in Section 3.3.4.2.1. Since publication of the Draft NI PEIS, additional facility location-specific information has been added to these referenced sections as reflected in this Final NI PEIS. Analyses presented in Chapter 4 of the NI PEIS (e.g., Sections 4.2.3.2.5, 4.3.2.1.5, 4.4.1.1.5, 4.4.2.1.5, 4.5.2.2.5, and 4.6.2.2.5) addressing use of Building CPP-651, FDPF, and ATR indicate that large-scale geologic

Commentor No. 381: Ellen Glaccum (Cont'd)

Response to Commentor No. 381

conditions (i.e., seismic and volcanic activity) present a relatively low risk to the proposed facilities. Historically, regional earthquakes have resulted in small effects on INEEL and would not be expected to significantly affect specially designed or reinforced structures. Also, the potential for recurrence of volcanic activity associated with identified volcanic rift zones during the 35-year mission timeframe is also very low. In addition, DOE will assess the need to evaluate and upgrade the existing facilities in response to natural geologic hazards in accordance with DOE Order 420.1 Facility Safety. This evaluation is periodically performed as part of facility Safety Analysis Report updates.

- 381-4:** Building CPP-666 is divided into two parts, the Fuel Storage Facility and the Fluorinel Dissolution Process Facility (FDPF). The FDPF is under consideration in this PEIS for storage of neptunium-237 oxide, preparation of neptunium-237 targets, and separation of plutonium-238 from irradiated targets. This facility will meet the criteria to conduct these operations safely with further analysis and/or minor modifications.
- 381-5:** As stated in EIS Volume 1, Section 2.3.1.2, ATR would continue to meet its medical and industrial radioisotope production mission for the no action and most other alternatives considered where ATR is not used for the production of plutonium-238. If ATR were to be used as a production facility for plutonium-238 (options 1, 2, 3, 7, 8, and 9 under Alternative 2), it would support medical and industrial radioisotope production to the extent possible. DOE would try to minimize the impact of the new mission on current medical and industrial radioisotope production.

Commentor No. 383: Charity Schweiger

Charity Schweiger
28104 S. 95th Pl. SE
Kennewick, WA
97338-9335

Mr. William Richardson, Secretary of Energy
U.S. Department of Energy
Forrestal Building, 7A-257
1000 Independence Avenue, S.W.
Washington, D.C. 20585

I support the restart of the FFTF
Reactor facility at Hazard to meet the
national needs for medical isotopes
and other peaceful nuclear materials.
The Fast Flux Test Facility is the
most economical, safe, and
environmentally friendly method
available to meet these needs. This is
the most fiscally responsible option
available. Sincerely,

Charity C. Schweiger
Kennewick, WA

Response to Commentor No. 383

383-1

383-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 386: Beth Call

Restart of FFTF at Hanford, WA, public comment

Beth Call
102 Otis
Walla Walla, WA 99362

The USDOE, in spite of recommendations by its own experts and an outcry of NW citizens, is planning to restart the Fast Flux Testing Facility at Hanford. Restarting FFTF would be disastrous for many reasons:

1. FFTF would add further high level nuclear waste to 177 underground High Level Nuclear Waste Tanks, 68 of which are already leaking life-threatening nuclear waste into the ground water seeping toward the Columbia River at a rapid rate. How can DOE propose to create yet more High Level waste when none of the present waste has yet been successfully transformed to a stabler form by vitrification? Insufficient clean-up funding is a major factor in the painfully slow progress being made in this vital project.
2. In 1995 DOE, promised in the Hanford Clean-up Agreement to shut down FFTF and use resulting savings for clean-up. \$100 million designated for waste clean-up has instead been used to keep FFTF on hot standby. Much more would be spent to restart and maintain FFTF, thus using clean-up funds to instead produce yet more highly radioactive waste.
3. The Washington State Medical Association says it does not need FFTF as an additional source of medical radioactive isotopes. NASA says it does not need Plutonium 238 for its space program. So why does DOE want to restart FFTF? DOE says it could use the Plutonium 238 for other unspecified missions. This could include **nuclear weapons testing and development.**
4. The DOE's Programmatic Environmental Impact Statement (PEIS) suggests shipping weapons-grade Plutonium through Puget Sound to fuel the FFTF Reactor, despite recent vehement protests of nearby residents and the Seattle and Tacoma City Councils against receiving even spent nuclear fuel. Fire on a Plutonium bearing ship could kill thousands and permanently leave a large area uninhabitable.
5. The deadly radioactive waste of Hanford will, if not contained, contaminate the Northwestern US and beyond, for thousands of years and countless generations, potentially rendering this beautiful area unfit for human habitation. We have an inescapable responsibility to present and future human civilization to clean up Hanford **NOW**. As a first step we must stop the restart of the Fast Flux Testing Facility.

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement.

Response to Commentor No. 386

- 386-1:** The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

386-2: DOE notes the commentor's opposition for Alternative 1, Restart FFTF.

386-3: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. High-level radioactive waste would not be generated from merely operating FFTF. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at

Commentor No. 386: Beth Call (Cont'd)

Response to Commentor No. 386

each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

- 386-4:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Prior public meetings were held on this formal milestone change.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected. If the decision is made to shutdown the FFTF, then cleanup dollars will be needed to deactivate the facility, which could impact the overall Hanford cleanup schedule.

Any future waste generated by these activities will be conducted in accordance with applicable Federal and state laws and regulations and appropriate DOE orders.

- 386-5:** DOE notes the commentor's opposition to restarting FFTF for expanding its existing nuclear facility infrastructure. No component of the proposed action is for the purpose of supporting any defense or weapons-related mission.

DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes,

Commentor No. 386: Beth Call (Cont'd)

Response to Commentor No. 386

estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings.

The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost.

Commentor No. 386: Beth Call (Cont'd)

Response to Commentor No. 386

A May 22, 2000, correspondence from NASA to DOE identified that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires one-third less plutonium-238 as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000, letter to DOE that large RTGs be maintained as backup. Section 1.2.2 was revised to clarify plutonium-238 mission needs.

- 386-6:** The commentor appears to express the concern that DOE would expose people in the Puget Sound area to risks associated with the transport of weapons-grade plutonium. None of the proposed alternatives would involve the shipment of any weapons-grade plutonium to any port in the United States. Alternative 1 does postulate that DOE might decide at some point to import mixed oxide fuel from Europe to fuel FFTF. At this time, however, DOE has not proposed to import this fuel through any specific port. If DOE ultimately decides to import fuel from Europe, it would perform a separate NEPA analysis to select a port. This review would address all relevant potential impacts of overseas and inland water transportation, shipboard fires, package handling, land transportation, as well as safeguards and security associated with the import of SNR-300 mixed oxide fuel through a variety of specific candidate ports on the east and west coasts. It would consider all public comments, including local resolutions, concerning the desirability of bringing mixed oxide fuel into the proposed alternative ports.

In the event that DOE decides to enhance its nuclear infrastructure, it would not expose any population to high, unacceptable risks under any alternative. Any transportation activities that would be conducted by DOE would comply with U.S. Nuclear Regulatory Commission and U.S. Department of Transportation regulations. Associated transatlantic shipment would comply with International Atomic Energy Agency requirements. In Section J.6.2, DOE reviewed the potential maximum impacts from the marine transportation of mixed oxide fuel from Europe

Commentor No. 386: Beth Call (Cont'd)

Response to Commentor No. 386

to a representative military port, Charleston, South Carolina, and overland transportation to Hanford. Also in that section, a bounding analysis demonstrates that the maximum potential radiological risks to the surrounding public from mixed oxide fuel shipments would be extremely small (e.g., less than 1 chance in a trillion for a latent cancer fatality per shipment from severe accidents at docks and in channels and less than 1 chance in 50 billion for a latent cancer fatality per shipment from overland highway accidents).

Commentor No. 387: U.S. Representative Doc Hastings

DOC HASTINGS
5th DISTRICT, WASHINGTON
ASSISTANT MAJORITY WHIP
COMMITTEE ON RULES
SUBCOMMITTEE ON
LEGISLATIVE AND BUDGET PROCESS



Congress of the United States House of Representatives

1223 LONGWORTH BUILDING
WASHINGTON, DC 20545
(202) 725-3876
2715 S. ANDREW LOOP
PASCO, WA 99361
(509) 543-9256
302 E. COLUMBIA
YAKIMA, WA 98901
(509) 452-3143

Statement of Congressman Doc Hastings at the Hearing on the Draft Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility.

August 31, 2000

Thank you for allowing me the opportunity to share my views with you this evening.

I'm here tonight as a strong supporter of the Fast Flux Test Facility and I urge the Department to move forward with the restart in the Final PEIS.

As a life long resident of the Tri-Cities, I understand the unique challenges our community faces as a result of the Hanford site. And, as the hometown Congressman, I know that a majority of Tri-Cities residents support restart of FFTF. As the DEIS reported: " FFTF would provide the greatest flexibility for both the isotope production and nuclear-based research and development...for all of the proposed alternatives."

It's time to end the politics of fear that has plagued the debate for far too long. We must focus on truth not innuendo, on science not scare tactics, and on the benefit FFTF will provide to this community, the country, and the world.

Tonight we'll hear that cleanup funding at Hanford will be diverted if FFTF is restarted. That's just not true. In fact, the Fast Flux Test Facility is funded under an entirely different account from cleanup dollars in the federal budget. I pledge that I will not allow the restart to jeopardize cleanup dollars for Hanford.

Tonight we'll hear that new tank waste will be added to Hanford if FFTF is restarted. That's just not true. The spent nuclear fuel will be managed independent of the existing Hanford site waste management infrastructure by using commercially available facilities for all waste treatment and disposal activities.

Tonight we'll hear that the Columbia River would be harmed if FFTF is restarted. That's just not true. The fact is FFTF's fuel cycle is a closed cycle with no release of contaminated liquids to the Columbia River or the environment.

387-1

387-2

387-3

387-4

Response to Commentor No. 387

387-1: DOE notes the commentor's support for implementation of Alternative 1 (Restart FFTF). The alternatives evaluated in this NI PEIS are described in Section 2.5 of Volume 1.

387-2: The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As described in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

387-3: As discussed throughout Section 4.3 of Volume 1, none of the proposed alternatives would add waste to the high-level waste tanks at Hanford.

Spent nuclear fuel resulting from implementation of Alternative 1, Restart FFTF, would not be managed at commercially available facilities. As described in Section 4.3.1.1.14 of Volume 1, it would be placed in existing storage facilities or dry storage casks at FFTF, pending availability of a disposal site.

387-4: FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to the groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

**Commentor No. 387: U.S. Representative Doc Hastings
(Cont'd)**

Tonight we'll hear that FFTF will be used to make weapons grade plutonium. That's just not true. In fact, Plutonium-238 cannot be made into a warhead. And in order for any new missions to be undertaken at Hanford, a new Environmental Impact Statement must be completed.

387-5

Tonight we'll hear that the FFTF is unsafe and will put our region in jeopardy. That's just not true. FFTF is much safer than commercial power reactors due to its unique design.

387-6

The truth is that FFTF will fulfill our nation's nuclear infrastructure needs and help save the lives of millions of Americans and citizens worldwide. At this hearing we'll hear from many in our community about the benefits nuclear medicine has provided. This is just the tip of the iceberg. FFTF is the only facility in the nation that can produce these isotopes in the size, quantity, and variety needed to fight all the different types of cancer.

387-7

Most of us know someone with cancer or have seen a loved one suffer from cancer. Recent developments in the medical isotope field suggest that our ability to combat deadly cancer strains will be revolutionized by these new isotopes. Section 31 of the Atomic Energy Act requires the federal government to maintain research and production quantities of isotopes. The FFTF has the unique ability to produce a steady stream of different medical isotopes simultaneously at one reactor. FFTF offers the added benefit of allowing the government to meet its statutory responsibilities at a low cost to taxpayers rather than building the capacity from scratch.

387-8

Medical isotope research is showing tremendous potential to improve the lives of millions of people worldwide. There have been many highly successful clinical trials in the treatment of several major classes of cancer and other medical problems. Medical isotopes offer innovative new ways to treat cardiovascular disease, arthritis, and other rheumatic conditions.

387-9

Restarting the FFTF would increase the reliability and diversity of medical isotopes while stabilizing the supply of these promising disease-fighting tools. The rapid growth of this field could support the majority of the costs to operate the reactor. The Expert Panel has estimated that the expected growth rate of medical isotope use during the next 20 years will range between 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications.

387-10

Some question these numbers but in 1999 alone the demand for therapeutic isotopes increased by 19 percent. That's not a projection -- that's a fact. However, without the ability to produce these isotopes, lives will be lost and research delayed. I believe that the restart of FFTF will increase the production of isotopes more than any other option in the DEIS. We can operate the FFTF safely and efficiently with little risk to local residents or Americans anywhere in the country.

387-11

Response to Commentor No. 387

387-5: As discussed in Section 1.2 of Volume 1, plutonium-238 would be produced to support NASA's deep space missions. Plutonium-238 is not used to produce nuclear weapons. All missions considered in the NI PEIS are for civilian purposes.

387-6: As discussed in Section 4.3, implementation of Alternative 1, Restart FFTF, would pose no significant risk to the health and safety of the public or workers.

387-7: The commentor's position on medical isotope production in FFTF is noted. As discussed in Section 2.7.3 of Volume 1, no single-production method evaluated could satisfy all of the Expert Panel's medical isotope projections. The medical isotope mission is discussed in Section 1.2.1 of Volume 1.

387-8: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "... ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." Cost is one of the factors that will be considered in developing the Record of Decision. Other factors include environmental impacts, public input, nonproliferation issues, schedules, technical assurance, policy, and program objectives.

387-9: DOE notes the commentor's position on medical research and applications of radioisotopes.

387-10: The commentor's position on FFTF capabilities to produce medical isotopes is noted. Findings of the Expert Panel are discussed in Section 1.2.1 of Volume 1. The use of medical isotopes has tracked at levels consistent with the Expert Panel's growth projections made in 1998.

387-11: DOE agrees that the FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

**Commentor No. 387: U.S. Representative Doc Hastings
(Cont'd)**

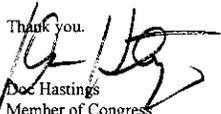
I continue to believe that the EIS should determine the amount of future health care costs that would be avoided by using these isotopes. Only then will we be able to quantify the enormous benefit provided by this unique facility. Any responsible analysis of FFTF must quantify expected benefits as well as potential risks and costs.

The PEIS should also include the benefits of isotope production not only for medicine, but also for biological and agricultural research, food irradiation, and numerous other industrial uses that would benefit the entire nation.

Further, the final PEIS must include a detailed account of the benefits provided for research and education. We must ensure that this nation maintains the ability for American students to learn firsthand the benefits and challenges associated with nuclear reactors. Research is an essential component to ensure further developments in the nuclear field.

In closing, I want to thank everyone for coming tonight. Government works best when we can debate policy freely and openly. I want to thank the Department of Energy for their efforts to ensure an open and fair public comment period. I look forward to working with you in the coming months to ensure that all the considerations of the public are addressed in the final EIS and urge you to conclude that the restart of FFTF is in our country's best interest.

Thank you.


Doc Hastings
Member of Congress

387-12

387-13

387-14

Response to Commentor No. 387

- 387-12:** The estimated costs of the range of reasonable alternatives are presented in the Cost Report, summarized in Appendix P of the Final NI PEIS. However, the Cost Report is not a cost-benefit analysis. While it is reasonable to believe that the benefits of medical isotopes are substantial, the purpose of this NI PEIS is to describe the nuclear infrastructure missions (Section 1.2 of Volume 1), a range of reasonable alternatives for satisfying the mission requirements (Section 2.5 of Volume 1), and the environmental impacts that would result from implementation of the alternatives. According to 40 CFR Section 1502.23, if a cost-benefit analysis exists, it must be reported and summarized in the PEIS.
- 387-13:** While it is reasonable to believe that the benefits of radioisotopes in biological, agricultural, and industrial applications may be substantial, the purpose of the NI PEIS is to describe the nuclear infrastructure missions (Section 1.2 of Volume 1), a range of reasonable alternatives for satisfying the mission requirements (Section 2.5 of Volume 1), and the environmental impacts that would result from implementation of the alternatives.
- 387-14:** The commentor's position on nuclear research and education is noted. The nuclear energy research and development mission for civilian applications is described in Section 1.2.3 of Volume 1.

Commentor No. 388: Shakir Zaman

The following views are submitted in support of FFTF restart:

- FFTF is the preferred alternative for materials testing in support of life extension of existing LWR's for which operating license may be expiring in the next decade or two.
- FFTF should be the preferred alternative for testing of advanced fuels to increase the operating time by reducing refueling cycles of the LWR's.
- In view of the breakdown of the Russian infrastructure soon after the breakdown of the Soviet Union, it should be noted that it is easy to lose the scientific base through benign neglect and or inaction. To ensure that such a phenomenon does not happen in USA, there is a need to build and preserve an infrastructure to maintain the scientific base, experience and knowledge in support of our national programs through positive actions. FFTF is needed to maintain such a scientific base.
- Recent reports of accidents (nuclear submarine accident), breakdown in morale in Russian administration, and prevailing corruption in that country demonstrate potential instability in the Russian institutions. The Russian sources therefore, can not be relied upon to provide Pu-238 on a long-term basis. FFTF is the preferred alternative for the needed production of Pu-238 for the US space program.
- To believe that Hanford can have only one mission i.e. "cleanup only", is naive. We live in a complex and intellectual society. The citizens of this society including Hanford workers can be trusted with multiple missions for multiple facilities geared according to national priorities. FFTF mission can be significantly different than PFP or the Tank Farms and still that mission can be understood and followed successfully according to national priorities.

Shakir Zaman
SHAKIR ZAMAN
222 Brookwood Loop
RICHLAND, WA. 99352
(509) 627-6175

388-1

388-2

388-3

Response to Commentor No. 388

388-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

388-2: DOE notes commentor's support for restarting FFTF for enhancing its existing nuclear facility infrastructure. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs:

1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;

2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and

3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

388-3: DOE notes the commentor's support for using the FFTF for the enhancement of its nuclear facility infrastructure.

Commentor No. 389: Frank E. Cole

FRANK E. COLE, M.D., Ph.D.

Marineland Professional Building

5219 W. Clearwater, Suite 3
Kennewick, WA 99336
Tel. (509) 783-0654
Fax (509) 735-3470

Diplomat Board of
Internal Medicine

Member American
College of Physicians

August 30, 2000

In Support of the Restart of FFTF

To Whom It May Concern:

It is a pleasure for me to speak on behalf of the restart of FFTF. I come perhaps wearing three hats. The first hat is that of a local citizen who has been a part of this community for some 25 years. The second hat is that of a former research scientist who has conducted research utilizing nuclear reactors in the past. And the third is that of a physician who has been in practice for some 20+ years in this community. I speak to you, therefore, with first hand knowledge of the importance of medical research and in particular, radio isotopes that can be utilized for research, diagnosis, as well as treatment of those who are ill. I have, I believe, a unique perspective and so I would like to relate to you very briefly what I think is very important as we give consideration for the restart of FFTF.

In the early sixties, I was a graduate student at Washington State University and utilized the nuclear reactor there for neutron defraction studies that allowed me to elucidate a very accurate structure of ortho-phosphoric acid. The phosphate moiety, as you know, plays a very important role in biology and biological reactions. I had the opportunity to obtain data from the Oakridge National Laboratory Reactor and utilize these data as part of my Ph.D. thesis. When I was a young post-doctoral fellow, at Roswell Park Memorial Institute, I was a co-author of a paper that very accurately determined the structure of a very primary, yet important amino acid. The data for this research was created at Brookhaven National Laboratories.

Response to Commentor No. 389

Commentor No. 389: Frank E. Cole (Cont'd)

Page 2

It was during those times, the early sixties, that the electron microscope was beginning to play an important role in biology, radio-chemistry was clearly becoming very important, and crystal structure analysis was becoming even more important in terms of elucidating the structure of ribonuclease as well as DNA. We had crude instruments to say the least, at our disposal. The computers were fairly slow and I specifically recall friends of mine using little red wagons to take their computer cards from the chemistry building to the computing center where, if it became too hot, the computer did not run. I remember the early biochemical studies, which addressed enzymes and proteins and their mechanisms of action. And I remember how the pieces were not yet there that would have implications for the treatment of diseases.

Some twenty years later, I could not have dreamed or anticipated all of the tremendous progress that has occurred. And I am convinced progress has occurred because the infrastructure for research; i.e. increased knowledge of radioactive isotopes for biological research, computers, better knowledge of biochemical and cellular reactions, and a better understanding of disease and disease processes, slowly came into place. As I look again some twenty years into the future, it would be literally impossible to visualize the advances that can be made for the curing of diseases and the decrease in the morbidity and the mortality that has attended to these diseases. These advances can only be made if a research infrastructure is in place. What is needed is more research and not less. We need "smart drugs" that are made of antibodies linked to a radioisotope. We need to produce in our own country, medical isotopes such that quality issues are adequately addressed. We need not have to depend on resources outside of our borders that clearly has the possibility of restricting, or at least limiting, our research efforts. These components of the infrastructure along with the FFTF facility I believe will bring good to all mankind that is far beyond our imagination today.

Therefore, it is my feeling that we should, and must, move forward with the restart of the FFTF for the reasons that I have just previously outlined. There is now, and there will be, a need for medical research utilizing isotopes as far into the future as I can see. I believe that the groundwork has already been laid.

*Frank E. Cole MD
PhD*

Response to Commentor No. 389

389-1

389-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 389: Frank E. Cole (Cont'd)

Page 3

As we are well aware, safety issues and environmental impact studies have been extensively addressed and in my opinion, pose no problems. I think the only problem that we have, is related to the fear that is currently being raised, and which I find on a scientific basis, to be unfounded. Therefore, I believe that we should go forth with diligence and not be afraid.

Sincerely Yours,



Frank E. Cole, M.D., Ph.D.

**389-1
(Cont'd)**

Response to Commentor No. 389

**Commentor No. 390: Sheila Rege
Oncology Group PLLC**



September 6, 2000

Ms. Collette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems (NE-50)
19901 Germantown Road
Germantown, Maryland 20874

SUBJECT: Commons on Nuclear Infrastructure Preliminary
Environmental Impact Statement

Dear Ms. Brown:

As a practicing radiation oncologist, I am writing to express my strong support of efforts by the U.S. Department of Energy to strengthen its nuclear infrastructure and become a reliable domestic supplier of medical isotopes.

Recent advances in the diagnosis and treatment of human disease by nuclear medicine procedures have made it more important for the U.S. to supply the needed quantities of isotopes required in the country. Both the draft Programmatic Environmental Impact Statement (PEIS) and the Nuclear Energy Research Advisory Committee have validated the need for D.O.E. to take the lead in establishing a facility capable of producing radioisotopes.

I would like to express my opinion that the restart of the Fast Flux Test Facility (FFTF) at Hanford is the best option to meet the projected future demand for medical isotopes. The FFTF reactors isotope production capabilities far exceed those of other operating U.S. reactors. It would prevent us from continuing to be dependent on Canada and Europe for our medical isotope needs. Because of its high neutron flux and energy spectrum, the FFTF can produce more types of medical isotopes with a higher quality than those supplied by other reactors that are operating today. I understand that the reactor has more than 30 years of lifetime remaining and this appears to be the most practical option for isotope production than the others described in the PEIS.

For the above reasons, I strongly urge that the restart of FFTF be the option chosen by D.O.E. for supplying the quantity and quality of isotopes needed for biomedical research as well as diagnosis and treatment of human diseases.

Response to Commentor No. 390

390-1

390-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Response to Commentor No. 390

*Commentor No. 390: Sheila Rege (Cont'd)
Oncology Group PLLC*

September 6, 2000

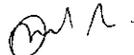
Ms. Collette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems (NE-50)
19901 Germantown Road
Germantown, Maryland 20874

SUBJECT: Commons on Nuclear Infrastructure Preliminary
Environmental Impact Statement

Page Two

As a board certified nuclear medicine specialist and radiation oncologist, I would like to add that I have been extremely impressed with the personnel working at D.O.E. Hanford.

Sincerely yours,



Sheila Rege, M.D.

SR:TTSjk
09/06/00

Commentor No. 391: Paul R. Prevo

Paul R. Prevo
108 Sherman St.
Richland, WA 99352
August 31, 2000

Department of Energy

Dear Sirs:

I support restart of the Fast Flux Test Facility (FFTF). The FFTF will provide much needed medical isotopes at the lowest cost. In addition, restarting the FFTF will ensure that a vital nuclear technology is retained. The U. S. A. will need FFTF technology in the future as the supply of oil and gas declines.

Sincerely,



391-1

Response to Commentor No. 391

391-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 392: Patricia Heasler

Response to Commentor No. 392

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

8/31/00

The FFTF is the facility most capable of producing the full range of isotopes that will be needed to meet the healthcare needs for diagnosis & treatment of health illnesses & disease. When the FDA approves upcoming health treatments, there will be an unprecedented demand for isotopes. I think the American government could well serve the people of America & the world if they would utilize the FFTF for isotope production.

Thank you —

Patricia S. Heasler

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Patricia Heasler

Organization: _____

Home/Organization Address (circle one): 2047 Greenbrook Blvd

City: Richland State: WA Zip Code: 99352

Telephone (optional): 509 628-2471

E-mail (optional): patriciaheasler@msn.com

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 1901 Germantown Road • Germantown, MD 20874
 Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



392-1

392-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

alternative: "Restart FFTF" should be adopted as the preferred alternative. FFTF has numerous advantages compared with the other alternatives.

393-1

393-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Sheryl Paglieri

Organization: Hausenrye

Home Organization Address (circle one): 1734 Hanna
Richie

City: Richland, State: VA Zip Code: 99302

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 1900 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Commentor No. 394: *Walter W. Laity*

Draft PEIS Comment Form

As a 26-year resident of Richland, and as a taxpayer who believes in getting maximum benefit from the nation's capital resources, I am in favor of restarting FFTF. FFTF would be ideal for supporting research such as that called for in "A Roadmap for Developing Accelerator Transmutation of Waste (ATW) Technology," which DOE submitted to Congress on Nov. 1, 1999. Among FFTF's significant advantages for research are the following:

- Only fast reactor remaining in the U.S.
- Designed explicitly for testing fuels and materials.
- Can accommodate a wide variety of test vehicles and large assembly sizes.
- It's high peak neutron flux is an important attribute for completing irradiation tests in a timely manner.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Walter W. Laity

Organization: _____

Home Organization Address (circle one): 402 Shaw St.

City: Richland State: WA Zip Code: 99352

Telephone (optional): (509) 375-1316

E-mail (optional): w.w.laity@owt.com

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



Response to Commentor No. 394

394-1

394-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 395: John B. Logan

Comments on the Draft NLEIS

I would like to express my support for the Restart of FFTF as the best option considered in the Draft document.

If the United States is to maintain any form of leadership in the world wide development of the peaceful use of Nuclear Energy we must actively pursue research with any asset at our disposal. The Fast Flux Test Facility is not only one of the newest facilities in the DOE complex, it offers unique capabilities that are not available anywhere else in the world. Because of its large core volume and high flux density it is the only option that can simultaneously meet the requirements of the multiple missions that DOE has identified.

In the field of Medical Isotope Research alone the FFTF offers a potential to dramatically increase the US ability to develop new treatments for Cancer. Promising research is being deferred because isotopes that could be made at FFTF are not available. Meanwhile over 1,000,000 new cases of cancer will be diagnosed this year. Americans deserve the best possible treatments available and the failure of DOE to support such research is reprehensible.

Opponents to restarting FFTF will claim that the risks are too high. The risk of operating FFTF are insignificant compared to the potential benefits. Opponents will claim that the costs are too great. Medical Isotope treatment of cancer is not only less expensive than traditional treatments but it is also less debilitating to patients. What cost are too great if they relieve human suffering?

The United States has historically been a world leader in Research and Development. The choice now is, do we continue to lead? Or do we step back and wait for a new leader?

Restart FFTF

Thank you

John B. Logan
2407 W. 36th Ave.
Kennewick WA. 99337

Response to Commentor No. 395

395-1

395-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 396: Richard O. Zimmerman

Richard O. Zimmerman
 220 Orchard Way
 Richard Wn 99352

Please change the definition of safety
 to one that closely matches a dictionary.

Draft Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility

rem (roentgen equivalent man) - A unit of dose equivalent. The dose equivalent in rems equals the absorbed dose in rads in tissue multiplied by the appropriate quality factor and possibly other modifying factors. Derived from "roentgen equivalent man," referring to the dosage of ionizing radiation that will cause the same biological effect as one roentgen of x-ray or gamma-ray exposure. One rem equals 0.01 sievert (See absorbed dose, dose equivalent, and quality factor.)

remediation - The process, or a phase in the process, of rendering radioactive, hazardous, or mixed waste environmentally safe, whether through processing, entombment, or other methods.

remote-handled waste - In general, refers to radioactive waste that must be handled at a distance to protect workers from unnecessary exposure (e.g., waste with a dose rate of 200 millirem per hour or more at the surface of the waste package). (See contact-handled waste.)

resin - See ion exchange resin.

Resource Conservation and Recovery Act, as Amended - A law that gives the U.S. Environmental Protection Agency the authority to control hazardous waste from "cradle to grave" (i.e., from the point of generation to the point of ultimate disposal), including its minimization, generation, transportation, treatment, storage, and disposal. Resource Conservation and Recovery Act also sets forth a framework for the management of nonhazardous solid wastes. (See hazardous waste.)

riparian - Of, on, or relating to the banks of a natural course of water.

risk - The probability of a detrimental effect from exposure to a hazard. Risk is often expressed quantitatively as the probability of an adverse event occurring multiplied by the consequence of that event (i.e., the product of these two factors). However, separate presentation of probability and consequence is often more informative.

risk assessment (chemical or radiological) - The qualitative and quantitative evaluation performed in an effort to define the risk posed to human health and/or the environment by the presence or potential presence and/or use of specific chemical or radiological materials.

roentgen - A unit of exposure to ionizing x- or gamma radiation equal to or producing one electrostatic unit of charge per cubic centimeter of air. It is approximately equal to 1 rad.

runoff - The portion of rainfall, melted snow, or irrigation water that flows across the ground surface, and eventually enters streams.

Safe Drinking Water Act - This act protects the quality of public water supplies, water supply and distribution systems, and all sources of drinking water.

safe, secure trailer - A specially modified semi-trailer, pulled by an armored tractor truck, which DOE uses to transport nuclear weapons, nuclear weapons components, or special nuclear material over public highways.

safeguards - An integrated system of physical protection, material accounting, and material control measures designed to deter, prevent, detect, and respond to unauthorized access, possession, use, or sabotage of nuclear materials.

safety - With regard to nuclear weapons, minimizing the possibility that a nuclear weapon will be exposed to accidents and preventing the possibility of nuclear yield or plutonium dispersal should there be an accident involving a nuclear weapon.

Safety analysis report - A report that systematically identifies potential hazards within a nuclear facility, describes and analyzes the adequacy of measures to eliminate or control identified hazards, and analyzes potential accidents and their associated risks. Safety analysis reports are used to ensure that a nuclear facility can be constructed, operated, maintained, shut down, and decommissioned safely and in compliance with applicable laws and regulations. Safety analysis

Change to
 standard
 dictionary
 definition

396-1

Response to Commentor No. 396

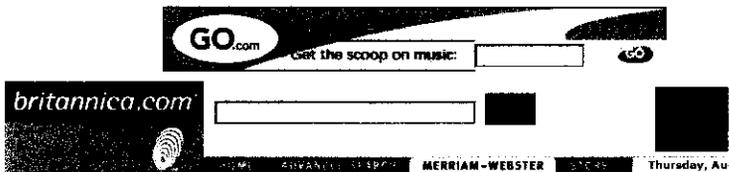
396-1: The definition of safety with regard to nuclear weapons has been deleted from the Glossary.

Commentor No. 396: Richard O. Zimmerman (Cont'd)

Response to Commentor No. 396

Britannica.com

Page 1 of 2



Merriam-Webster's Collegiate Dictionary



Search Merriam-Webster's Collegiate Dictionary

13 words found.

To view an entry in the list, highlight it and click on GO TO.

safety[1,noun]
 safety[2,transitive verb]
 free safety

Main Entry: ¹**safe-ty**

Pronunciation: 'sAF-tē

Function: *noun*

Inflected Form(s): *plural safeties*

Etymology: Middle English *saufte*, from Middle French *sauveté*, from Old French, from *sauve*, feminine

Date: 14th century

1 : the condition of being safe from undergoing or causing hurt, injury, or loss

2 : a device (as on a weapon or a machine) designed to prevent inadvertent or hazardous operation

3 a (1) : a situation in football in which a member of the offensive team is tackled behind its own goalposts
counts two points for the defensive team -- compare TOUCHBACK (2) : a member of a defensive backfield who occupies the deepest position in order to receive a kick, defend against a forward pass, and block a punter
b : a billiard shot made with no attempt to score or so as to leave the balls in an unfavorable position for the opponent
c : **BASE HIT**

Dictionary Pronunciation Key

\&\ as a and u in abut	\e\ as e in bet	\o\ as aw in law
\[^\&]\ as e in kitten	\E\ as ea in easy	\oi\ as oy in boy
\&r\ as ur and er in further	\g\ as g in go	\th\ as th in thin
\a\ as a in ash	\l\ as l in hit	\[th_]\ as th in the
\A\ as a in ace	\I\ as i in ice	\ü\ as oo in foot
\ä\ as o in mop	\j\ as j in job	\u\ as oo in foot
\au\ as ou in out	\[ng]\ as ng in sing	\y\ as y in yet

<http://www.britannica.com/cgi-bin/dictionary?va=safety>

8/31/00

**Commentor No. 397: Robert J. Thompson, Mayor,
City of Richland, WA**



505 Swift Blvd. • Box 190 • Richland, Washington 99352 • (509) 942-7390 • FAX (509) 942-5666

OFFICE OF THE MAYOR

August 28, 2000

Colette Brown, Document Manager
Office of Nuclear Energy, Science and Technology
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

Re: NI PEIS

Dear Ms. Brown:

I am writing you to restate the position of the City of Richland regarding the Draft Environmental Impact Statement that addresses future use of the Fast Flux Test Facility (FFTF) at Hanford. The City has stated in several letters to the Department of Energy over the past few years that we unequivocally support the use of FFTF for production of isotopes for medicine, space missions as well as other research and development projects.

In 1996 we formed an advisory committee with over 30 participants from a wide spectrum of interests in our community. They studied the use of FFTF and other Hanford facilities for isotope production and plutonium disposition. The committee concluded that the FFTF, which was designed to operate with mixed oxide fuel and has more than a 20-year remaining life, should be used to produce medical isotopes and other products. Operating the facility has the added advantage of disposing of surplus weapon's material by converting it to reactor fuel and irradiating it to the spent fuel standard, which makes the material unavailable for weapons.

Residents of our community were involved in the design construction and operation of FFTF. They are extremely knowledgeable about the facility's track record for safe operation. We have no reservations about the reactor being restarted to serve various national missions. We would however object to our federal tax dollars being spent to build a new facility somewhere else that has less capability than FFTF. We were pleased that the cost analysis done by the Department of Energy as part of the current Environmental Impact Statement, confirms that FFTF is the most cost effective means for meeting the entire suite of missions proposed.



Response to Commentor No. 397

397-1

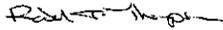
397-1: DOE notes the commentor's support for Alternative 1, Restart FFTF, although it should be noted that conversion of weapons grade plutonium is not one of the stated missions for which it would be restarted.

**Commentor No. 397: Robert J. Thompson, Mayor,
City of Richland, WA (Cont'd)**

NI PEIS
Page 2

Hanford's legacy is the production of plutonium for the defense of our country. It is a proud history but one that leaves this region with a significant environmental cleanup challenge. It is our dream to develop a new legacy, which is the production of a wide range of medical isotopes. Many isotopes have not been examined for their life saving potential because they have not been available to researchers. Others that have proven successful in clinical trials will not be available in the quantity needed when FDA approval is granted. It is shocking that the United States currently lacks the capability to provide needed isotopes for cancer victims in this country. FFTF is the solution to this problem. Department of Energy must make the bold decision to restart the reactor.

Sincerely,



Robert J. Thompson
Mayor

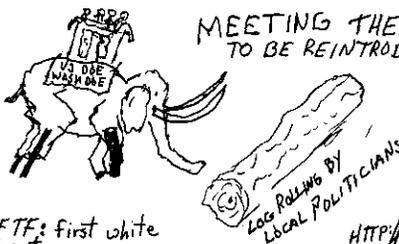
CC: Richland City Council
Ron H. Rabun, City Manager
Senator Slade Gorton
Senator Patty Murray
Congressman Doc Hastings
Keith Klein, DOE-RL

397-1

Response to Commentor No. 397

Commentor No. 398: G. Jansen

NI PEIS
EXTINCT SPECIES



MEETING THEME: FIRST
TO BE REINTRODUCED.

FFTF: first white
elephant with
3 artificial legs

HANFORD NATIONAL MONUMENT to be used as preserve
for extinct pleistocene mammals. ENDANGERED
SPECIES ACT EXTENDED TO INCLUDE FLORA AND FAUNA
THAT FELL VICTIM TO MIGRATION OF PREHISTORIC MAN
TO WESTERN HEMISPHERE. THEME PARK WILL BE
MAJOR TOURIST ATTRACTION BRINGING MILLIONS OF DOLLARS TO TRI-CITIES.

COUGAR
WSU/TRI-CITIES MASCOT TO BE REPLACED
BY GIANT GROUND SLOTH WITH 3" DIAM DUNG BALLS
FOR SNOWBALL FIGHT SUBSTITUTE

G. Jansen 126 ORCHARD COURT RICHLAND WA
30 AUG 2000 627-7385

HTTP://WEST RICHLAND.
.3-1/8 CITIES.COM

398-1

Response to Commentor No. 398

398-1: Comment noted.

**Commentor No. 399: Donna Noski, Council Member,
City of West Richland, WA**

The time is close when a decision will be made on the future of the Fast Flux Test Facility. When all the information is compiled, it will come down to the Department of Energy determining what is the "right" decision on the future of the controversial FFTF.

How will DOE make the "right" decision? How will ^{DOE} you determine what is in the highest and best interest of our nation? I offer that the decision process simply comes down to determining "what works". "What works" cannot be separate from the highest and best interests of the nation and the world.

FFTF is capable of: *Civilian Nuclear Research & Development*
Transmutation of Waste to reduce nuclear waste stockpiles *to include*

FFTF is capable of:
Producing power for NASA's deep space probes

FFTF is capable of:
Producing medical isotopes for treatment of cancer and other diseases.

As a result of these capabilities, the final EIS should identify

- FFTF as the preferred alternative
 - it should include health care cost savings
- and,
- it should identify the importance of the need for expansion of medical isotope production

Restart of FFTF is in the highest and best interest of our nation. Making the decision to restart FFTF is "what works".

*Donna Noski
West Richland City Council Member*

399-1

399-2

399-3

399-2

Response to Commentor No. 399

- 399-1:** DOE notes the commentor's views on decisionmaking in the NEPA process.
- 399-2:** DOE notes the commentor's support for Alternative 1, Restart FFTF.
- 399-3:** DOE notes the commentor's views that health care cost savings and the importance for expanded medical isotope production be identified in the NI PEIS. The estimated costs of the range of reasonable alternatives are presented in the Cost Report, summarized in Appendix P of the Final NI PEIS. However, the Cost Report is not a cost-benefit analysis. While it is reasonable to believe that the benefits of medical isotopes are substantial, the purpose of this NI PEIS is to describe the nuclear infrastructure missions (Section 1.2 of Volume 1), a range of reasonable alternatives for satisfying the mission requirements (Section 2.5 of Volume 1), and the environmental impacts that would result from implementation of the alternatives. According to 40 CFR Section 1502.23 if a cost-benefit analysis exists, it must be reported and summarized in the NI PEIS.

**Commentor No. 400: Ken Dobbin, Councilman,
City of West Richland, WA**

Secretary William Richardson
United States Department of Energy
Forrestal Building
1000 Independence Avenue SW
Washington, DC 20585

August 31, 2000

Dear Mr. Secretary:

During the FFTF scoping meetings last year, I spoke on behalf of the residents of West Richland. This year, I am morally compelled to speak on behalf of a larger constituency. I must speak for the thousands of American children and tens of thousands of American adults, across our great land, who will, over the next 35 years, owe their lives to the FFTF. The citizens of West Richland expect me to speak out for those helpless in the face of cancers not now curable.

On behalf of those Americans, from coast to coast, whose lives will be saved from FFTF isotopes, I want to thank the United States Department of Energy, from the bottom of my heart. Thank you for carefully weighing the science in preparing this Programmatic Environmental Impact Statement (PEIS). It would have been far easier to fold under the political pressure of anti-nuclear fanatics who don't care about the helpless, but only in advancing their own agendas. I am speaking of fanatics who say we don't have a shortage of medical isotopes, even though there is a one-year backlog for Pd 103 seed therapy and patients have been denied clinical trials using nuclides such as Cu-67 due to lack of supply. I am speaking of fanatics who propose either a red herring of an accelerator that only has a target volume the size of a pop can or one that costs billions of dollars and 10 years to build. I am speaking of fanatics who falsify safety data to say that there is a one-in-three chance of an accident that will contaminate eastern Washington. I am speaking of fanatics who say let people die rather than bring one more atom of waste to Hanford--then they turn around and dump the 1000 ton radioactive Trojan reactor vessel on us!

On behalf of those Americans whose future depends upon the FFTF, I respectfully ask that the argument for restart be strengthened. Please add to the final PEIS the medical cost savings from a sufficient supply of medical isotopes as a first line defense against cancer, heart disease, and arthritis. Estimates I have seen put these savings in the billions of dollars. Please add the loss of life that will result from choosing an option that takes longer to build than the three year startup time of the FFTF. These data should be added to Figures S-5 and 2-24. The four years quoted in Table E-12 must be a misprint. I cannot conceive of a facility that could produce all the required isotopes being built in that short of a time. Please compare the debt service on the capital cost to build new production capability, with the much smaller annual operating cost of the FFTF. In addition to the saving of lives, taxpayers expect us to be good stewards of their dollars.

Our opponents, who have shown they don't understand science, medicine, or engineering, have falsely accused the FFTF of generating too much waste. Please clarify the facts for them. Show a picture of one of the score of dry fuel storage casks now stored on a pad at

Response to Commentor No. 400

400-1

400-1: DOE notes the Councilman's views and observations.

400-2: DOE notes the commentor's views on the costs and benefits of the proposed production of medical radioisotopes. The estimated costs of the range of reasonable alternatives are presented in the Cost Report, summarized in Appendix P of the Final NI PEIS. However, the Cost Report is not a cost-benefit analysis. While it is reasonable to believe that the benefits of medical isotopes are substantial, the purpose of this NI PEIS is to describe the nuclear infrastructure missions (Section 1.2 of Volume 1), a range of reasonable alternatives for satisfying the mission requirements (Section 2.5 of Volume 1), and the environmental impacts that would result from implementation of the alternatives. According to 40 CFR Section 1502.23, if a cost-benefit analysis exists, it must be reported and summarized in the NI PEIS.

400-2

400-3

400-2

400-4

400-3: The four years stated in the NI PEIS Table E-12 is not a misprint, but is based on comparable radioisotope production research reactors that have been designed and are being constructed in Canada and Australia, as referenced in Section E.10. The four year time period is for new research reactor construction only and does not include design, licensing, and pre-operational startup activities, which were assumed to require an additional four years as presented in PEIS Figure 2-34 of Volume 1.

400-4: DOE notes the comment.

Commentor No. 400: Ken Dobbin, Councilman (Cont'd)
City of West Richland, WA

Response to Commentor No. 400

the FFTF. Each cask, about the size of a compact car, contains 7 spent fuel assemblies, already in a dry, controlled environment that is safe until a repository is opened. To save the lives of the constituents I am representing tonight, it will only take two more casks per year. Compare this volume with the spent fuel the Navy is generating that must go to the same repository. Each day, a foreign power, called cancer, enters the US and murders 1500 Americans. We need the FFTF to defend those people as much as the Navy needs submarines! Also compare the one truckload of low-level waste from the FFTF each year with that generated by other sources such as hospitals. Will our fanatical opponents declare war on hospitals next? It will take the FFTF much longer than 35 years to generate as much low-level waste as Oregon sent us last August on one barge! Let our hypocritical opponents declare war on Oregon, not on those suffering from cancer.

400-4

Please emphasize how the FFTF is complimentary with other DOE sites and facilities. For my 25 years as a nuclear engineer, too often I have seen one site pitted against another rather than cultivating cooperation. I was told in 1993 that the FFTF would have to be shut down to save EBR-2 and the Integral Fast Reactor (IFR) program. I was also told that the Advanced Neutron Source would produce all needed medical isotopes. It was not long after the FFTF shutdown order that these facilities were shut down and canceled, invalidating the justification for FFTF shutdown. We know now that without the FFTF, the DOE cannot produce a space power source, provide for material science testing along with the other nuclear technology needs and still provide the quantity and quality of medical isotopes that my constituents will need. New facilities with the same capability cannot be built in the three year period that it takes to get the FFTF restarted. Every minute, every hour, every day, every month that we delay, human life is lost! All DOE sites cannot help but embrace the FFTF startup to create a rising nuclear technology tide that will raise the well-being of all Americans. No one could support delay in getting on line a medical facility to supply the required quantity and quality of isotopes. No one could intentionally delay a facility that will transform the new promising clinical trials to a first line defense, coast to coast.

400-5

400-5: DOE notes the concerns expressed about efficient and coordinated use of its facilities and resources.

400-6

400-6: DOE notes the commentor's support for Alternative 1, Restart FFTF.

FFTF operation is good for America. Our opponents have tried but failed during the last 4 years to find a legitimate reason not to restart. I have sat through public meeting after public meeting listening to their false testimony. I have read their internet sites. They have not developed one legitimate reason why the FFTF should not be restarted!

400-1

Therefore, let's get on with it. Please designate the FFTF as the preferred alternative in the final PEIS and make a record of decision to restart as soon as possible. Every minute of every day another American man, woman, or child dies of cancer. They are depending upon us!

400-6

Sincerely,

Ken Dobbin

Ken Dobbin, Councilman
City of West Richland, WA

Commentor No. 401: Jim Davis



Jim Davis for Congress Campaign
2132 Harris Ave.
Richland, WA 99352
(509) 946-0826

FOR RELEASE
Aug. 31, 2000

For more information contact:
Patty Heasler, campaign manager
(509) 946-0826 headquarters
(509) 366-2471 cellular

Jim Davis Strongly Favors Restart of FFTF

Testimony submitted August 31, 2000 by Jim Davis in support of FFTF at Richland's

Tower Inn:

This letter is in response to the comment period concerning the findings of the Department of Energy's (DOE) Nuclear Infrastructure Programmatic Environmental Impact Statement (NI PEIS).

I strongly endorse the restart of the Fast Flux Test Facility (FFTF) for essential peaceful, civilian missions. I believe this can be done without sacrificing the primary clean-up mission of Hanford and without generating substantial new waste streams that pose a significant burden to the clean-up mission.

401-1

Response to Commentor No. 401

401-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 401: Jim Davis (Cont'd)

FFTF is America's best answer for medical isotope production. Reactivation of FFTF will allow more people to effectively combat cancer. In addition, FFTF can also produce more kinds of isotopes, providing more flexibility for isotope research, which can lead to more effective treatments for cancer.

From my reading of the cost analysis released by the Department of Energy, I feel the restart of FFTF is the most cost-effective solution. The added costs of converting FFTF from standby to shutdown will cost an estimated \$281.2 million. This would take a substantial amount of money away from environmental cleanup.

FFTF is not an issue we should be playing politics with. Like all difficult issues, we are going to have to work with local officials, with the Administration and with both sides of the state to produce results. We have the unique opportunity to operate a state-of-the-art research facility here in the Tri-Cities community. We can truly save lives, as thousands will be treated with the medical isotopes that are produced at FFTF.

I am convinced that FFTF can be restarted without endangering the critical cleanup missions at Hanford. In congress, I will fight to ensure that FFTF funding does not cut into cleanup missions. We have to restart FFTF; people's lives depend on it.

###

401-1

Response to Commentor No. 401

Commentor No. 402: M. F. Duffield

Draft PEIS Comment Form

I am in favor of start up of
FFTF for medical ~~isotope~~ ^{isotopes} +
PU238

402-1

402-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail, Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Maurice F. Duffield

Organization: _____

Home/Organization Address (circle one): 1940 Pheasant

City: W. Richland State: LA Zip Code: 99353

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov





Draft PEIS Comment Form

So often when local state or national government try to erect or construct a new controversial project, there is the NIMBY effect - Not In My Backyard. Here in the Tri-Cities, we want the FFTF to be restarted because of all the good results that will occur. If it is not restarted, you can believe that getting another reactor or accelerator built will be exceedingly difficult to do. The same groups that are trying to deactivate FFTF will try to prevent or delay the construction & activation of these other projects. In other words, you can almost be assured that the production of adequate isotopes, W238 and research will not be available for many years, if even.

403-1

403-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

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- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Ginger Vetrano

Organization: NIA

Home/Organization Address (circle one): 4512 W. Yellowstone

City: Kennecook State: WA Zip Code: 99336

Telephone (optional): (509) 735-4248

E-mail (optional): Vetrano@owt.com

COMMENTS MUST BE POSTMARKED BY September 18, 2000

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Toll free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
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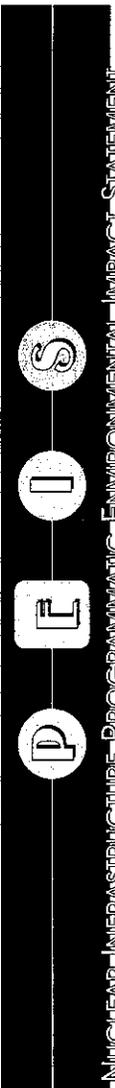


7/12/00

Commentor No. 404: Roger J. Thiede

Response to Commentor No. 404

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

- ① Recommended returning FFTE as operating reactor for primarily medical isotopes. Although I retired in 1989, I was intimately involved in the standards used to construct FFTE. FFTE is a good machine and is too valuable to shut down.
- ② Wife died in 1995 of cancer. New treatments with isotopes might have saved her.
- ③ Grandfather died of prostate cancer.
- ④ Grandmother died of cancer even though it was in remission after 5 yrs following radiation therapy.

404-1

404-1: DOE notes the commentor's support for Alternative 1, Restart FFTE.

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Roger J. Thiede

Organization: Self

Home/Organization Address (circle one):

1314 Birch Ave.

City: Richland State: WA Zip Code: 99352

Telephone (optional): 509-945-1905

E-mail (optional): rathiede@aol.com

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 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: NuclearInfrastructure-PBS@hq.doe.gov



Commentor No. 405: Walt Apley

My name is Walt Apley and I am a resident of Richland, Washington. I support FFTF restart for medical and industrial isotope production, Plutonium-238 production, and research & development irradiation requirements.

Besides expressing that support, I have three comments:

(1) The debate on FFTF should not distract us from acknowledging how critically important the nuclear infrastructure needs are.

A great nation like ours must: promote the health and welfare of its citizenry; protect the environment we live in; and support the beneficial expansion of human knowledge.

Failure to provide medical isotopes is not an option.

Failure to provide nuclear research capabilities is not an option.

Failure of this EIS to result in a decision that fixes what is a clear and present danger is not an option.

(2) My second comment relates to, given the need, why FFTF?

FFTF has the size no other available test reactor has to meet a self-supporting set of missions. FFTF's safety record is superb and it remains the Department of Energy's only reactor that meets modern commercial U.S. nuclear standards. FFTF's neutron spectrum is a unique scientific asset, and it would be a technological tragedy were that asset to disappear. The fast neutron spectrum is a critical tool needed for high purity isotope production, fusion materials research, waste transmutation development, and nuclear materials lifetime extension studies. Eliminate this scientific tool and you take an almost irreversible step to set nuclear research back in a major way.

(3) My third comment is a concern, and a cautionary statement. FFTF is an outstanding facility that

Response to Commentor No. 405

- 405-1 405-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.
405-2: DOE notes the commentor's opinion.

Commentor No. 405: Walt Apley (Cont'd)

should be restarted and could be ^{an incredible} ~~such a~~ boon to health care and nuclear research. But DOE and Congress must recognize that a great investment like FFTF requires sustained and sufficient investment. I'm sick and tired of the short-sighted, penny-pinching, do it with less attitude that Congress and this administration has displayed towards its nuclear infrastructure. A decision to restart FFTF needs to come with the firm resolve to fund excellence.

405-1
(Cont'd)

405-2

I know that the people involved in putting together this EIS and making the decision are doing their best. But as Winston Churchill ~~once~~ said "Sometimes it is not enough to do your best. You must do what is right." Restarting FFTF is the right decision.

405-1

Response to Commentor No. 405

Commentor No. 406: Bruce Klos (Cont'd)

Although the three-page letter had many of these half-truths I will limit my remarks to three or four of them, depending on the time. A couple of these were addressed in the opening remarks but I believe bear repeating.

FFTF - copy of relevant pages are available at the DOE table.

First half-truth - The NERAC subcommittee (the referenced "blue ribbon panel") did indeed state that the FFTF was ill suited (because of

IN FACT I noticed

financial - not technical reasons) to produce research isotopes. However, *IN FACT, I NOTICED COPIES OF EXCERPTED PAGES FROM THIS REPORT*

the NERAC subcommittee also said that there was a shortage of isotopes and that the FFTF was well suited for large scale production of isotopes;

ON THE DOE TABLE

isotopes that will be needed to treat patients, not just conduct research.

What use is the research if you don't have the production quantities to treat patients? The report encouraged the FFTF supporters to seek partnership with private industry for the production of these treatment quantities. Quantities that will be used to treat hundreds of thousand of patients. The NERAC subcommittee also heartily endorsed the Expert Panel Report, which predicted the growth to be 7% - 14% for therapeutic isotopes. NERAC saw the obvious potential of the FFTF as a large-scale

406-1
(Cont'd)

Response to Commentor No. 406

Commentor No. 406: Bruce Klos (Cont'd)

isotope production machine and applauded this capability throughout the report.

Second half-truth - The PEIS identified Puget Sound as a possible Port of Entry for the German Reactor-Grade fuel. However, the Senator failed to recognize it is unlikely that DOE will even ship the fuel to Puget Sound, not because of any risk, but because it costs more to sail to the west coast than to sail directly to an eastern port. The PEIS also indicates that Charleston Naval Station has been the primary port for receiving foreign fuel for the past five years and was the port selected for ~~detailed~~ ^{the boundaries} analysis in the PEIS.

The signers of the letter also failed to recognize that the accident risk in the PEIS was determined to be less than 10^{-12} latent cancer fatalities or 1 in a trillion. For perspective, the chance of dying from cancer from one flight across the U.S. is 1 in 1 million. The chance of dying from an asteroid is 1 in 1.6 million. The chance of dying from this fuel shipment is

**406-1
(Cont'd)**

Response to Commentor No. 406

Commentor No. 406: Bruce Klos (Cont'd)

approximately
 A million times less. Clearly these members of Congress Senator are
 misinformed of the risks or have been misled.

Relates to the need for Pu²³⁸

Third half-truth - In Seattle, last night I referred to this as a half
 truth. I have since re-read the letter, and must confess that I was too
 generous in that assessment. This aspect of the letter appears to be an
 outright falsehood. The letter states "The major claimed need for
 FFTF restart no longer exists, yet the Department continues to expend
 funds and undermine its credibility by continuing to propose the restart
 of the FFTF reactor to meet a need for **Plutonium that NASA has
 informed you does not exist.**" NASA did not say they no longer need
 Plutonium. NASA did state that they no longer required small RTGs for
 long space missions. These batteries use Pu-238 for the heat source.
 The same letter also indicated that NASA is transitioning to the more
 efficient Stirling Radioisotope Power System. This generator still
 requires Pu-238.

406-1
 (Cont'd)

Response to Commentor No. 406

Commentor No. 406: Bruce Klos (Cont'd)

How much effort would it have taken to for a Representative of the Federal Government to find this simple truth? Last night I ~~said~~^{asked} where was the other half of the truth, tonight I ask them where is any aspect of the truth?

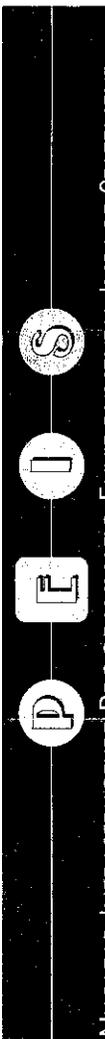
As evidenced by the letter from the Association of Washington Business, and a recent Portland Oregonian editorial, there are those in Western parts of Washington and Oregon who support a balanced view of the issues; not just the anti-nuclear, anti-technology, anti-business views of many who were at the Hood River, Portland and Seattle meetings. As elected representatives you have a responsibility to your entire constituency. By not researching the whole truth, you do a disservice to them and to the remaining residents of the great state of Washington.

**406-1
(Cont'd)**

Response to Commentor No. 406

Commentor No. 407: Joyce M. Fitzgerald

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

or a loved one
 Until you have heard your doctor say
 "you have cancer - you will not know the
 meaning of the word "fear"
 "Fear" that works its way through your
 entire body - your life truly does flash in
 front of your eyes --
 This is a real fear a life threatening fear
 that is destined to change not only your
 entire life process, but of each person
 around you - this is the 1st step - just
 dealing with this fear!
 The 2nd step - treatment! *What?*
 Once you start to deal with this part of the
 process, you can invariably turn to *so many*
 ways *are* there more available & why aren't they
 more manufactured here?!

*These are real fears: & that is what we should be
 dealing with - anything at all that can be done
 to expedite this process - MUST BE UNDERTAKEN!*
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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Joyce M. Fitzgerald

Organization: _____

Home/Organization Address (circle one): 4301 English Court
West Pukland

City: WV State: WV Zip Code: 26033

Telephone (optional): _____

E-mail (optional): doublefitz@aol.com

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7/12/00

Response to Commentor No. 407

407-1

407-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 408: Victor and Roberta Moore

Victor & Roberta Moore

8149 W. Clearwater Place
Kennewick, WA 99336-9574
vbmoores@owl.com • (509) 734-8436

August 31, 2000

MS. Collette Brown
U.S. Dept. of Energy
NE, -50 Germantown Road
Germantown, MD 20874-1290

My wife and I moved to Kennewick, WA a little over two years ago. We were under the impression from what we could find out, that the mission for the Hanford project was to be clean-up.

408-1

Now comes the "boosters" for the restart of a moth-balled reactor in hopes of producing medical isotopes, although evidently, they are easily obtained from other countries.

408-2

The "boosters" also are pushing to perhaps produce space batteries, although we read that NASA says they have changed their requirements to a different form of energy.

408-3

Restarting the FFTF would mean adding more nuclear waste to the already overloaded wastestream that has no good way of disposal and no place to go.

408-4

Count us in the column to stay the course and continue with the Clean-up Mission!

408-1

No more production from Hanford until clean-up is accomplished.

Thank you,

Victor Moore

Victor Moore

Roberta Moore

Roberta Moore

Response to Commentor No. 408

408-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Prior public meetings were held on this formal milestone change.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected. If the decision is made to shutdown the FFTF, then cleanup dollars will be needed to deactivate the facility, which could impact the overall Hanford cleanup schedule.

DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "... ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

With respect to plutonium processing, no weapons material will be produced within the stated mission. All proposed activities are for civilian purposes.

Commentor No. 408: Victor and Roberta Moore (Cont'd)

Response to Commentor No. 408

408-2: For nearly 50 years, DOE's use of its unique technologies and capabilities to develop isotopes for civilian purposes has enabled the widespread application of medical isotopes seen today. While its market share is a small fraction of total world isotope production, DOE remains the key provider for a large number of isotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially experimental, these isotopes are not generally purchased in large-enough quantities to make their production financially attractive to private industry.

The United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

408-3: A May 22, 2000, correspondence from NASA to DOE identified that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Commentor No. 408: Victor and Roberta Moore (Cont'd)

Response to Commentor No. 408

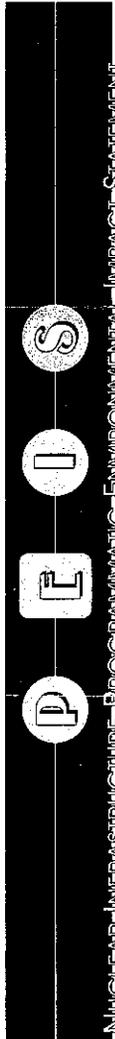
408-4: FFTF restart would not impact the schedule or available funding for existing cleanup activities nor would it generate high-level radioactive waste. As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram funds designated for Hanford cleanup, regardless of the alternative(s) selected.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

Commentor No. 409: Gene Koschik

Response to Commentor No. 409

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

I WAS MGR OF THE PLANNING + SCHEDULING AT THE CONSTRUCTION SITE FROM ~~1973-1976~~ 1973-1976. I SAW THE QUALITY WORK THAT WENT INTO THE FACILITY. IT PROVED ITS WORTH DURING A 10 YEAR PERIOD.

LAST YEAR MY WIFE HAD TOLD SHE HAS CANCER OF THE COLON! WHAT A ~~SHOCK~~ BLOW TO OUR FAMILY. I SPOKE AS ONLY ONE FAMILY THAT HAS A NEED FOR FTF. MULTIPLE THIS VERY SERIOUS MEDICAL BY THOUSANDS OF OTHERS ACROSS OUR NATION.

I ~~BE~~ ALSO WORKED IN (U) PROSECUTOR AS A MANAGER - WHEN I HEARD TONITE THAT WE BUY FROM RUSSIA, GERMANY AND CANADA AND WE SUPPORT OVER 100 OTHER COUNTRIES! WHAT A "HORRIBLE" ~~SCARY~~ SITUATION FOR DOE TO BE IN - AND IMPART 90% OF ISOTOPES !!!

PLEASE RESTART FTF - THIS IS A "MAKE" DECISION NOT A "BUY" DECISION.

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): GENE KOSCHIK

Organization: RETIRED - WESTINGHOUSE HANFORD COMPANY

Home Organization Address (circle one): 121 W 31ST

City: KENNEWICK State: WA Zip Code: 98337

Telephone (optional): _____

E-mail (optional): _____

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7/12/00

409-1

409-1: DOE notes the commentor's support for Alternative 1, Restart FTF.

Commentor No. 410: Laurel Piippo

PEOPLE FOR A KINDER AND GENTLER TREATMENT FOR CANCER

FFTF4

Collette Brown
Department of Energy
August 31, 2000



CANCER SURVIVOR LAUREL PIIPO

Dear Ms. Brown,

I've attended hearings in Hood River and Portland this week, plus hearings last year, and I'm exhausted. In those cities I've been called a 3-hour carpet bagger, told I was arrogant for being there and told to stay home, because it was THEIR hearing, told NOT to leave a hearing at 10:30 PM for the 3 hour drive home because the hearing wasn't over and I should have the courtesy to stay, asked how I had the gall to come to THEIR hearing. I've also been called a Bimbo, asked if my friends and I were the Singing Grandmas or a bowling team and accused of being a Communist because I wear a red shirt, but the accuser would rather be red than dead ha ha. Any time children's treatment for cancer was mentioned, a group of gigglers giggled. They probably laugh their way through the obituary column. People so vociferously opposed to nuclear medicine would rather be dead than cured. Having taught in the public schools for 20 years, rude treatment and name-calling rolls right off me because it says everything about the speaker and nothing about me.

410-1

I am appalled that an issue of such importance to the health of the American people should be decided by showmanship at expensive and wasteful hearings where ignorant people voice their emotions and little else. In Hood River we were subjected to papier-mâché Mardi Gras clowns representing Gore and Bush, also a man with a guitar and a lady friend who distributed words against FFTF for everyone to sing. In Portland a woman "testified" by singing a song. I admire their enthusiasm and creativity, but deplore their lack of scientific knowledge and technical expertise. Unfortunately, I share that particular deficiency, but I can say CLEAN UP HANFORD and CURE CANCER.

When my friends and I drove home from Portland yesterday we stopped at a view point high on a cliff above the Columbia River. The beauty of that river is so stunning I can't describe it. DOE, don't you dare dilly-dally in cleaning up the toxic waste at Hanford, which is seeping toward the river. That river runs through my town, Richland, where I've lived with my husband since 1951. Our two sons were born here and our seven grandchildren, who still live here. My husband used to be a great steelhead fisherman, and we all enjoyed eating it for many years. I am the only one of 13 in our family who has had cancer. I do not believe living near Hanford caused my cancer, but I am not a scientist, so I don't know -- and neither do you. I do know that we have a lower cancer rate than the national average, and a much lower rate than our neighbors in Hood River County, Oregon, according to the American Cancer Society.

410-2

I am here for two reasons: CLEAN UP HANFORD. The DOE has an obligation to the people of the Pacific Northwest to CLEAN UP HANFORD, and I appreciate their focus expressed by people I heard in Hood River and Portland. I'm offended by another kind of waste -- the waste of taxpayer money in building FFTF and letting it sit costing millions of dollars for the past seven years. The DOE has an obligation to the American people to restart FFTF for the manufacture of medical isotopes for a kinder, gentler treatment for cancer. We have wasted seven years, wasted money, while 600,000 people per year die of cancer. A friend, mystified, asked me, "How could anyone be against medical isotopes?"

410-3

410-4

Medical isotopes offer a less traumatic treatment for many kinds of cancer. Cancer survivors like me go through barbaric and brutal traditional treatments, partly because anti-nuclear hysterics want to maintain the status quo. I am a four time cancer survivor, three times life-threatening. I hate boring you with a repetition of my medical

Response to Commentor No. 410

410-1: DOE notes the commentor's views and observations. It is DOE policy to encourage public input on matters of regional, national and international importance. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

410-2: DOE notes the commentor's support for Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

410-3: DOE notes the commentor's opinion.

410-4: DOE notes the commentor's support for Alternative 1, Restart FFTF.

410-5: DOE notes the commentor's views about lessons to be learned from other countries on waste management and the limited benefit of the hearing process. See also response to comment 410-1. The U.S. frequently collaborates with France and other nations with developed nuclear power industries to share technology and nuclear practice information and experience.

Commentor No. 410: Laurel Piippo (Cont'd)

history. I had a radical mastectomy and removal of 18 lymph nodes in 1989 followed by six months of chemotherapy, the traditional brutal treatment that poisons the entire body. I know. For 18 hours after each chemo treatment, I lay on the bed trying not to throw up, unable to eat or drink anything, as close to hell as I've ever come. I would rather be dead than go through chemotherapy again. I had a Rubbermaid waste basket next to the bed for throwing up. When I tried to clean the bucket afterwards, it was black and corroded from the poison I had vomited. I looked at that bucket and thought, "My God, this brutality is supposed to cure me?" Of course my hair fell out and not just on my head -- eyebrows, eyelashes, nose hair, pubic hair, underarm and leg hair thinned out disgustingly. I told my husband, "I am a two-legged bald-headed hairless freak," stuck the hair that fell off by head in a box and gift-wrapped it for my doctor. Incidentally, the cancer was found by an X-ray -- nuclear medicine. I had extensive reconstructive surgery in May 1990.

In September 1990 a chest X-ray discovered lung cancer. Surgery was required to remove the lung. At that time I was so dumb I didn't know why half a dozen doctors standing by my bed at Virginia Mason Hospital seemed so relieved to tell me the lung cancer had nothing to do with the breast cancer. My main worry was that surgery might ruin my reconstruction. I had no idea that some kinds of cancer run round the body attacking organs until they kill you. I was fortunate to have primary cancer cured by surgery! The cancer had not metastasized, but for about six weeks the pain was excruciating. Since I have a high pain threshold, this surprised me. Recovering from previous surgeries was not a big deal, but my nurses were perturbed because I refused pain pills. Finally, I asked for two aspirin every night at midnight, and they felt much better. Lung surgery is something else. When a surgeon inserts a knife and removes a vital organ, the body is brutalized, and the pain is dreadful. I ate pain pills like popcorn and quit feeling so smug about being tough.

A couple of years later I finished reconstructive surgery when tissue was removed from the inner thigh and transplanted onto the breast to form a nipple and areola, just to give you all the intimate details. In 1993 cancer on the scar tissue came back on my right side. More surgery. I would have refused chemotherapy, but thank heavens the doctors prescribed radiation treatment -- 35 treatments over a 7 week period during which the entire upper right side of my body was ~~radiation~~ was burned red, blistered, raw, and bloody so treatment had to be suspended for 10 days. "This is barbaric. There must be a better way," I yelled.

Old-fashioned blasts of radiation melted down the last part of my breast reconstruction. The side effects over the years include lymphedema (swollen arm) because surgery, chemotherapy, and radiation finally broke down my formerly efficient lymph system in January 1997. I have to exercise and massage my arm daily and purchase compression garments three times a year at a total cost of about \$350 for the rest of my life. Another side effect were weakened bones on my right side, which resulted in fractured ribs on two different occasions. Shingles is another predictable side effect of radiation, and I didn't miss out on that one either. A persistent little cough is another side-effect of fried lungs. I never had a moment's pain from cancer because nuclear medicine caught it in time. It's the treatment that is awful. I am grateful to be alive and am dedicating my life to supporting medical isotopes as a more humane treatment for many types of cancer. Cancer fatalities are generally described in the obituary column as having "fought a courageous battle against cancer." I'm looking for a new disease, but if I do die of cancer, it won't be courageously. It will be a cowardly ~~and~~ demise because this wimp refuses to take chemotherapy, and I am furious with anti-FFTF demonstrators who heartlessly demand, "Clean up Hanford and postpone cancer treatment." In other words, "Suffer and die because of our fear and ignorance." I'm told that FFTF would produce about the same amount of nuclear waste as two of our state universities. Again, I'm not a scientist, but I'd believe scientists before I'd believe the "Suffer and die" proponents. As a nation, aren't we smart enough to clean up and cure at the same time?

I don't know enough to comment about the other missions suggested for FFTF, but I do know that certain kinds of blood cancer, thyroid cancer, prostate cancer have been successfully treated with medical isotopes, called smart bullets, which directly attack the cancer cells without poisoning or burning surrounding tissue. I was

Response to Commentor No. 410

Commentor No. 410: Laurel Piippo (Cont'd)

astounded to hear from many people testifying against reactivating FFTF that this is about money, that the selfish Tri-Citians want jobs regardless of nuclear waste. They have the gall to judge my values by theirs. Money and jobs have nothing to do with my attending these tedious hearings. One person in my family works at Hanford in waste clean-up. My major concern is health, with the equally important concern of clean up. If they think this is about money, they must have left their brains and ~~any~~ compassion in the parking lot.

A couple of years ago I heard a program at Richland Kiwanis from a man who had studied nuclear waste disposal in France where nuclear power is an accepted fact of life. He visited their nuclear site, describing the area as beautifully landscaped with flowers, trees and green grass, and several large neat boxes which contain nuclear waste, controlled and contained. If the French can do it, why can't we? Why not direct your energies to going to France and coming back with a solution instead of looking for it among ignorant and emotional folks like me. I shouldn't have to come to these damn hearings over and over again when scientists and others who care about health and the environment should make an intelligent and compassionate decision: *restart FFTF*

Sincerely,



LAUREL PIIPPO

1334 Sacramento Boulevard
Richland WA 99352
(509) 943-3415

Response to Commentor No. 410

410-5

410-1

410-4

Commentor No. 411: Ken Greenwell

FMIT versus FFTF

Hello. My name is Ken Greenwell. I live in Kennewick, Washington, and I am here representing myself. I would like to respond to statements that have been made about using an accelerator based facility like the Fusion Materials Irradiation Test (FMIT) facility to produce isotopes instead of the FFTF. I worked on the FMIT project, and there are several basic problems with this approach.

For background, the FMIT facility was being developed at Hanford in the early 1980's to test materials that could be used in a fusion reactor. Due to changing program needs and priorities, the project was cancelled before the development and design was totally completed or demonstrated.

In the FMIT facility, a beam of neutrons was to be used to irradiate small metal samples that might be used in a fusion reactor. The neutrons were to be produced by what is called a charged particle stripping reaction in which deuterium would be accelerated to impact a liquid metal target. When the deuteron beam hit the target, charged protons would be stripped off leaving only non-charged neutrons to continue out the back of the target. This would produce a beam of neutrons continuing in the same direction as the original deuteron beam superimposed on a lower flux neutron field.

Although suitable for the special purposes of the FMIT project, the neutron beam and available irradiation volume would not be very usable for many of the missions proposed here tonight. As an example, the higher neutron flux volumes, without targets in place, were very small, ranging from about one hundredth of a liter to one half liter dependent on the neutron flux level. This relatively small irradiation volume at the higher flux levels would severely limit the number and amount of medical isotopes that could be irradiated in a short time. Additionally, the neutrons from the FMIT target would include many very fast neutrons. The efficient production of many medical isotopes requires slower neutrons which are obtained by the use of what is called moderator materials. Adding moderator material and coolant within the irradiation volume would further cut down on the flux and the volume available for targets. Finally, the neutron

Response to Commentor No. 411

411-1

- 411-1:** DOE agrees with the commentor that an accelerator like the FMIT would not be a viable alternative for the proposed action. The accelerators proposed for Alternative 3, Construct New Accelerator(s), are discussed in Volume 1, Section 2.3.1.5 and Appendix F.
- 411-2:** DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 411: Ken Greenwell (Cont'd)

beam was directional near the FMIT target with steep variations in flux level which would affect uniformity of irradiation. In the region outside the highest flux volumes mentioned above, there are of course other neutrons, but the neutron flux level drops off significantly with distance making it less attractive for producing high quality isotopes.

The above factors, particularly limited irradiation volume at higher fluxes, would make an FMIT size facility impractical for making any significant amount of high quality isotopes or irradiating physically large targets in a reasonably short time. Based on a usable FFTF target irradiation volume of about 80 liters, the FFTF would provide up to 8,000 times the irradiation volume of the FMIT at the highest corresponding FFTF flux level and over 160 times the volume at the lowest FFTF flux level.

Therefore, to provide a high flux irradiation volume comparable to FFTF would require building many FMIT type facilities. At a cost of more than 105 million dollars nearly 20 years ago, it would cost billions of dollars today to provide the required number of FMIT type facilities. It is conceivable that changes in technology might allow some scale-up to reduce costs, but this would likely mean a return to a research and development project perhaps with new technical uncertainties, additional costs, and delays. These facilities would also require hundreds of megawatts of electrical power for operation, with the associated added costs and environmental impacts for providing power. Finally, the FMIT was never built nor was it proven full scale. The free surface, high power, liquid metal target, which was essential to satisfactory operation of FMIT, was never actually demonstrated on any accelerator in the world, and thus it is not a readily available technology.

Based on the above, the FMIT approach is not a viable option. There is no valid basis for saying that an FMIT type facility would be superior to, or even remotely comparable to, the FFTF for medical isotope production or for civilian nuclear research and development work. I strongly urge the DOE to restart the proven, existing FFTF for the PEIS missions.

Ken Greenwell
515 W. 20th Ave.
Kennewick, WA
99337

Page 2 of 2

Response to Commentor No. 411

**411-1
(Cont'd)**

411-2

Commentor No. 412: Dale Bartholomew

Response to Commentor No. 412

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

and gratefully lead.

- I'm here this evening to support your restart of FFTF.*
- I'm here as a cancer survivor and would like others to have the opportunity to receive therapeutic isotopes like I have. FFTF can provide that opportunity.*
- I also would like support to restart the generation of Pu-239. Back in the early 70's I worked at RTG fabrication facility and we never had any radiological or biological problems associated with the Pu-239.*
- My job was at a company which was radiologically safe. I was not a destructive test in the laboratory. Many applications are being used in correcting environmental issues such as Pb detection in paint in older properties and in the process.*
- Finally, I am very convinced that people who are opposed to restart, do not appear to be open to factual, objective technical data. I believe if they had an opportunity to work in nuclear facilities such as FFTF, they would realize their fears are unfounded.*
- It is my sincere hope that DOE's Record of Decision will be based solely on a thorough, technical analysis. Not the emotional or currently politically correct positions.*

412-1
412-2

412-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

412-2: DOE notes the commentor's views. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): DALE BARTHLOMEW

Organization: _____

Home/Organization Address (circle one): 1330 BROADVIEW DRIVE

City: W. RICHLAND State: WA Zip Code: 99353

Telephone (optional): _____

E-mail (optional): dalebartholomew@att.net

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For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



Commentor No. 413: Rick Mounce

Good Evening, my name is Rick Mounce. I reside in Kennewick, WA. I am speaking tonight as a private citizen.

I was not surprised that the PEIS confirmed that there was essentially no public risk associated with operation of the FFTF to support an expanded isotope mission. Since I have been associated with operation of the FFTF for many years, I can personally attest to its high standards of safety.

But tonight, I would like to comment on some of the information that has been distributed by the activist groups attending these meetings.

One brochure I have read from front to back is titled "Hanford and the River" by Columbia River United. This brochure identifies the major areas and past operations at Hanford that have impacted the Columbia River. I would like to point out that the FFTF operated for over 10 years. FFTF is not mentioned one single time in this activist publication for impacting the Columbia River. Why? Because operation of FFTF has absolutely no impact on the river.

Another hand-out I read was from Columbia Riverkeeper. In it they demand that the following statement be removed from the PEIS summary on spent fuel management. "The environmental impacts associated with the existing inventory of spent fuel at the Hanford site are minimal."

I agree that this statement should be removed. Instead, the PEIS summary should reflect DOE's well-publicized and appropriate commitment to remove the 2100 metric tons of corroded defense mission spent fuel from Hanford's 100 area water basins. This defense mission spent fuel does not include the 16 metric tons of non-defense spent FFTF fuel.

The PEIS summary should also discuss the minimal environmental impacts associated with the spent FFTF fuel on its own merits. Namely, that it is not corroded and is stored in dry storage casks, not aging defense mission water basins. This section should also be consistent with Chapter 4 of the PEIS which correctly states that the FFTF spent fuel will be shipped to the repository for disposal.

Another activist statement made by Seattle-based Heart of America Northwest contends:

Quote "Restart of the FFTF nuclear reactor will have enormous environmental consequences for the Pacific Northwest for generations to come. Restart of the FFTF nuclear reactor will mean importation of Weapons Grade Plutonium in "Mixed Oxide" fuel to Hanford from Germany and production of 35,000 pounds of High-Level Nuclear Waste (here they mean the 16 metric tons of spent FFTF fuel)- waste which USDOE has no idea of where or how to dispose of, but the report (and here they mean the PEIS) just

Response to Commentor No. 413

413-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

413-2: DOE notes the commentor's views and observations. DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and to providing ample opportunity for public comment on those actions.

413-2: DOE notes the commentor's views and observations. DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and to providing ample opportunity for public comment on those actions.

413-3: The discussion in the Summary and Section 4.8.3.5 of Volume 1 on the cumulative impacts for spent nuclear fuel management at Hanford was revised to clarify that the management of the existing spent nuclear fuel at Hanford results in a dose of less than 0.1 millirem per year of the maximally exposed member of the public. This dose is well within the DOE limits given in DOE Order 5400.5. As discussed in that Order, the dose limit from airborne emissions is 10 millirem per year, as required by the Clean Air Act; drinking water is 4 millirem per year, as required by the Safe Drinking Water Act; and the dose limit from all pathways combined is 100 millirem per year. DOE has committed to remove the spent nuclear fuel at Hanford for ultimate disposition in a geologic repository.

413-3

413-2

Commentor No. 413: Rick Mounce (Cont'd)

concludes that the waste can be stored indefinitely at Hanford.” End Quote

First, the FFTF fuel is not, nor could it ever be, classified as weapons-grade plutonium. Also, had Heart of America Northwest read Chapter 4 of the PEIS, they would know that DOE did not, in any way, conclude that the spent fuel would be stored indefinitely at Hanford. Instead, they would know that the disposition path for the 16 metric tons of spent FFTF fuel is ship it to the repository for disposal, the same process as for the nation's 105,000 metric tons of commercial reactor fuel. They would also know that the time-line for doing this is either during operation or at cessation of reactor operation.

Furthermore, if Heart of America Northwest really had public education in mind, they would be knowledgeable about the status of the repository at Yucca Mountain. They would then know that the FFTF fuel is suitable for repository disposal in its current form and that its contribution to the overall projected repository inventory is only 0.015%.

I honestly do not understand the basis for many of Heart of America Northwest's claims that restarting FFTF will have “enormous environmental consequences for the Pacific Northwest for generations to come”. Or their claim that the public must demand that DOE shutdown FFTF to “prevent more disasters at Hanford” and “save the future of Hanford Cleanup.”

Heart of America Northwest must provide accurate credible analysis too substantiate their claims. They must also be willing to come to the table with their concerns so that they can be resolved. Operation of FFTF to produce isotopes for this nation is too important to throw out based on the here-say of a few activist groups.

By using unsubstantiated claims in an attempt to manipulate the public into forcing DOE to shutdown FFTF, it is my opinion that Heart of America Northwest has seriously undermined the NEPA process and their own credibility as a stakeholder.

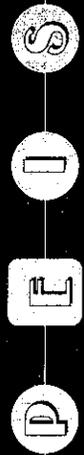
On a personal note, just last month I lost my brother to cancer. He was 49 years old. Perhaps, had FFTF been restarted to produce medical isotopes earlier, he may still be alive today; therefore I fully support the restart of the FFTF to produce medical isotopes in support of the eradication of this and other debilitating diseases.

413-2
(Cont'd)

413-1

Response to Commentor No. 413

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

Please see our comments attached "Breeder Technology: The Key to National Energy Independence" (1990) which I believe is ~~it~~ is very misguided and should be ~~educate~~ educate as to just what the advantages of the FFTF are, actually, the ~~paper~~ paper should be told in terms they understand!

Doc Hastings made statements that should be ~~listened~~ listened to - stop the score cards, etc. at tonight's meeting (8/13/00)

We hope you all have a copy of ~~hot~~ hot Haley's statements that she made tonight!! Shirley Hankins too! and Krome Delvin's and Bob Thompson's speech ~~the~~ the commencing on ~~secretaries~~ secretaries, as well as Jerry Halch's & Jerry Kellers, and Ken Daubins.

Please read & listen to the people who know what they're talking about. We need the FFTF!! Some ~~ones~~ ones should look to ~~argue~~ argue with them of the ~~expanded~~ expanded ~~thus~~ thus ~~in~~ in ~~the~~ the ~~future~~ future ~~for~~ for ~~our~~ our ~~national~~ national ~~interests~~ interests on ~~the~~ the ~~part~~ part ~~of~~ of ~~lives~~ lives that can ~~be~~ be ~~saved~~ saved ~~if~~ if ~~we~~ we ~~can~~ can ~~do~~ do ~~it~~ it.

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure.PEIS@hq.doe.gov

Name (optional): Alice + Peter Shaw

Organization: _____

Home/Organization Address (circle one): 2217 Camas Ave.

City: Richland State: WA Zip Code: 99352-1905

Telephone (optional): (509) 375-1423

E-mail (optional): peter.shaw@jpac.com

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For more information contact: Collette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure.PEIS@hq.doe.gov



7/12/00

414-1

414-1: DOE recorded all comments made at the public hearings and has included them in Volume 3 of the Final NI PEIS with appropriate responses. DOE gave equal consideration to all comments in preparing the Final NI PEIS.

414-2

414-2: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 414: Alice and Peter Shaw (Cont'd)

This was handed to us as we sat down & waited for the meeting to start 8/31/00 @ Iowa Inn, Richland, WA.

BREEDER TECHNOLOGY: THE KEY TO NATIONAL ENERGY INDEPENDENCE! (1990)

The sodium metal cooled Fast Flux Test Facility (FFTF) was obsolete before construction was ever begun, and has never operated as a plutonium breeder. Breeder technology predates FFTF by 25 years! FFTF was preceded by Experimental Breeder Reactor #1 (EBR-1, completed in 1951) and by EBR-II (completed in 1964), both of which proved the breeder concept by producing their own oxide fuel, which was recycled on site, at the same time producing electricity. The only shortcoming of either reactor is that neither recovered fission products for reuse.

Not true! FFTF was proposed to develop methods and materials that had already been developed, tested and proven in EBR-1 & II by 1968. FFTF, fueled with highly enriched (weapons grade) fuel, has never bred fuel, never produced electricity and has only served to heat the desert air. It has no end product that cannot be better produced in a commercial power plant. It has never paid for itself through production. It is only a costly consumer of resources. *not true*

The proposal to tap heat generated at FFTF for power production, by utilizing the generators from the abandoned CLINCH RIVER BREEDER, is ludicrous. One must only remember the lessons on metal-water reactions taught in high school chemistry, or the destruction of the Soviet MIKE class submarine on 8 April 1989 to be reminded that water and sodium metal react vigorously to liberate flammable hydrogen gas. One small leak in a sodium/water heat exchanger installed at FFTF would be the last leak. More research on inherently hazardous liquid-metal cooled breeder technology is not the answer. What is required is that the Department of Energy get out of the way and allow production of oxide-fueled breeder reactors which do one thing best: They produce more fissile fuel than they consume while producing heat (convertible to electricity) and light.

Tri-City Herald: 29 Oct 1990
"FFTF REPORTS RECORD ENERGY PRODUCTION"

FFTF fuel assemblies have produced energy at a rate four times greater than commercial nuclear power plants. Two advanced oxide fuel assemblies have produced about 210 megawatt days of energy for each kilogram of fuel.

Letter to the Editor: Tri-City Herald
"JACKED UP REACTOR"

Four months of operation has produced not one kilowatt-hour, not 3 cent of recoverable energy. Can we afford to operate a "fleet of buses" continuously with the rear wheels jacked off the ground? Can we afford FFTF, which has never been blanketed with U-238, nor has it produced electrical power?

"In light of the experience gained from EBR-1 and EBR-2
FFTF SERVES ONLY AS A MONUMENT TO MAN'S STUPIDITY!"

It's not true! It's not true! It's not true! It's not true!
Galen Winsor

Robert Dupuy
(FFTF WPD, Nov 1990)

The public has to be educated in terms they understand or they'll be misled by gobble-de-gook like this.
Alice + Peter Shaw
(509) 375-1423

Response to Commentor No. 414

Commentor No. 414: Alice and Peter Shaw (Cont'd)

THE SCAM OF NUCLEAR "WASTE" DISPOSAL (1984)

Every argument opposing the Basalt Project I have read is based upon fear of polluting the earth and water here in the Tri-Cities. Nowhere has anyone questioned the definition of "nuclear waste" or the wisdom of disposing of nuclear material.

The term "nuclear waste" is used to legalize theft from the ratepayers. The Basalt Project is justified upon the presumption that products of irradiation are harmful (any amount), are of no value and benefit and are "dangerous wastes" to be confiscated by the Federal government for permanent disposal at public expense; ALL FALSE PRESUMPTIONS!

Reactors have been built for 40 years at Hanford specifically to recover products of irradiation from "spent fuel" or "waste"! Even if we dumped all the heat from a reactor into the air (as was done with the original Hanford reactors and is now done at FFTF), we would still build nuclear reactors for the fission products. Electricity is simply a convenient by-product of material enrichment. If you purchased a bucket of coal and burned two lumps, would you dispose of the remainder of the coal as "waste"? We are!

WHO OWNS THE MATERIALS CREATED BY IRRADIATION AND JUST HOW MUCH ARE THEY WORTH?

Since the nuclear power consumer pays tribute to the Federal government and is financially liable for the disposal of "spent fuel" or Reusable Uranium Fuel (RUF), that consumer must then be the legal owner. The rate paying public has paid for "RUF", its mining, processing, utilization and now is billed for its burial.

WORTH? A TONNE OF "SPENT FUEL", "RUF", CONTAINS PRECIOUS METALS WORTH UPWARDS OF 10 MILLION DOLLARS. THE VALUE OF ALL SPENT FUEL SCHEDULED TO BE PERMANENTLY DISPOSED OF PROBABLY EXCEEDS THE NATIONAL DEBT!

WHAT IS THE FINANCIAL COST TO THE RATEPAYERS OF THIS SWINDLE?

Utilities carry spent fuel on the books as a liability, not a 10 million dollar per tonne asset and add this "expense" to the cost of your electricity. The nonsense put in place by Congress called the "Nuclear Waste Policy Act of 1982" multiplies the cost of power by at least a factor of 10. Our \$200. per month power bills should be \$20 or less!

The consumer pays \$1100. in tribute to the Secretary of Energy per hour of operation of WNP-2 to permanently dispose of the energy resources of the future. This charge equals the cost of recycling these materials and making them available to the public! Recycled fuel would yield zirconium for fuel cladding, fuel for new reactors, irradiation sources for food processing, for chemotherapy and medical research and superconducting metals for industrial applications. These by-products are not to be feared but to be used prudently and with wisdom to raise the standard of living of our society.

WHAT SHOULD WE DO WITH "NUCLEAR WASTE" ("RUF"/"SPENT FUEL")?

There is no "nuclear waste", simply transuranic materials to be recycled! It should be recycled routinely in existing facilities such as Purex, Barnwell Nuclear Fuel Plant (BNFP), G.E.'s Morris operation or at Nuclear Fuel Service (NFS) in New York. The recovered metals should be made available to industry.

WITH ALL THE FLACK OVER BURYING "WASTE", WON'T ANYONE STOP TO ASK -- WHY WE ARE BURYING OUR NUCLEAR RESOURCES?

THE ONLY NUCLEAR WASTE, I PERCEIVE, IS THE WASTING OF NUCLEAR RESOURCES!

Robert Dupuy
(steam.wpl, 1984, updated 8/31/2000)

Galen Winsor

Response to Commentor No. 414

Commentor No. 415: Anonymous

Draft PEIS Comment Form

Please restart FFTE. My brother was cured using isotopic treatments for prostate cancer and I'm sure many others can and will be cured, too. Thank you

415-1

415-1: DOE notes the commentor's support for Alternative 1, Restart FFTE.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



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Name (optional): _____

Organization: _____

Home/Organization Address (circle one): _____

City: _____ State: _____ Zip Code: _____

Telephone (optional): _____

E-mail (optional): _____

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Commentor No. 416: David E. Nelson

Response to Commentor No. 416

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

It is time that DOE restarted FFTF. It is the best facility for the production of Medical isotopes & performing research. Both my parents died of cancer. My uncle & I cousin died from cancer & the conventional treatments available at the time. With medical isotope treatment they would have survived. My brother in law was cured using isotope treatment for prostate cancer. Conventional cancer treatment debilitates & devastates the victims. Nuclear is the best option.

416-1

416-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

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- commenting via e-mail: Nuclear.Infrastructure.PEIS@hq.doe.gov

Name (optional): David E. Nelson

Organization: _____

Home/Organization Address (circle one): 2250 E Tara Rd.

City: Benton City State: WA Zip Code: 99320

Telephone (optional): _____

E-mail (optional): dnelson@3-cities.com

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 E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

Commentor No. 417: William B. Garrard, Jr.

Draft PEIS Comment Form

I, as a private tax paying citizen, fully support the restart of the Fast Flux Test Facility (FFTF) for the following purposes: Medical & Research Isotopes, Pu-238 and advanced nuclear research. I also support the use of the FMEF to support the operation of the FFTF. The US needs a domestic reliable source of Pu-238 and Medical & Research Isotopes, and I believe the FFTF and FMEF are the most cost effective and viable facilities to meet these missions.

Thank you

William B. Garrard, Jr.

417-1

Response to Commentor No. 417

417-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



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• commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): William B. Garrard, Jr.

Organization:

Home/Organization Address (circle one): 7124 West 4th Avenue

City: Hennevis State: WA Zip Code: 99336

Telephone (optional): (509) 735-2094

E-mail (optional): WB Garrard@aol.com

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50, U.S. Department of Energy, 19901 Germantown Road, Germantown, MD 20874



Commentor No. 418: Joe Johnson

From: Joe Johnson[SMTP:JOE@RICHLANDNAZ.ORG]
Sent: Tuesday, September 05, 2000 6:48:41 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Yes, I think FFTF would be a good thing for the
USA and Richland
Auto forwarded by a Rule

418-1

Response to Commentor No. 418

418-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 419: Gerald R. Greenfield

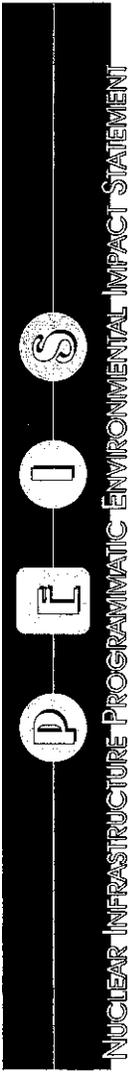
Draft PEIS Comment Form

FFTF Startup should be the preferred alternative. Even though it's operating costs are a bit higher than others, it is a small price to pay to relieve human suffering.

419-1

Response to Commentor No. 419

419-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.



There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
• returning this comment form to the registration desk at the meeting or to the address below
• calling toll-free and leaving your comments: 1-877-562-4593
• faxing your comments toll-free to: 1-877-562-4592
• commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Gerald R Greenfield

Organization: Richland City Councilman

Home/Organization Address (circle one): PO Box 3093

City: Richland State: WA Zip Code: 99352

Telephone (optional): 509-628-2068

E-mail (optional): jerryg@cwst.com

COMMENTS MUST BE POSTMARKED BY September 18, 2000

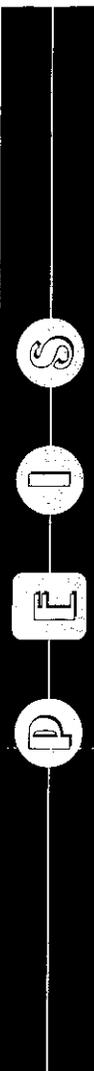
For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



Commentor No. 420: Brad Evans

Response to Commentor No. 420

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

The evidence provided by the PEIS strongly supports the selection of Alternative #1, restart of the FFTF to support the three missions:
 - medical isotopes
 - nuclear technology advancement
 - production of Pu-238

Please do not allow the politics of fear and ignorance dictate a decision ^{permanently} to shut down FFTF and compromise our ability to fulfill these important objectives, especially medical isotope production.

Please exhibit foresight and courage in doing the right thing and restart FFTF.

Thank-you.

420-1

420-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

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- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): Brad Evans

Organization: self

Home/Organization Address (circle one): 1222 N. Shepard St.

City: Kennecott State: WA Zip Code: 99336

Telephone (optional): (509) 372-2744 (work) 783-7358 (home)

E-mail (optional): bdevans@integrityonline.com

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Collette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

Chapter 2—Written Comments and DOE Responses

Commentor No. 421: Monte Bemham

Response to Commentor No. 421

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

① The report must include the importance of providing a back up method of producing medical isotopes

The BEC provided backup facilities to ~~isotopes~~ such as: Oak Ridge & Hanford Savannah River & Hanford.

Commercial Aircraft provide safety back up systems - a backup to produce medical isotopes

② The report should clearly state that restart of FTFE will benefit everyone - even opponent will benefit when they are diagnosed with cancer

421-1

421-1: DOE notes the commentor's views regarding the need to provide backup production capacity for medical isotopes. The medical and industrial isotope production mission considered as part of this NI PEIS fulfills this need. As stated in Section 1.2.1 of Volume 1, nearly 50 percent of DOE's isotope production capacity is being utilized with the remaining capacity dispersed throughout the DOE complex and not readily available due to existing operating constraints. While other facilities exist to produce medical isotopes, many are dedicated to existing missions, as outlined in Section 2.6.1 of Volume 1. The selection of the preferred alternative in this NI PEIS will enable DOE to meet its program objectives for medical isotope production.

421-2

421-2: While this NI PEIS includes consideration of the alternative that would best enable DOE to meet its responsibilities under the Atomic Energy Act to provide isotopes for medical, industrial, and research applications, it is beyond the scope of this NI PEIS to specifically consider the benefits to individual persons or groups.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Monte Bemham

Organization: Candidate State Rep 8th Leg Dist. Texas

Home/Organization Address (circle one):
5312 W TUCANNAN

City: KEMMERWILK State: WA Zip Code: 99336

Telephone (optional): 509 783 3824

E-mail (optional): rmondeb@aol.com

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19001 Germantown Road • Germantown, MD 20874
Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



Draft PEIS Comment Form

August 31, 2000
 To: Collette Brown
 From: Bernice C. Mitchell

After talking to some people today at the yard and not being able to talk to some others - none other, especially Mr. Pisco. I now see keeping EFTF as another DOE award/proposal for B.N.W. in what seems a long line for DOE's partnering with Congress and the Senate to assist B.N.W. to acquire the business and Educational worlds, while we attend hearings etc., and watching notes and Ted Turner and the others. In short, this hearing is and was in justifying and promoting that we are an "Necessary Evil!!" B.N.W. can take their time and go home anytime.

I withdrew my previous request. I sent to Collette Brown this mail. See attachment PS "Slade Barton is not working for me."

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Bernice C. Mitchell

Organization: N/A

Home/Organization Address (circle one): 115 Spring Street

City: Richland State: WA Zip Code: 99352

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 18, 2000

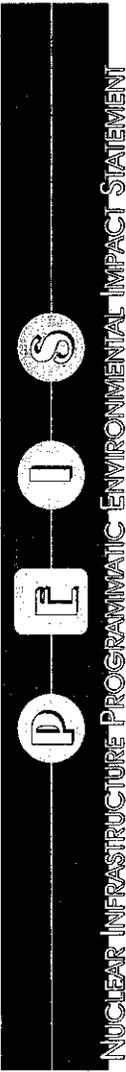
For more information contact: Collette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

422-1

422-1: DOE notes the commentor's views and request to withdraw the previously submitted letter (dated August 2, 2000).



Commentor No. 423: John Fialkovich

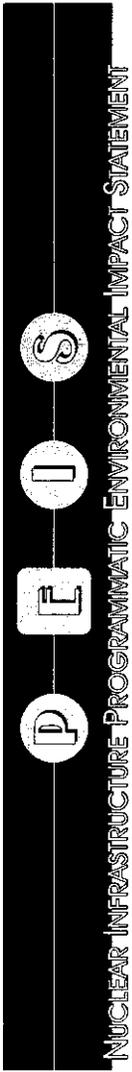
Draft PEIS Comment Form

I fully support restart of the FFTF

423-1

Response to Commentor No. 423

423-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.



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• returning this comment form to the registration desk at the meeting or to the address below
• calling toll-free and leaving your comments: 1-877-562-4593
• faxing your comments toll-free to: 1-877-562-4592
• commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): John Fialkovich
Organization: self
Home/Organization Address (circle one): 153 Bremner
City: Richland State: WA Zip Code: 99352
Telephone (optional): (509) 376-4000
E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19001 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

The preferred alternative should be starting of the FFTF. I am a cancer survivor who wants the DOE to understand and appreciate the emotional and physical tribulations to which cancer patients are subjected. Some medical isotopes are in short supply, so patients may not be able to obtain treatment until it is too late. Some isotopes are so unavailable that research cannot practically be conducted although potential cures are promising. The Government should consider medical applications and the relief of human suffering as well as just the raw financial analysis. The cost of operating the FFTF for diagnostics and treatment is a small price to pay for the benefits.

424-1

424-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Corky Greenfield

Organization: _____

Home/Organization Address (circle one): PO Box 3093

City: Richland State: WA Zip Code: 99352

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

Commentor No. 425: Debbie Nielsen

Good evening, my name is Debbie Nielsen and I represent myself. My family and I have lived in the shadow of Hanford for more than 23 years. From our property, we look out over the Site and see the white dome and cooling towers of FFTF in the distance. This sight does not fill me with fear or apprehension for my family. My husband and I have raised 8 children in West Richland and I believe my community is a safe and wonderful place to live and for kids to grow up. As a matter of fact, when I look at FFTF I feel an enormous sense of pride and accomplishment.

I've been an engineer at FFTF for more than 15 years and I know what an outstanding and safe reactor this is. FFTF is DOE's largest and newest reactor complex which has received numerous awards recognizing its performance and impeccable safety record during its 10 year operating history. I would like to take a few minutes to share a few of my views with you.

First, I would like to thank the DOE for considering restart of the FFTF to support the important missions being discussed here tonight, in particular the production of medical isotopes. Having survived cancer myself, I know the devastation that comes with being diagnosed with cancer and the horrible impact that it has on your family. My cancer was removed in two painful, invasive procedures, but it hasn't returned. I was lucky. But many others aren't so fortunate. According to the American Cancer Society, this year about 552,000 Americans are expected to die of cancer, more than 1,500 people a day. Unfortunately, nearly everyone in this room tonight will experience the pain cancer will inflict to you, a loved one or a friend.

There is hope available, if we only decide to move forward and develop it. Recent advancements in the field of nuclear medicine have dramatically opened a whole new dimension in cancer treatment by being able to target isotopes directly to unwanted cancer cells without damaging healthy ones. Sadly though, these treatments are only available for a select few because of the severely limited supply. I firmly believe the DOE should expand the nuclear infrastructure by restarting FFTF to provide physicians and

425-1

Response to Commentor No. 425

425-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 425: Debbie Nielsen (Cont'd)

researchers with a stable, large, and varied isotope supply to help this country in its battle against cancer.

FFTF stands out above the other alternatives evaluated in the PEIS both in its flexibility and capability to support DOE's objectives. As a matter of fact, I believe one thing missing in the PEIS is a capabilities assessment. Right now it is difficult for someone not technically familiar with these alternatives to recognize that the options vary greatly in their capability to meet the mission needs. I am sure that if the Department of Energy completes a capabilities comparison, coupled with the results of the PEIS, cost study, and nonproliferation report, they will come to the same conclusion that I have.

I know there are concerns about wastes that would be generated and the possible impacts of FFTF operation on the environment and current cleanup activities at Hanford. I want to see Hanford cleaned up too. I've been involved in environmental compliance and safety at FFTF for many years so I was not surprised that the PEIS indicated impacts of FFTF operation are extremely small. I know that FFTF operation does not pose a threat to the public or the environment. I would never support restart if I believed the reactor posed a danger to my family or community.

However, I believe it is important to recognize that there are some significant impacts that would occur by selecting FFTF. These impacts will manifest themselves in tremendous humanitarian benefits to the people in this country. The medical isotopes FFTF could produce would dramatically alter the course of cancer treatment, and provide hope and low cost care to millions of suffering Americans. I have complete confidence in the skill and competence of the staff at FFTF and the quality of the facility itself to safely and effectively meet these missions. I fervently hope that the DOE won't allow the anti nuclear sentiment and unfounded fear of a few vocal activists in this region to force shutdown of this important national asset. During my talk alone tonight, 5 more Americans have died of cancer. It is critical that the upcoming decision be based on facts, not fiction.

425-1
(Cont'd)

425-2

425-3

425-1

Response to Commentor No. 425

- 425-2: The comment with respect to the need for a capabilities assessment of NI PEIS alternatives is noted. Volume 1, Section 2.7.1.2.3 of the Draft NI PEIS presents a comparison of mission effectiveness among alternatives. This section has been revised in the Final NI PEIS (see Section 2.7.1.8, "Comparison of Mission Effectiveness Among Alternatives") to provide the reader a better understanding of the medical isotopes that can be produced using accelerator technology (Alternative 3) and reactor technology alternatives (Alternatives 1 and 4).
- 425-3: DOE notes the commentor's support for Alternative I, restart of FFTF. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Commentor No. 426: Dennis A. Fitzgerald

Dennis A. Fitzgerald
4301 English court
West Richland WA 99353
(509) 627-0936 Fax: (509) 627-2413
E-mail: Fromthetrenches@aol.com

"One voice, one perspective from life in the trenches of America"

August 31, 2000

Page 1

**Public hearing on the Nuclear Infrastructure PEIS
Tower Inn, Richland, Washington**

Good Evening, Ladies and Gentlemen.

My name is Dennis Fitzgerald. Tonight I represent the West Richland Chamber of Commerce. I also desire to speak on behalf of my fellow cancer FIGHTERS.

I wish for no one to "walk a mile in the moccasins" of a cancer FIGHTER. However, if one wants a sense of what it is like, read Chapter Six of Lance Armstrong's book, "It is Not About the Bike, My Journey Back to Life". Or read "The Warrior's Way", by John R. Cope from Lake Oswego, Oregon, a four-time breast cancer survivor. (Men get 1 ½% of all breast cancers.) Or talk to the parents and grandparents of my nine-year old fellow cancer FIGHTER Larry, who after a bone transplant in his leg, has eight months to go in his year of hard chemo treatment. They can give you a sense of what it is like to care for a child with cancer.

In Mr. Cope's book he states, " Three words will change you life forever, 'YOU HAVE CANCER'. It will affect your loved ones, too. Mr. Armstrong writes, "I never thought I knew what fear was until I heard the words, 'YOU HAVE CANCER'". Mr. Armstrong, the recent two-time winner of the Tour de France, had testicular cancer, which in a short time spread to his lungs, then to his brain. That is why early detection is so important.

Latest input from the American cancer Society predicts that in one's lifetime for women, one in three will get cancer, one in eight will get breast cancer. For men, one in two will get cancer, one in six will get prostate cancer. **These odds are the same whether you are for or against the restart of FFTF**

- For you ladies, if you did get breast cancer, would you prefer a medical isotope "smart bullet" that would attack only the cancer, or prefer surgery that may disfigure you, followed by hard chemo that will leave you temporarily bald?
- For you men, if you did get prostate cancer would you prefer outpatient implant of medical isotope seeds, or surgery with almost a week of hospitalization, follow by several weeks of home recovery with a catheter in your bladder? Plus being at equal or higher risk of permanent impotence or incontinence, or both.
- You could be one of the eight million suffers of rheumatoid arthritis in our country and the doctor told you medical isotopes would help, but you have to go to Europe for treatment.

Response to Commentor No. 426

Commentor No. 426: Dennis A. Fitzgerald (Cont'd)

Dennis A. Fitzgerald
4301 English court
West Richland WA 99353
(509) 627-0936 Fax: (509) 627-2413
E-mail: Fromthetrenches@aol.com

August 31, 2000

Page 2

**Public hearing on the Nuclear Infrastructure PEIS
Tower Inn, Richland, Washington**

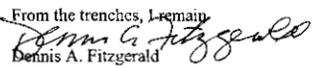
What if the doctor told you medical isotopes would be the best treatment you. However due to shortages, causing delays in clinical trials or in general supply the desired isotopes are not available to you now, but the doctor will put you on a waiting list. Since we import 90% of our isotopes these are real scenarios

Let us talk about what I call emotional uncertainties or perhaps fears and seek to overcome them with facts.

- Operating FFTF will come from separate funds than Hanford clean up funds. In fact **shutting down FFTF will add \$281.2 million** to the existing clean up budget burden.
- No existing accelerators in the western hemisphere can compete in variety, quantity and purity of the FFTF an existing facility in which you and I as taxpayers have already invested millions and millions and millions of dollars. Reportedly a high-energy accelerator may come close to matching the FFTF but it does not yet exist and will require years and more millions of our tax dollars to bring on line.

Unfortunately cancer does not wait. It is like our recent Twin Forks Fire. While the bureaucrats and political entities were "fiddling" over how to control the fire, the fire raged out of control, eventually burning over 300 square miles. While the bureaucrats and politicians have been pondering the fate of the FFTF for too many years now, thousands of our fellow citizens have died an early death and many, many thousands more have had to endure prolong suffering. Why? Because our government has no effective strategy or programs in place to meet the medical isotope needs of our people. That includes the present and future medical isotope needs of everyone of us in this meeting tonight, plus our family, friends and neighbors.

The bottom line is this: Medical isotopes offer a kinder and gentler treatment for an expanding array of cancer types and an easier and longer "walk in the moccasins" for the cancer FIGHTER. For the health of our nation that is the case for the for restart of FFTF.

From the trenches, I remain,

Dennis A. Fitzgerald
Citizen
Cancer FIGHTER
Member, West Richland Chamber of Commerce

CC: West Richland Chamber of Commerce
Citizens for Medical Isotopes (CMI)

Response to Commentor No. 426

426-1

426-1: DOE notes the commentor's support for Alternative 1, Restart FFTF, and opposition to Alternative 3, Construct New Accelerator(s).

426-2

426-2: See response to comment 426-1. A combination of low energy and high energy accelerators can meet mission objectives although they might not be able to do some research and development that requires fast neutrons or liquid metal loops. The reference accelerator design is mature and DOE has considerable experience in designing and building such accelerators.

426-1

Commentor No. 427: Susan Carlstrom
UFCW Local 141

Response to Commentor No. 427

Draft PEIS Comment Form

See Attached

United Food & Commercial Workers Local 141
United Staff Nurses Union and United
Food & Commercial Workers Local 1439
Stand in Support of Medical Isotope
Production for Cancer Research and
Cancer Treatment. We also support the
restart of the FFTE for this purpose.
We understand that the use of medical
isotopes is a more humane way of
treating people with cancer diagnoses
with less side effects than the
traditional treatments of chemotherapy
or radiation therapy. As registered nurses
we advocate for patients on a daily basis, we
care for patients with cancer diagnoses
and see first hand the pain & suffering
that these pts must endure not only from
their cancer but from the side effects of their
treatments. It is for this reason we
encourage the DOE to consider restart of FFTE
for the production of medical isotopes for cancer
research. There are several ways to provide comments on the Nuclear Infrastructure
PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Susan Carlstrom Vice President

Organization: UFCW Local 141

Home Organization Address (circle one): 5117 W. 4th Ave
Keokuk, IA 52336

City: ~~Federal Point~~ State: IA Zip Code: 52336

Telephone (optional):

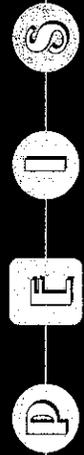
E-mail (optional): scarlstrom@aol.com

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



427-1

427-1: DOE notes the commentor's support for Alternative 1, Restart FFTE.

Commentor No. 427: Susan Carlstrom (Cont'd)
UFCW Local 141

Response to Commentor No. 427

FROM : ROBERT WILKINSON FAX NO. : 509 735 4992 Aug. 23 2000 09:23AM P2
07/28/00 16:50 FAX 5099160905 HEASTON VISION C @02

**Support of Medical Isotope Production
at the Fast Flux Test Facility**

- Whereas, One in three Americans are touched by cancer, and
- Whereas, The use of medical isotopes in the treatment of cancer and heart disease is showing very encouraging and dramatic results. These new treatments use radioisotopes targeted specifically to the diseased cells and minimize the damage to healthy cells. The cost of medical isotope treatment is often much less than conventional treatments and with less debilitating results; and
- Whereas, Serious concern exists in the scientific and medical professions that the United States does not have the capability to produce enough radioisotopes to meet the rapidly increasing demand, while we depend on foreign supplies as over 90% of the isotopes currently used are imported, and
- Whereas, Private companies that develop new cancer treatments hesitate to invest millions of research dollars up front when the isotopes they want to use may not be reliably available, and
- Whereas, The existing Fast Flux Test Facility (FFTF) can reliably produce a diverse selection and large quantities of high quality isotopes; and
- Whereas, The FFTF is a significant national asset as it is the Department of Energy's newest and most sophisticated nuclear reactor with the potential to play a major role in supporting critical national missions such as medical isotope production for treatments of disease, non-proliferation fuels testing, research associated with the transmutation of nuclear waste, NASA space mission energy needs, and other scientific research; and
- Whereas, The United States has an aging and diminishing reactor inventory for scientific research and testing, while at the same time the United States is experiencing an increasing demand for the production of isotopes for medical and industrial applications; therefore

BE IT RESOLVED that the ~~(UFCW Local 141)~~^{F&E} support a restart of the Fast Flux Test Facility to serve as a multi-mission research and isotope production reactor.


(Signed)

8-23-00
(Date)

Commentor No. 427: Susan Carlstrom (Cont'd)
UFCW Local 141

**Support of Medical Isotope Production
 at the Fast Flux Test Facility**

- Whereas, One in three Americans are touched by cancer, and
- Whereas, The use of medical isotopes in the treatment of cancer and heart disease is showing very encouraging and dramatic results. These new treatments use radioisotopes targeted specifically to the diseased cells and minimize the damage to healthy cells. The cost of medical isotope treatment is often much less than conventional treatments and with less debilitating results; and
- Whereas, Serious concern exists in the scientific and medical professions that the United States does not have the capability to produce enough radioisotopes to meet the rapidly increasing demand, while we depend on foreign supplies as over 90% of the isotopes currently used are imported, and
- Whereas, Private companies that develop new cancer treatments hesitate to invest millions of research dollars up front when the isotopes they want to use may not be reliably available, and
- Whereas, The existing Fast Flux Test Facility (FFTF) can reliably produce a diverse selection and large quantities of high quality isotopes; and
- Whereas, The FFTF is a significant national asset as it is the Department of Energy's newest and most sophisticated nuclear reactor with the potential to play a major role in supporting critical national missions such as medical isotope production for treatments of disease, non-proliferation fuels testing, research associated with the transmutation of nuclear waste, NASA space mission energy needs, and other scientific research; and
- Whereas, The United States has an aging and diminishing reactor inventory for scientific research and testing, while at the same time the United States is experiencing an increasing demand for the production of isotopes for medical and industrial applications; therefore

BE IT RESOLVED that the UFCW Local 141 support a restart of the Fast Flux Test Facility to serve as a multi-mission research and isotope production reactor.

Marilyn Savage RN
 (Signed) President

8-12-2000
 (Date)

Response to Commentor No. 427

Commentor No. 427: Susan Carlstrom (Cont'd)
UFCW Local 141

AUG 28 '00 11:42AM B. F. HEALTH DEPT.

P. 2/2

**Support of Medical Isotope Production
at the Fast Flux Test Facility**

- Whereas, One in three Americans are touched by cancer, and
- Whereas, The use of medical isotopes in the treatment of cancer and heart disease is showing very encouraging and dramatic results. These new treatments use radioisotopes targeted specifically to the diseased cells and minimize the damage to healthy cells. The cost of medical isotope treatment is often much less than conventional treatments and with less debilitating results; and
- Whereas, Serious concern exists in the scientific and medical professions that the United States does not have the capability to produce enough radioisotopes to meet the rapidly increasing demand, while we depend on foreign supplies as over 90% of the isotopes currently used are imported, and
- Whereas, Private companies that develop new cancer treatments hesitate to invest millions of research dollars up front when the isotopes they want to use may not be reliably available, and
- Whereas, The existing Fast Flux Test Facility (FFTF) can reliably produce a diverse selection and large quantities of high quality isotopes; and
- Whereas, The FFTF is a significant national asset as it is the Department of Energy's newest and most sophisticated nuclear reactor with the potential to play a major role in supporting critical national missions such as medical isotope production for treatments of disease, non-proliferation fuels testing, research associated with the transmutation of nuclear waste, NASA space mission energy needs, and other scientific research; and
- Whereas, The United States has an aging and diminishing reactor inventory for scientific research and testing, while at the same time the United States is experiencing an increasing demand for the production of isotopes for medical and industrial applications; therefore

BE IT RESOLVED that the (UFCW 1439) support a restart of the Fast Flux Test Facility to serve as a multi-mission research and isotope production reactor.


(Signed) UFCW 1439

8-28-2000
(Date)

Response to Commentor No. 427

Commentor No. 428: Citizens for Medical Isotopes

MEDICINE SAYS FAST FLUX TEST FACILITY GREATLY NEEDED

428-1

"The FFTF could play a very significant role in health care in the United States."

- DuPont Pharmaceuticals

"I believe our nuclear medicine/research programs are in great jeopardy."

- Thomas Maloney, President, Iso-Tex Diagnostics, Friendswood, Texas

"Without the availability of radioisotopes such as Cu-67, we will essentially be depriving the American public of a new drug that has already shown responses in cancer patients."

- Sally J. DeNardo, M.D., University of California, Davis

It is critical that FFTF be brought back on-line to ensure adequate supplies (of isotopes) for medical uses."

- Michael R. Henson, CEO, Radiance Medical Systems, Inc.

"Our research has been severely hampered over the years because the government has so poorly supported a strong isotope production program...We have had difficulty sustaining some of our research efforts because of a lack of radioisotope availability. . . We believe that FFTF should be restarted to help meet projected needs for many isotopes that (we would like to explore and develop into cancer treatments)."

- Robert M. Sharkey, Ph.D., Director of Clinical Research, Garden State Cancer Center

"We believe that FFTF is a valuable asset and consider the national interest better served by keeping the reactor in service."

- E. Allen Womack, Jr., BWX Technologies, Inc. Lynchburg, VA

"The field of therapeutic isotopes is just opening up and has tremendous potential for the future. However, this future will be heavily impacted by availability of ...these new isotopes at costs that basic research can afford."

- Victor J. Becker, Sr. Director – Operations, Diatide, Inc. (Developer of new diagnostic and therapeutic imaging agents)

Response to Commentor No. 428

428-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 428: Citizens for Medical Isotopes (Cont'd)

"The FFTF is a unique facility with capabilities...that no other device in the world can match. It also has an outstanding record of research, operational excellence, safety, and environmental stewardship. A reactor with the capabilities of the FFTF might never be built again. "

- Wilson C. "Toby" Hayes, Vice Provost for Research, Oregon State University, Corvallis, OR

"I am writing to express my strong support for... the restart of the Fast Flux Test Facility (FFTF). I hope that the decision on its future will fully weigh its considerable merits and many prospective contributions to the nation's health and welfare."

- Manuel Martinez-Maldonado, M.D., Vice Provost for Research, Oregon Health Sciences University

"Immunomedics, Inc., is developing radiolabeled monoclonal antibodies as specific targeting agents for the treatment of human disease, particularly cancer... as we at Immunomedics work to make this promising technology a clinical reality...the major impediment to progress in this type of work is a steady reliable supply of promising new radioisotopes."

- Dr. Gary Griffiths, Director of Chemistry, Immunomedics, Inc.



Citizens for Medical Isotopes: Benton-Franklin Title Bldg.
3315 W. Clearwater, Kennewick, WA 99336
(509) 737-8463 Fax: (509) 737-9524
www.medicalisotopes.org e-mail: cmi@owl.com

Response to Commentor No. 428

Commentor No. 428: Citizens for Medical Isotopes (Cont'd)

CAN YOU SAVE MY LIFE?

Medical Isotopes –new opportunities to survive and regain quality of life

The following expressions of gratitude are made by cancer patients and their family members - father, mother, sister, cousin or they, themselves had a terminal disease and no hope of survival with standard treatments.

Patients treated experimentally with medical isotopes for Carcinoid Cancer

“My cousin has been released from a prison of suffering and has once again joined in the world of the living. . . every person who faces a terminal disease should have the right to exhaust any and all medical treatment that could make the difference between life and death.”
- December, 1999 letter to Dr. Lowell B. Anthony of Stanley S. Scott Cancer Center - Louisiana State University

“Your ‘potion’ is an amazing thing: one might even say a thing of beauty; a work of nuclear art, even. . . her clinical response borders on the unbelievable. . . I can even begin to hope that this saga will have a happy ending. Whatever you guys are doing, you’re doing it right. From one deeply grateful husband.” *-March, 1998 letter to Dr. Anthony*

“I truly believe that this is my best and only answer to the cancer. There have been no side effects – no hear loss, nausea, pain, nothing! This is by far the greatest thing I’ve heard of and I always looked forward to the 8 hour drive for my treatments because I knew they were working!”
- 1998 handwritten letter

“I appreciate very much not only what (this medical isotope treatment) has done to increase my life span but also appreciate your company for standing behind people like myself with no where else to go.”
-1998 letter to Thomas Maloney of ISO-TEX Diagnostics

“My dad was very depressed and despairing . . . We knew that the only standard options available would not arrest the progression of this disease. What a blessing it is that he happened onto this research project. . . I think I speak for the entire family when I say that this therapy has improved his emotional and mental well being as well as his overall physical health. You have given my father the gift of hope.”
- Written by daughter of patient with carcinoid tumor of the thymus

“My wife’s response to the (medical isotopes) has been nothing short of phenomenal! Her quality of life had fallen to near non-existence and I sensed that she was preparing to die. . . (After the medical isotopes infusions), the pain was completely gone. . . and the wheelchair was collecting dust. You are the people who gave me this additional time with my beloved wife. For that, sir, I shall be eternally grateful.” *-March, 1998*

Response to Commentor No. 428

Commentor No. 428: Citizens for Medical Isotopes (Cont'd)

A PATIENT SPEAKS OUT

"I had no side effects at all with the medical isotope treatment. It was the easiest time I have ever spent in the hospital. I was just hanging out reading a book and watching the T.V. Afterward the x-rays showed my tumors had been reduced and some had completely disappeared, even though no previous treatment had done anything to reduce my tumors. Before the medical isotope treatment I had experienced tremendous pain in my back and I was on morphine quite a bit. After the treatment I had almost no back pain at all. What I love about this treatment is, it works, it takes the pain away and there's no side effects." - Laura Mosher of Mentone, Alabama

Response to Commentor No. 428

Commentor No. 428: Citizens for Medical Isotopes (Cont'd)

**Why FFTF is Hanford's
"Desert Diamond"**

- ◆ The FFTF is a state-of-the-art facility – the most advanced research reactor in the United States.
- ◆ Research & Development reactor (not a defense reactor)
- ◆ The most versatile reactor in the U.S. and the world.
- ◆ The newest reactor in the U.S.
- ◆ It can "use up" old weapons materials in the process of making medical isotopes. No other reactor can do this on a large scale.
- ◆ Named one of the nation's top 10 engineering achievements by the national Society of Professional Engineers.
- ◆ Received the NEA's Federal Design Achievement Award
- ◆ Superior safety and environmental performance record carefully documented during construction and operation.

Response to Commentor No. 428

Commentor No. 428: Citizens for Medical Isotopes (Cont'd)

Organizations and Individuals Supporting FFTF

PATIENT ORGANIZATIONS

American Cancer Society, Benton-Franklin
National Association of Cancer Patients
United Way

THE MEDICAL COMMUNITY

Lourdes Health Network
Dr. Albert Corrado
Dr. James Leedy
The Oncology Group
Vista Family Health
Tri-Cities Cancer Center
Kadlec Medical Center
Kennewick General Hospital
United Staff Nurses Union - Spokane,
Tacoma, Tri-Cities Chapters

THE MEDICAL RESEARCH COMMUNITY

Harvard Medical School
Children's Hospital, Boston
American Society of Nuclear Cardiology
Louisiana State University Medical Center
Johnson & Johnson
Garden State Cancer Center
Iso-Tex Diagnostics
Radiological Society of North America
National Institutes of Health
NeoRx
North American Scientific
Battelle
Dr. Rainer Starb, Fred Hutchinson Cancer
Research Center

UNIVERSITIES

University of California, Davis
Oregon Health Sciences University
Oregon State University
USC School of Pharmacy

**ELECTED OFFICIALS & POLITICAL
GROUPS**

Gary Locke, Governor of Washington State
Resolution passed by Washington State
Senate
Senator Slade Gorton, Washington
Congressmen Doc Hastings and Norm Dicks,
Washington
Congressman Nethercutt, Washington
Congressman Wamp, Tennessee
Booth Gardner, former Washington governor
Party platform of Washington State
Republicans
Democrats for FFTF

PROFESSIONAL ORGANIZATIONS

Association of Washington Businesses
American Nuclear Society
American Society of Mechanical Engineers
Association of Washington Cities
Nuclear Medicine Research Council
Washington State Association of Counties

Response to Commentor No. 428

Commentor No. 428: Citizens for Medical Isotopes (Cont'd)

Company Press Release

NeoRx Corporation Reports Cures of Lung, Breast, and Colon Cancers in Preclinical Animal Studies Using a Single Dose of Pretarget Technology

Results published in the Proceedings of the National Academy of Sciences

SEATTLE--(BUSINESS WIRE)--March 6, 2000-- NeoRx Corporation (Nasdaq:NERX - news) today announced publication of a peer-reviewed manuscript in the Proceedings of the National Academy of Sciences, reporting that a single dose of its proprietary Pretarget® technology cured established human lung (10/10 animals), colon (10/10 animals) and breast cancers (8/10 animals) implanted in mice. To be judged a cure, both complete disappearance of the tumor and absence of any re-growth for at least one year were required. These results were achieved with a single dose of radioactivity developed with NeoRx's proprietary Pretarget® technology. The manuscript appears in the February 15, 2000 issue of the journal.

"The key finding in these experiments was the ability to actually cure large, established tumors using the higher doses of radiation that can be safely administered with our Pretarget® technology," said Don Axworthy, NeoRx scientist and lead author on the paper. "Unlike other therapies that have been reported to be curative in animals, Pretarget® effected cures with only a single administration. We are looking forward to testing our latest Pretarget® therapy, with the incorporation of various improvements we have made since the original animal studies were done, in the clinic later this year."

In the manuscript, NeoRx scientists compared Pretarget® technology to the conventional targeting approach used by others. With Pretarget®, the targeting antibody and radiation are injected separately and at different times, and join at tumor sites where the antibody has pre-localized. Radiation that does not join the antibody is rapidly eliminated from the body. This brief exposure of normal organs permits higher doses than the conventional approach to be administered safely, as has been shown in these animal trials and in patients. By contrast, the conventional approach links the radiation (a small drug) to the large antibody molecule, irradiating normal tissues such as bone marrow as it circulates for prolonged periods in the blood. Doses using the conventional approach are limited by normal organ exposure.

"Several groups have products under development using the conventional approach to radiotherapy," said Paul G. Abrams, M.D., J.D., NeoRx's chief executive officer. "We expect to begin formal Phase I trials with at least one Pretarget® product this year. Using a prototype Pretarget® product in patients with lymphoma, we have already observed 3 complete remissions (two of which occurred in patients who had progressed after high dose therapy and stem cell transplantation) in the 7 patients treated. As in the animal studies reported in our manuscript, these responses were observed after a single dose of Pretarget®. Moreover, we began our clinical study at a dose higher than the maximum tolerated dose of conventional radiotherapy products, yet we did not see any clinically significant toxicity"

Response to Commentor No. 428

Safety and Efficacy of Colorectal Cancer Therapy Confirmed

June 8, 2000
MedscapeWire

Immunomedics, Inc. has announced the results of ongoing phase 2 clinical studies using CEA-Cide for the treatment of patients with metastatic colorectal cancer who failed or were intolerant to prior chemotherapy. CEA-Cide is a humanized antibody against carcinoembryonic antigen (CEA), which is produced by colorectal and many other cancer types. In this study, the antibody was radiolabeled with iodine-131, which is a therapeutic isotope.

The results reported by a clinical research team from the University of Goettingen, in Germany, led by Docent Thomas Behr, MD, involved 21 patients (group 1) studied with metastatic cancers of the colon and rectum, and 9 patients (group 2) who had their liver metastases surgically removed, and who were at high risk for recurrence. The patients received 1 dose of CEA-Cide, and were then followed for up to 18 months.

Dr. Behr reported that the patients tolerated the single injection very well, with minimal, if any, adverse effects. Of 15 evaluable patients in the first group, 2 had a partial response (more than 50% reduction in tumor) for an average of 7 months, while another 6 patients showed lower levels of tumor reduction, providing an overall response rate of 53%. In the second group, 8 (89%) of 9 patients remain free of disease for more than 15 months, whereas 47% of previously studied patients with resected liver metastases, who did not receive CEA-Cide, showed

cancer recurrence in the same time period.

"These are very encouraging results, especially since we believe that such patients can tolerate repeated courses of this therapy," stated Dr. David M. Goldenberg, chairman and chief executive officer of Immunomedics.

Colorectal cancer is the third highest cancer killer, resulting in more than 56,000 deaths each year in the United States. "Once the cancer spreads, the 5-year survival rate of patients with inoperable metastases is virtually zero, despite the development of several new chemotherapeutic agents," Dr. Behr remarked.

Commentor No. 429: Kathryn Roberg

I am for alternative 5 - close down FFTF.

These are the concerns I have in regard to the restart of the FFTF Nuclear Reactor

1. Already we are experiencing a drastic global warming, as evidenced almost throughout the whole world. I am afraid that a restart of FFTF Nuclear Reactor will send more gases and waste into the Universe, whether in the air, soil or water and add to this horrendous problem of global warming. The waste has to go somewhere. What cost are we going to have to pay because of these facilities?

2. In 1995, DOE promised in the Hanford Clean-Up Agreement to shut down the FFTF, and use the resulting savings for radioactive nuclear waste clean-up. \$100 million designated for waste-clean-up has instead been used to keep FFTF on hot standby. To restart and maintain the FFTF would cost much more. I'm concerned that the funds set aside for clean-up would be used to produce yet more highly radioactive nuclear waste. I am also very concerned about the honest use of allocated funds.

3. I understand that The USDOE's own panel of experts (Subcommittee for Isotope Research and Production planning) and the Washington State Medical Association say there is no need for FFTF as an additional source of medical isotopes. I ask the question - Is plutonium really needed for medical research radioisotopes?

4. If plutonium is produced, what are the SAFEST MEANS OF TRANSPORTING this weapons-grade plutonium to fuel the FFTF in Hanford? If transported through Puget Sound, I am concerned about the potential deadly hazards to the watersheds, to not only the entire Puget Sound but also the entire Pacific Ocean and to the millions of people who live there.

5. The deadly radioactive waste of Hanford will, if not contained properly and thoroughly, for thousands of years and countless generations, contaminate not only the Northwestern US but also beyond - (a global destruction) What are we sending on to our children and their children... a contaminated and hazardously wasted world? Already there 177 massive, underground high-level nuclear waste tanks, some explosive, dozens leaking at Hanford. A restart of FFTF would add even more radioactive waste to these tanks. What are we doing to this world? DESTROYING IT!!!

Nuclear Energy account

429-1

429-2

429-3

429-4

429-5

429-3

Response to Commentor No. 429

- 429-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 429-2: The concerns expressed in the comment with respect to potential FFTF emissions and global warming in the event of FFTF restart are noted. FFTF operations would result in small impacts to the environment and would not contribute to global warming because nuclear, rather than fossil, fuels provide the primary source of energy, resulting in negligible releases of greenhouse gases. Section 4.3 of the NI PEIS includes an evaluation of potential environmental impacts due to air emissions and wastewater discharges associated with the proposed operation of FFTF and existing Hanford support facilities. All air emissions and wastewater discharges would be in accordance with applicable permit and regulatory requirements. The release of criteria air pollutants would result in concentrations well below Federal and state air standards (Table 4-13); impacts from emissions of hazardous chemicals would have a negligible effect on human health or the environment (Tables 4-17 and 4-19); and there would be no discernible impacts to groundwater or surface water quality (Section 4.3.1.1.4). The management of the wastes that are associated with nuclear infrastructure activities at Hanford is assessed in Section 4.3.1.1.13. The ultimate disposition of these wastes is addressed in that section.
- 429-3: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Prior public meetings were held on this formal milestone change.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1

Commentor No. 429: Kathryn Roberg (Cont'd)

It has been emphasized that production will cause cancer. which are some major causes of cancer in the first place?
6. Almost every day I am hearing more and more cases of CANCER...My concern is that what we are putting into the whole ecosystem in this world has a tremendous impact on our health. Restarting the FFTF with its nuclear waste would add to this destruction of health and life.

429-6

I ask that these concerns be included in the official record for PU-238/FFTF

Thank you

Sr. Kathryn Roberg

429-7

I am supporting alternative 5 - Shut down FFTF!

429-1

Why does EIS not address any strategies in regard to waste removal or holding? and the impact this will have on the environment?

429-7

Response to Commentor No. 429

would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected. If the decision is made to shutdown the FFTF, then cleanup dollars will be needed to deactivate the facility, which could impact the overall Hanford cleanup schedule.

Restart and operation of FFTF would not add any waste to the Hanford underground waste storage tanks. The impacts to the environment from the NI PEIS mission were determined in Chapter 4 of Volume 1 to be negligible to the Northwest population.

429-4: The purpose of the NI PEIS is to evaluate the environmental impacts of reasonable alternatives to enhancing DOE's existing nuclear facility infrastructure to support production of radioisotopes for medical, research and industrial uses, production of plutonium-238 for use in future NASA space exploration missions, and U.S. nuclear research and development needs for civilian application. The plutonium that would be produced under the proposed action would not be intended for medical applications.

DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

Commentor No. 429: Kathryn Roberg (Cont'd)

Response to Commentor No. 429

The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

- 429-5:** The commentor appears to express the concern that DOE would expose people in along the Pacific Coast and in the Puget Sound area to risks associated with the transport of weapons-grade plutonium. None of the proposed alternatives would involve the shipment of any weapons-grade plutonium to any port in the United States. Alternative 1 does postulate that DOE might decide at some point to import mixed oxide fuel from Europe to fuel FFTF. At this time, however, DOE has not proposed to import this fuel through any specific port. If DOE ultimately decides to import fuel from Europe, it would perform a separate NEPA analysis to select a port. This review would address all relevant potential impacts of overseas and inland water transportation, shipboard fires, package handling, land transportation, as well as safeguards and security associated with the import of SNR-300 mixed oxide fuel through a variety of specific candidate ports on the east and west coasts. It would consider all public comments, including local resolutions, concerning the desirability of bringing mixed oxide fuel into the proposed alternative ports.

Commentor No. 429: Kathryn Roberg (Cont'd)

Response to Commentor No. 429

In the event that DOE decides to enhance its nuclear infrastructure, it would not expose any population to high, unacceptable risks under any alternative. Any transportation activities that would be conducted by DOE would comply with U.S. Nuclear Regulatory Commission and U.S. Department of Transportation regulations. Associated transatlantic shipment would comply with International Atomic Energy Agency requirements. In Section J.6.2, DOE reviewed the potential maximum impacts from the marine transportation of mixed oxide fuel from Europe to a representative military port, Charleston, South Carolina, and overland transportation to Hanford. Also in that section, a bounding analysis demonstrates that the maximum potential radiological risks to the surrounding public from mixed oxide fuel shipments would be extremely small (e.g., less than 1 chance in a trillion for a latent cancer fatality per shipment from severe accidents at docks and in channels and less than 1 chance in 50 billion for a latent cancer fatality per shipment from overland highway accidents).

- 429-6:** Cancers are believed to be caused by a combination of hereditary and environmental factors, including exposure to ionizing radiation and chemical agents. This NI PEIS provides an estimate of the potential human health impacts associated with a range of reasonable alternatives considered for the production of radioisotopes for medical and industrial uses, research and development, and as heat sources for radioisotope power systems (see Sections 1.2 and 2.5 of Volume 1). The methodology used in the analysis of health effects, which is detailed in Appendixes H through J, is based upon our current knowledge of the health impacts that may result from exposure to low doses of ionizing radiation and chemical agents. Sections 4.3 through 4.6 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of any of the alternatives, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with each of the alternatives would be small.
- 429-7:** The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be

Commentor No. 429: Kathryn Roberg (Cont'd)

Response to Commentor No. 429

implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

Commentor No. 430: Charity Schweiger

August 31, 2000

My grandfather moved his family to Richland, WA, because of Hanford, and my father, the youngest of six, kept his family here because of the FFTF. Out of all the places we could have been, we ended up here. While I was growing up I was enchanted by big cities like Seattle. The big lights, the skyscrapers, the beautiful architecture, the Puget Sound. It was all so large and exciting, so purposeful. I thought the Tri-Cities was small, hot, and boring. But last year I began a study on Hanford. I studied White Bluffs, and other towns which were evicted, the trailer park it became, the operations which finally announced itself to the world in the form of "Fat Boy", the bomb dropped on Nagasaki. True, the Tri-Cities area is developing, but along side it is my view which is steadily growing also. Beneath the so-called uneventful exterior lie so many important things, which have always been there, but which I have never taken the time to discover. The FFTF is part of all of it. It has a history, and it has a purpose. Unlike the atomic bomb, which destroyed so many innocent lives, the FFTF has the ability to save lives in the form of medical isotopes. My grandmother died of cancer, and the kind of medical treatment FFTF can produce could have saved her beautiful and precious life. Please consider those lives, which are affected by cancer now, and those who will be affected by it later, as you make your decision about the Fast Flux Test Facility. Thank you!
Charity Schweiger
Richland, WA

430-1

Response to Commentor No. 430

430-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 431: Bill Dautel

8/31/00

Good evening, my name is Bill Dautel and I am speaking tonight as a citizen of the Pacific Northwest.

Recently, I read the citizen's guide distributed by Heart of America Northwest of Seattle. This guide claims that the guide "is designed to help citizens understand and comment on the draft PEIS." However, it appears that the sole purpose of this guide is to deliberately misinform citizens in an effort to force DOE's hand in the decision to restart FFTF.

This guide claims that public outcry to shutdown FFTF will "prevent more nuclear disasters at Hanford" and "save the future of Hanford cleanup."

How absurd. I have lived here for 26 years with my family. Do you think for one moment that nuclear disasters and cleanup at Hanford are not my major concerns?

I am speaking to this citizen's guide tonight because I feel the public deserves to know that most of the material in it is unsubstantiated and wrong. However, because of the time limitation, I will only be able present substantiated facts about one of its outrageous statements. I am not asking you to change your position; I merely ask that you listen with an open mind. Then I challenge you to bring your specific concerns to the table so they can be addressed. It is only by this process that you will be able to form an objective, informed position. The benefits of operating FFTF to alleviate the very real future health risks to you and your family are too important to throw them out based on heresay.

The area I would like to address tonight is the section of the Heart of America guide titled "Weapons-Grade Plutonium Could Come Through Puget Sound." The plutonium that they are referring to is unused mixed oxide fuel that has no future use in Germany but can be used to operate the FFTF reactor for 15 years. This fuel is essentially identical to FFTF fuel. As such it is not, nor could it ever be classified as, "weapons-grade" plutonium.

431-1**Response to Commentor No. 431**

431-1: DOE notes the commentor's views and observations. DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and to providing ample opportunity for public comment on those actions.

Commentor No. 431: Bill Dautel (Cont'd)

They also claim that DOE has ignored transportation risk concerns in the PEIS and that citizens <quote> "demand that USDOE acknowledge that a ship fire in Puget Sound, with plutonium on board, could kill thousands and permanently leave a large area uninhabitable. Oppose any scheme to import plutonium fuel through any port to FFTF." <unquote>

Heart of America Northwest apparently hasn't read the Appendix J of the PEIS which is entirely dedicated to the impacts of transportation.

As Colette Brown stated earlier, the port for receiving the German fuel has not been officially selected. However,
If you read this section, you will discover that public and environmental safety is paramount. ~~You will also discover that~~ it is unlikely that DOE will even ship the fuel to Puget Sound, not because of any risk, but because it costs more to sail to the west coast than to sail directly to an eastern port. Charleston Naval Station has been the primary port for receiving foreign fuel for the past five years and was the port selected for detailed analysis in the PEIS.

Heart of America Northwest claims that a ship fire could kill thousands and leave a large area uninhabitable. Have they supplied you with an independently reviewed risk analysis that explains just how this event could occur? I don't think so.

Let's examine the facts. First, the FFTF fuel is designed to operate at temperatures up to 1500 degrees fahrenheit and is not susceptible to damage from the DOT severe transportation fire temperature of 1475 degrees fahrenheit. Additionally, FFTF fuel has been safety tested and shown not to leak under these conditions. Second, the fuel is transported in certified high integrity casks. These casks are subject to stringent regulatory safety testing to verify beyond doubt that they will not leak during severe transportation accident conditions, including fire. Third, certified purpose-built ships would be used to transport the fuel casks from Europe to the U.S. These ships are constructed with double hulls to assure that they can withstand a collision without

**431-1
(Cont'd)**

Response to Commentor No. 431

Commentor No. 431: Bill Dautel (Cont'd)

penetrating the inner hull. Every part of the ship is protected by an automatic fire system which will quickly detect, isolate, and suppress a fire should one break out in any one of the separate compartments. The individual holds can also be deliberately flooded with water, and, if all the holds were flooded the ship would still remain afloat. These levels of safety are what contribute to the low level of risk to transport the fuel. In fact, the accident risk in the PEIS was determined to be less than 10^{-12} latent cancer fatalities or 1 in a trillion.

Let me put this in perspective. The risk of dying from radiation exposure received from flying round trip cross-country is approximately 1 in a million. Mightily small. The risk from fuel transportation is a million times less. So I ask you, is this the enormous risk that results in thousands of deaths as claimed by Heart of America Northwest? Hardly!! In my view this is a blatant insult to the intelligence of the public and undermines the entire NEPA process. The transportation of nuclear fuel is completely safe.

Thank you for the opportunity to speak about this PEIS issue.

William A Dautel
2360 Mark Ave
Richland, WA 99352

431-1
(Cont'd)

Response to Commentor No. 431

Commentor No. 432: K. Contini

From: Contini, Katherina
[SMTP:KCONTINI@AMPACET.COM]
Sent: Wednesday, September 06, 2000 1:28:06 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF use for Medical Isotopes
Auto forwarded by a Rule

I fully support the re_start of FFTF for the production of medical isotopes!

K Contini
Tarrytown, NY

|| 432-1

Response to Commentor No. 432

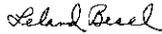
432-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 433: Leland Besel

To Whom It May Concern:

This is my testimony in support of the FFTF being used for the production of medical and industrial isotopes and the production of plutonium-238 for use in future NASA space missions. FFTF is the most modern reactor facility that the DOE currently has and has an exemplary operational history. To not use this facility for such needed isotope and U-238 missions would be inappropriate in my estimation. FFTF has been shown to be the most cost effective alternative in producing the nuclear isotopes needed for cancer treatments and cancer research. As one who has had cancer, the need to have these isotopes available within the United States for both cancer treatment and research is of paramount importance to me.

Yours truly,



Leland Besel
2026 Howell Ave
Richland, WA 99352

433-1

Response to Commentor No. 433

433-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 434: Denny L. Condotta

August 30,2000

Colette E. Brown, NE-50
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

Dear Ms Brown:

Subject: Comments on DOE/EIS-03100

I am pleased to offer the following comments on the Nuclear Infrastructure PEIS, DOE/EIS-03100:

1. First, I would like to compliment the preparers of this PEIS for a thorough and comprehensive report. I generally agree with the data and conclusions of the PEIS, at least in the areas where I have some knowledge.
2. I strongly recommend choice of Alternative 1, "Restart of FFTF at Hanford WA, to meet all isotope production and research requirements." My reasons for this recommendation are defined in the following comments.
3. A major reason for recommending Restart of the FFTF is **Humanitarian**. Prudent restart of the FFTF provides the greatest assurance of meeting the needs for Isotopes required for research and treatment of cancer victims, and thus will save the lives of countless people.
4. A second major reason for recommending restart of the FFTF is the fact that it is an existing facility that has started up and operated successfully for numerous years. There are in existence operating procedures, support equipment, and a trained and capable staff. It is hard to put a value on this experience base, but as an engineer that has gone through several complex plant startups, I know it represents a large amount of money and time. There will always be a large unknown risk factor associated with building a new and different facility; and with the effort to test and bring this new facility into the operating mode. For this reason alone, starting up the FFTF is the most assured and conservative way to provide the required supply of radio-isotopes. I recommend that the value of using an existing and proven facility be given much more consideration in your final draft.
5. Another factor favoring use of the FFTF is the large base of skilled and trained personnel, and laboratories and industrial resources, available in the Tri-city area, to provide technical support to the FFTF operation.
6. One concern that is raised by many of those who are opposed to a restart of the FFTF is that this action could delay the cleanup activities at Hanford, mainly by diverting funds away from the cleanup budget. However, the commitment by the DOE that the FFTF restart would not divert or reprogram budgeted funds from Hanford cleanup should resolve this issue. In fact, restart of the FFTF should make a positive contribution to funding available for cleanup, for the following reasons: (a) If the FFTF is deactivated in 5 to 10 years, funds for this activity would come out of the Hanford cleanup budget during a critical period in the Hanford Program, i.e. about when the first Waste Glassification plant is in the startup phase. Restart of

Response to Commentor No. 434

434-1

434-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

434-2: DOE notes the commentor's support for restarting FFTF to conduct nuclear energy research and development as part of its nuclear infrastructure enhancement.

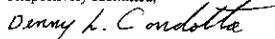
Commentor No. 434: Denny L. Condotta (Cont'd)

the FFTF would defer deactivation by 35 years or more, well past the peak of Hanford cleanup activities (b) If the FFTF is restarted and operated, it would utilize some general Hanford support activities, such as security, utilities, health services, etc. It would then be charged a portion of the Hanford overhead costs, resulting in lower costs being assigned to the plant cleanup activity.

7. In Section S-1 of the Summary of the PEIS it is noted that the Nuclear Energy Research Advisory Committee (NERAC) has informed the Secretary of Energy that: "There is an **urgent sense that the nation must rapidly restore an adequate investment in basic and applied research in nuclear energy if it is to sustain a viable United States capability in the 21st Century.**"
- It should be recognized that restarting the FFTF will make a large contribution to the above goal; both by maintaining and enhancing skills, and also by providing a test facility for fuels and materials and possibly in areas that are not now recognized. This essentially free contribution needs further emphasis in the PEIS.

The FFTF represents a large investment of time, money and materials. It is the newest reactor in the DOE complex, and is a valuable national resource. It would be both an economic loss and also a strategic folly to permanently deactivate this facility, and then try to duplicate its capabilities elsewhere.

Respectfully submitted,



Denny L. Condotta
Chemical Engineer, Retired

2144 Harris Ave.
Richland, WA 99352

Ph # (509) 943-4780

434-1
(Cont'd)

434-2

434-1

Response to Commentor No. 434

Commentor No. 435: Maurice R. Duffield

Response to Commentor No. 435

Draft PEIS Comment Form

I am in favor for Start up of F.F.T.F nuclear isotopes use. #1238

435-1

435-1: DOE notes the commentor's support for Alternative 1, Restart FFFTF.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Maurice R. Duffield

Organization: F.F.T.F. Support

Home/Organization Address (circle one):

City: Richland State: WA Zip Code: 99352

Telephone (optional):

E-mail (optional): roy.duffield@yahoo.com

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Collette E. Brown, NE-50 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592 E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

Commentor No. 441: Anonymous



Draft PEIS Comment Form

Money should be spent on eco-friendly alternative energy sources such as solar & wind power. Nuclear power whether civilian or government requires digging into land for plutonium & uranium. The majority of these resources are either in areas that should be left untouched or are on reservations. Also the majority of nuclear waste is dumped in neighborhoods with poor blacks, Hispanics and Native Americans. Just look at the waste on reservations across America. Please do not expand our country's nuclear program and instead look to alternatives.

441-1
441-2
441-1

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): _____
 Organization: _____
 Home/Organization Address (circle one): _____

 City: _____ State: _____ Zip Code: _____
 Telephone (optional): _____
 E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 1901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Response to Commentor No. 441

- 441-1:** DOE notes the commentor's interest in alternative energy sources, although issues of research and development of alternative energy sources are beyond the scope of this Nuclear Infrastructure PEIS. The DOE missions to be addressed in this EIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies.
- 441-2:** Although beyond the scope of this PEIS, the commentor's concern for nationwide waste disposal practices is noted. Nuclear waste that would be generated under the alternatives and the disposition of generated waste are discussed in Chapter 4 of the NI PEIS. Potential environmental impacts on low-income and minority populations that would be expected to result from implementation of the nuclear infrastructure alternatives are evaluated in Appendix K. DOE would disposition waste generated under the nuclear infrastructure alternatives in compliance with current site practices. None of the waste would be disposed of on the Fort Hall Reservation near Idaho National Engineering and Environmental Laboratory or the Yakama Reservation near the Hanford Site.
- Environmental justice is a key part of an environmental impact statement and is addressed in detail in Appendix K of the NI PEIS.

Commentor No. 442: William J. Condotta

10113 East 39th
Spokane, WA
August 26, 2000

U.S. Department of Energy
Office of Space and Defense Power Systems
NE 50
19901 Germantown Road
Germantown, Maryland 20874-1290

Please re-start the *Fast Flux Test Facility* for Medical Isotopes.

New treatments for cancer using medical isotopes are showing great promise in human clinical trials. A new medical isotope treatment for research (treating only a few patients) is much smaller than the quantity that will be required when the treatment becomes FDA approved. In the next several years, demand for certain medical isotopes may skyrocket as a result of their excellent performance in clinical trials.

The *Fast Flux Test Facility* (FFTF) has the capacity to produce 2-3 times more medical isotopes than all other reactors in the nation combined. We need it to be ready to supply large quantities of medical isotopes to cancer centers around the nation. The only reactor in the Western Hemisphere capable of producing large quantities of several high specific activity isotopes is the FFTF, located in the Tri-Cities in the state of Washington. The *Pacific Northwest National Laboratory* (PNNL) medical isotope program receives calls from researchers waiting for such isotopes.

Thank you very much for any help that you can give.

Sincerely,


William J. Condotta

Response to Commentor No. 442

442-1

442-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 443: Mary Ellen Condotta

10113 East 39th
Spokane, WA
August 26, 2000

U.S. Department of Energy
Office of Space and Defense Power Systems
NE 50
19901 Germantown Road
Germantown, Maryland 20874-1290

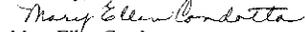
Please re-start the *Fast Flux Test Facility* for Medical Isotopes.

New treatments for cancer using medical isotopes are showing great promise in human clinical trials. A new medical isotope treatment for research (treating only a few patients) is much smaller than the quantity that will be required when the treatment becomes FDA approved. In the next several years, demand for certain medical isotopes may skyrocket as a result of their excellent performance in clinical trials.

The *Fast Flux Test Facility* (FFTF) has the capacity to produce 2-3 times more medical isotopes than all other reactors in the nation combined. We need it to be ready to supply large quantities of medical isotopes to cancer centers around the nation. The only reactor in the Western Hemisphere capable of producing large quantities of several high specific activity isotopes is the FFTF, located in the Tri-Cities in the state of Washington. The *Pacific Northwest National Laboratory* (PNNL) medical isotope program receives calls from researchers waiting for such isotopes.

Thank you very much for any help that you can give.

Sincerely,


Mary Ellen Condotta
25 year Cancer Survivor

443-1

Response to Commentor No. 443

443-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 444: Nancy Kenner

Response to Commentor No. 444

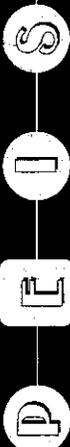
Draft PEIS Comment Form

I have cancer - leukemia
I need FFTF - for the isotopes
please Restart.
These isotopes are no longer
available.

444-1

444-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Nancy Kenner

Organization: SDR Optimist Mid-Columbia

Home/Organization Address (circle one): 3205 W 46th

City: Kennewick State: WA Zip Code: 99337

Telephone (optional): 509 372-7201

E-mail (optional): nkenner@twiweb.usk.edu

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Commentor No. 445: The Ritter Family

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

What about the Hanford Cleanup Agreement of 89?

Clean - up Hanford!

Alternative #5 - Permanently deactivate FFTF !!

It is the only solution.

445-1

445-2

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): *John Ritter and Family*

Organization: *Carbon Band - 800 / June 10*

Home/Organization Address (circle one): _____

City: *San Jose* State: *CA* Zip Code: *95031*

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19001 Germantown Road • Germantown, MD 20874
 Toll-free telephone: 1-877-562-4593 • Toll-free fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Response to Commentor No. 445

- 445-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Prior public meetings were held on this formal milestone change.
- 445-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 446: Les Gray

Response to Commentor No. 446

Draft PEIS Comment Form

we NEED FFTF Please Restart it
It is Astinine to have to buy ANYthing
from Russia - After ALL that we have GAVE them
Aft NO change

446-1

446-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Les Gray

Organization:

Home/Organization Address (circle one):

City: Robert Lee, Va State: VA Zip Code: 2265-9901

Telephone (optional): 915 453 2775

E-mail (optional): LSKYG@comcast.com

COMMENTS MUST BE POSTMARKED BY September 11, 2000

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toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 447: Henry P. Kraemer

Draft PEIS Comment Form

Keep it running. It can produce needed products.

447-1

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
returning this comment form to the registration desk at the meeting or to the address below
calling toll-free and leaving your comments: 1-877-562-4593
faxing your comments toll-free to: 1-877-562-4592
commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): HENRY P. KRAEMER

Organization: RETIRED, SIEMENS

Home/Organization Address (circle one):

1109 LONG AVENUE

City: RICHLAND State: WA Zip Code: 99352

Telephone (optional):

E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 11, 2000

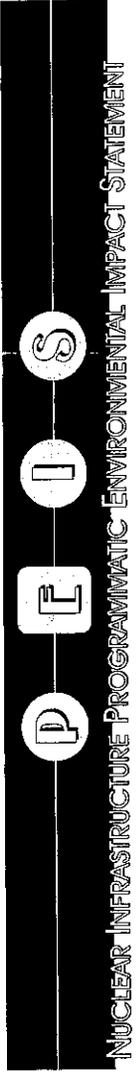
For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Response to Commentor No. 447

447-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.



Commentor No. 448: George Ludwig

Response to Commentor No. 448

Draft PEIS Comment Form

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



27 Aug 2000
Dear Ms Brown,
WE ARE IN FAVOR OF RESTARTING
THE FAST FLUX TEST REACTOR FACILITY
AT THE HANFORD SITE IN THE STATE
OF WASHINGTON FOR THE PURPOSE
OF PRODUCING MEDICAL ISOTOPES.

George Ludwig
Kerensa Ludwig

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): _____

Organization: _____

Home/Work Address (circle one): _____
G. Ludwig
9 Cannon Row
Hilton Head, SC 29928-4118

City: _____ State: _____ Zip Code: _____

Telephone (optional): 843 363 2926

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

448-1

448-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 449: Nate and Andrea Hildebrand

Draft PEIS Comment Form

IT SEEMS LIKE THERE ARE SAFER AND BETTER WAYS TO ACHIEVE THE MISSIONS OUTLINED IN THE PEIS. GIVEN THE INFORMATION WE'VE RECEIVED, ACCELERATORS SEEM MUCH MORE DESIRABLE THAN FFTF. WE ~~WANT~~ AS FAR AS ENERGY GOES, WE'D LIKE TO SEE THIS MONEY USED TO FURTHER RESEARCH AND DEVELOPMENT OF RENEWABLE ENERGY, SUCH AS SOLAR POWER, SPACE EXPLORATION? LET'S FOCUS ON APPRECIATING OUR OWN PLANET FIRST, AND NUCLEAR WEAPONS? PLEASE DON'T FURTHER THEIR DEVELOPMENT! COULDN'T WE USE ALL THE \$ SPENT ON MILITARY AND WEAPONS TO FIND BETTER SOLUTIONS TO THE MISSIONS GIVEN HERE? Or even to better the living conditions of ALL the world?

449-1

449-2

449-3

We vote Alternative #5 - Permanently deactivate FFTF with no new missions.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Nate & Andrea Hildebrand

Organization: _____

Home Organization Address (circle one): 1317 SE Main St

City: Portland State: OR Zip Code: 97214

Telephone (optional): _____

E-mail (optional): andrea@innategraphics.com

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free telephone: 1-877-562-4593 • Toll-free fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Response to Commentor No. 449

- 449-1: DOE notes the commentor's support for Alternative 3, Construct New Accelerator(s), and support for Alternative 5, Permanently Deactive FFTF..
- 449-2: DOE notes the commentor's interest in alternative energy sources and concerns about space exploration and defense spending. The DOE missions to be addressed in this PEIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies. None of these DOE missions are defense- or weapons-related.
- 449-3: See response to comment 449-1



Commentor No. 450: Penny and Rick Wirsing

Response to Commentor No. 450

S
 I
 E
 P
 NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

We need FFTE. Please, restart it!

450-1

450-1: DOE notes the commentor's support for Alternative 1, Restart FFTE.

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): Penny + Rick Wirsing

Organization: none

(Home) Organization Address (circle one): 9411 Van Arsdale Drive,
Vienna, VA 22181

City: _____ State: _____ Zip Code: _____

Telephone (optional): 703-846-6078

E-mail (optional): clark@cox.rr.com

COMMENTS MUST BE POSTMARKED BY September 11, 2000

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 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free telephone: 1-877-562-4593 • Toll-free fax: 1-877-562-4592
 E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

Commentor No. 451: Anonymous

Draft PEIS Comment Form

Let's use FFTF (a national resource) for the benefit of many - the Tri Cities, the nuclear community + the consumer of medical isotopes!

451-1

451-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): _____

Organization: _____

Home/Organization Address (circle one): _____

City: _____ State: _____ Zip Code: _____

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00



Commentor No. 452: Susan B. O'Donnell

316 NE 191st St.
Shoreline, WA 98155

August 30, 2000

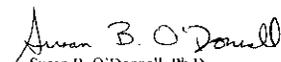
Bill Richardson
Secretary of Energy
United States Department of Energy
NE - 50
19901 Germantown Road
Germantown, MD 20874-1290

Dear Secretary Richardson:

I am unable to attend the public hearings regarding the plans for Hanford's FFTF Nuclear Reactor, so I am writing to express my opinion on the consideration to restart Hanford's FFTF Nuclear Reactor.

I am outraged that restart of the Reactor is being considered while many of the existing nuclear waste tanks at Hanford are leaking. As a biologist and resident of Washington, I fear the disastrous effects of nuclear contamination reaching the Columbia River. Clean up of Hanford must be continued without delay and without additional waste being added to already inadequate tanks. Please honor the Hanford clean-up agreement and shut down the FFTF Nuclear Reactor.

Sincerely,


Susan B. O'Donnell, Ph.D.

Response to Commentor No. 452

452-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford and protection of the Columbia River. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected. If the decision is made to shutdown the FFTF, then cleanup dollars will be needed to deactivate the facility, which could impact the overall Hanford cleanup schedule.

In regard to the concerns about the migration of contaminants to the Columbia River, the Hanford Site has a comprehensive waste minimization and pollution prevention program in place as summarized in Section 3.4.11.8 that would govern any proposed site activities. The alternatives delineated in the NI PEIS would not have an impact on Hanford cleanup activities and none of the alternatives considered would add to existing tank waste volumes.

More specific to the alternatives presented in the NI PEIS, FFTF is located approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to the groundwater. Analyses presented in Chapter 4 of the NI PEIS (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4) indicate that there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of the existing Hanford facilities in support of the proposed activities. Also, no

452-1

452-2

Response to Commentor No. 452

water quality impacts would be expected as a result of permanent deactivation of FFTF (Section 4.4.1.2.4).

452-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 452: Susan B. O'Donnell (Cont'd)

**Commentor No. 453: Patricia Hale, Washington State Senator
8th Legislative District**



Washington State Senate

Olympia Office:
303 Legislative Building
PO Box 40108
Olympia, WA 98501-0108

Senator Patricia S. Hale
Republican Caucus Chair
8th Legislative District

Phone: (360) 786-7014
FAX: (360) 786-7520
Toll Free: 1-800-562-6600
e-mail: hale_p@leg.wa.gov

August 28, 2000

Ms. Colette E. Brown, NE-50
U.S. Department of Energy
19901 Germantown Road
Germantown, Maryland 20874

Dear Ms. Brown:

As State Senator for Washington's 8th legislative district, I represent the area in which the Hanford Site is located. Hanford's neighbors are my constituents, and I welcome this opportunity to speak out on their behalf.

The Fast Flux Test Facility (FFTF) has long been the crown jewel of the nuclear industry. It remains the nation's newest and safest reactor, which has been borne out by ten years of operating excellence. But the government has never tapped into the enormous potential of this remarkable facility, and the time has come to do so.

With the FFTF, we have a reactor with the unique capability to produce life-saving medical isotopes while leading the way to breakthroughs in medical research. The FFTF is the only existing facility that can provide our country with the projected quantity, variety and quality of isotopes that will be needed in the coming decades. Why then is the United States supporting some 100 research reactors in 40 foreign countries? It seems incomprehensible that our government would choose to invest in foreign facilities rather than the far superior test reactor we have right here at home.

Obviously, there is a clear and compelling need for medical isotopes. This year, in the United States alone, more than 550,000 people will die of cancer and more than 950,000 will die of heart disease. The annual cost of healthcare has already surpassed the \$1 trillion mark and is expected to reach a staggering \$2.3 trillion by 2015.

Our country can no longer afford to turn its back on an existing, state-of-the-art facility – already paid for by taxpayer dollars – that could and should lead the world in medical isotope production

453-1

Response to Commentor No. 453

453-1: DOE notes the commentor's support for Alternative 1, Restart FFTF. DOE also notes the commentor's statement about the Foreign Research Reactor Program; however, this program, managed by the DOE Office of Environmental Management, is separate from the proposed action in this PEIS.

***Commentor No. 453: Patricia Hale, Washington State Senator
8th Legislative District (Cont'd)***

Ms. Colette E. Brown, NE-50
Page 2

and research. Nor should we risk heavy reliance on foreign sources – no matter how friendly – for our isotope supply. History is filled with grim reminders of national vulnerabilities that were created and consequences wrought by changing political winds.

And finally, at a time when the world is struggling with scientific challenges -- in medical treatments, energy production, waste management and space exploration -- it would be both wasteful and foolhardy for the government to dismantle this versatile facility that could bolster our national capabilities and lead the way to important new discoveries.

I wholeheartedly support the restart of the FFTF and urge the Department of Energy to move ahead without further delay.

Thank you for allowing me to voice these views.

Sincerely,

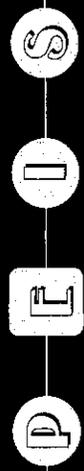


Senator Patricia S. Hale
8th District

**453-1
(Cont'd)**

Response to Commentor No. 453

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

We support restart of FFTF Now. We don't have time to build new facilities (10 or 15 years) & don't have the money to build new accelerators (which might need a reactor to power the operation). People who are dying from cancer cannot wait. We need to have empathy for those who are suffering. ~~Investment in space technology~~
 Buying from Russia or other countries is NOT a long term solution and it jeopardizes National Security.

Daniel + Kitty GANDEE

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Daniel + Kitty Gandee

Organization: _____

Home/Organization Address (circle one): 1404 Black Ct

City: Richland State: VA Zip Code: 99352

Telephone (optional): _____

E-mail (optional): Kitty-dan@juno.com

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Collette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

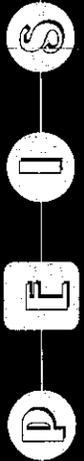
454-1

454-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 455: Marion McGaughey

Response to Commentor No. 455

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

WE NEED FFTF - PLEASE RESTART IT
USE THE MONEY IT WILL SAVE TO
MAKE OUR ASYED FORCES READY
THANKS

455-1

455-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): 

Organization: _____

Home/Organization Address (circle one): _____

City: _____ State: _____ Zip Code: _____

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



Commentor No. 457: Paul Moyer

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

8/29/0

Ms. Brown,

Having already sent "comments" to you on the Draft PEIS, strongly supporting Alternative Five, I will take no more of your time on this matter.

Sincerely, Paul Moyer

457-1

Response to Commentor No. 457

457-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Paul Moyer

Organization: _____

Home/Organization Address (circle one): P.O. Box 930
White Salmon, WA.

City: _____ State: _____ Zip Code: 98672

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
toll-free telephone: 1-877-562-4593 • toll-free fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



Commentor No. 458: Nita Vanmy

Response to Commentor No. 458

Draft PEIS Comment Form

I feel we need FFTF. You need to restart it.
The reasoning behind restarting it seems to be logical and necessary.

458-1

458-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Nita Vanmy

Organization: /

Home Organization Address (circle one): HCR 84 Box 65

City: Morris State: TX Zip Code: 76839

Telephone (optional): _____

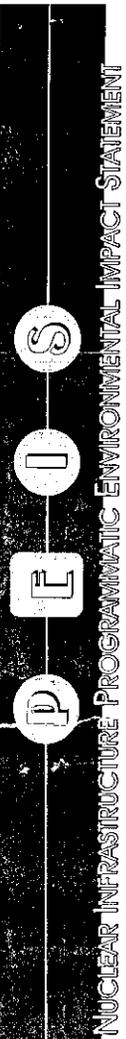
E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00



Commentor No. 459: Emily D. Munn

Draft PEIS Comment Form

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



I think we need FFTF. Please restart it.
Wanda Munn's reasoning seems very
rational.

459-1

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
returning this comment form to the registration desk at the meeting or to the address below
calling toll-free and leaving your comments: 1-877-562-4593
faxing your comments toll-free to: 1-877-562-4592
commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Emily D. Munn
Organization:
Home Organization Address (circle one): 2801 Chatteston Drive
City: San Angelo State: Tx Zip Code: 76904
Telephone (optional):
E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-30
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Response to Commentor No. 459

459-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 460: Andrew Butterfield

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

**Public comment on Nuclear Infrastructure Draft Programmatic
Environmental Impact Statement (NI PEIS)**

I am opposed to restart of the Fast Flux Test Facility reactor because:

*There is no safe way to dispose of
the waste produced by this reactor,
and the facility is up stream from
many populated areas which use
the Columbia for food and recreation*

Name Andrew Butterfield
Address 2830 NE 35TH AVE
City, state Portland, OR Zip 97212

Response to Commentor No. 460

460-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

460-2: The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE Orders. The potential impacts to human health and environmental media including air, water, and land are shown in Section 4.3 of Volume 1 to be small.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Commentor No. 462: Pat Hazlett (Cont'd)

Response to Commentor No. 462

then cleanup dollars will be needed to deactivate the facility, which could impact the overall Hanford cleanup schedule.

- 462-4:** In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

Commentor No. 463: Lynn Hanrahan

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

0875*1207

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

*all efforts of funding should be
directed to clean-up. This site is
already a hazard to the environment,
the people & the animals in the northwest!
Do not restart!*

Name Lynn Hanrahan
Address 2718 SE Brooklyn St
City, state Portland OR Zip 97202

Response to Commentor No. 463

- 463-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 463-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

463-1

463-2

463-1

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected. If the decision is made to shutdown the FFTF, then cleanup dollars will be needed to deactivate the facility, which could impact the overall Hanford cleanup schedule.

Current waste management activities are conducted in accordance with applicable Federal and state laws and regulations and appropriate DOE orders.

Commentor No. 464: Scott D. Swanson

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

76 97035+0237

**Public comment on Nuclear Infrastructure Draft Programmatic
Environmental Impact Statement (NI PEIS)**

I am opposed to restart of the Fast Flux Test Facility reactor because:

We were promised
CLEAN UP first we do
not need to MAKE ANY
more WASTE. Oregon and
Washington have sacrificed enough for
the Cold War effort CLEAN UP THE MESS!
Name SCOTT D. SWANSON
Address 4773 N.E. 75TH AVE.
City, state Portland, Oregon Zip 97218

464-1

464-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

464-2

464-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Prior public meetings were held on this formal milestone change.

Commentor No. 465: Sara Lillegard

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

76



Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS).

I am opposed to restart of the Fast Flux Test Facility reactor because:

the disadvantages are detrimental to
the world specifically that ecosystem we
need to begin to think beyond greed and
selfishness and have concern for
those that will live here after us.

Name Sara Lillegard
Address 159 E 24th Pl
City, state Eugene OR Zip 97405

Response to Commentor No. 465

465-1

465-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

465-2

465-2: The impacts of the various alternatives, including No Action, on ecological resources at ORR, INEEL, and Hanford are assessed in Chapter 4 of the NI PEIS. It was determined that there would be negligible short- or long-term ecological impacts at these sites.

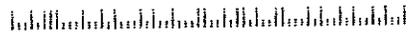
Commentor No. 466: Yvonne McDonald

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

76



Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

THIS FACILITY THREATENS THE
INTEGRITY OF THE COLUMBIA
RIVER.

Name YVONNE McDONALD
Address 2733 SW TROY ST.
City, state PORTLAND, OR zip 97219

Response to Commentor No. 466

466-1

466-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

466-2

466-2: FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

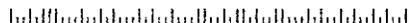
Commentor No. 467: Richard Alevizos

Hanford Watch
 2285 SE Cypress
 Portland, Oregon 97214



Ms. Colette Brown
 U.S. Department of Energy
 Office of Space and Defense Power Systems
 NE-50
 19901 Germantown Road
 Germantown, Maryland 20874-1290

76



Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

it does not take into consideration
the danger to our planet or
the survival of our species. I am
in favor of nuclear power - just
not on this planet. ^{only in the vacuum}
^{of outer space can}
^{a nuclear accident}
^{be effectively contained}

Name Richard Alevizos

Address 159 E 24th Pl.

City, state Eugene OR. Zip 97405

467-1

467-2

467-3

Response to Commentor No. 467

467-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

467-2: DOE notes the commentor's concerns related to potential environmental impacts.

The environmental impacts associated with operation of the FFTF during normal operations and from postulated accidents are presented and discussed in Section 4.3 of the draft NI PEIS. All impacts to human health and insults to environmental media including air, water, and land are shown to be small. No fatalities would be expected from the 35-year operating period of the FFTF. Any discharges would be in accordance with applicable permit and regulatory requirements and the impacts on air and water quality would be small. The potential impacts to the Hanford area and transportation corridors to and from Hanford associated with FFTF operations are also shown to be small. Because of the small impacts associated with FFTF restart, the danger to our planet or to the survival of the human species would be virtually nonexistent.

467-3: DOE notes the commentor's views on nuclear power.

Commentor No. 468: Liz Copeland/Susan Giese

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

1474+1207

**Public comment on Nuclear Infrastructure Draft Programmatic
Environmental Impact Statement (NI PEIS)**

Both of us

are opposed to restart of the Fast Flux Test Facility reactor because:

We feel that, since Hanford is
presently radioactively polluted and
years behind cleanup schedule, the
FFTF should not, under any foreseeable
circumstances, be restarted.

Name Liz Copeland / Susan Giese

Address 1917 NE Fourth Ave.

City, state Portland, OR Zip 97212

Response to Commentor No. 468

468-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

468-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected. If the decision is made to shutdown the FFTF, then cleanup dollars will be needed to deactivate the facility, which could impact the overall Hanford cleanup schedule.

468-1

468-2

468-1

Commentor No. 469: Marilyn Lipko

Hanford Watch
 2285 SE Cypress
 Portland, Oregon 97214



Ms. Colette Brown
 U.S. Department of Energy
 Office of Space and Defense Power Systems
 NE-50
 19901 Germantown Road
 Germantown, Maryland 20874-1290

087441207 |-----|

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

Hanford is the most polluted place in the United States and one of the worst in the world! Concentrate on clean-up, which is already overwhelming. Please!

Name Marilyn Lipko
 Address 2125 SE Sherrett St
 City, state Portland, Or Zip 97202

Response to Commentor No. 469

- 469-1 469-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 469-2 469-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Commentor No. 470: S. Daly

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

20874+1290 [Barcode]

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

HANFORD IS A MESS, AND THIS WILL ONLY ADD TO THE PROBLEMS. MY CITY'S WATER SUPPLY LIES 15 FT BELOW SEA LEVEL LESS THAN 1/2 MILE FROM THE COLUMBIA RIVER. KNOWING GROUNDWATER HYDROLOGY, A RADIOACTIVE COLUMBIA MEANS I HAVE NO WATER.
Name S. DALY
Address P.O. BOX 1307
City, state KILAMA, WA Zip 98625

470-1
470-2
470-3

Response to Commentor No. 470

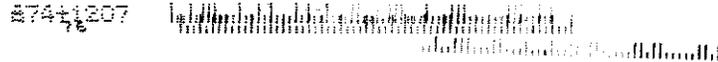
- 470-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 470-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 470-3: FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Commentor No. 471: Richard Bailey

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290



Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

Is not the world
contaminated enough!!!

Name Richard Bailey
Address 2837 NE 14th Ave
City, state Portland OR Zip 97212

Response to Commentor No. 471

- 471-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 471-2: The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

Commentor No. 473: Pat Rogers

NI PEIS Toll_Free Telephone

9/2/00

Pat Rogers
Pasco, WA
509_547_9378

I would like to leave a comment on the FFTF at Richland, Washington. I believe this plant should be put into use for the production of radioisotopes and possibly power. It is a multi-million dollar plant that is just sitting out there, and because the people in Seattle and Portland don't seem to want to utilize this utility is totally ridiculous. I think we need it, and I think it needs to be started.

473-1

Response to Commentor No. 473

473-1: DOE notes the commentor's support for Alternative 1, Restart FFTF. The commentor should note that the heat generated by FFTF operation will not be used for generation of electricity.

Commentor No. 474: Edwin Schlupford

NI PEIS Toll-Free Telephone
9/2/00

Edwin Schlupford
206_767_4710

This comment is in regards to restarting of Fast Flux Reactor. I am very strongly opposed to it. I would like to make the following comments. First of all, we have never figured out what to do with nuclear waste. The Germans have finally pulled themselves up to their knees with their bootstraps and decided to shut down their nuclear infrastructure. Thank goodness they worked out with industry a good compromise, and it is happening very shortly in a matter of years from now. We need to go that same direction, and I don't know or understand why us Americans can't be leaders for a change instead of late Charlie followers. We don't know what to do with nuclear waste. We've got a big, big mess on our hands. We've tried to find places like Yucca Mountain, which ironically we later find out that has a faster leak rate than we anticipated because of a man-made product that has only been in the world since the development of the nuclear age, and we were able to trace it down to Yucca Mountain. The whole idea of transferring nuclear waste from the private sector into the public is a complete transfer of liability. We need to as citizens stand up and say what is right and wrong.

This type of restarting and continuing on with this thing, which has even been written into it the possibility of potential other uses, which could be many different things, including weapons, is totally ridiculous. And sitting under the ruse of nuclear medicine is exactly that.

Thank you very much for your time. We need to, you know, nuclear energy would be fine if it was a total start to finish solution, but we only [have] half [of] that thing figured out. Until we figure out the whole end of it, in other words, the disposal end, we should not be and it is irresponsible to be involved with this and burdening our future generations. We should spend the money on shutting this stuff down; getting people into other jobs that can do something useful in cleaning up our messes that we have inherited from our fathers.

474-1

474-2

474-3

474-2

474-4

Response to Commentor No. 474

474-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

474-2: The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS assumes, for the purposes of analysis, that Yucca Mountain Nevada, would be the final disposal site for DOE's high-level radioactive waste and spent nuclear fuel. As directed by the U.S. Congress through the Nuclear Waste Policy Act, as amended, Yucca Mountain is the only candidate site currently being characterized as a potential geologic repository for high-level radioactive waste and spent nuclear fuel. DOE has prepared a separate EIS, "Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High Level Radioactive Waste at Yucca Mountain, Nye County, Nevada" (DOE/EIS-0250D, July 1999), which analyzes the environmental impacts from construction, operation and monitoring, related transportation, and eventual closure of a potential geological repository.

474-3: DOE notes the commentor's views. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio.

Commentor No. 474: Edwin Schlupford (Cont'd)

Response to Commentor No. 474

However, no component of the proposed action is for the purpose of supporting any defense or weapons-related mission. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

- 474-4:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Commentor No. 475: The Ritter Family

NI PEIS Toll_Free Telephone

9/4/00

Jeanna Ritter
Sean Ritter
Katherine Ritter
John Ritter
Hood River, OR

I would like to voice my concern about the start of the Hanford nuclear plant. Hanford's highlevel nuclear waste tanks are already presently leaking radioactive waste into the groundwater. This is moving much closer to the Columbia River, and it is threatening the life of the river and also the people downstream. With this real and intermittent danger, how can anyone reasonablypropose restarting a reactor that will add more waste to this ecosystem. My family and I arestrongly against restart of this nuclear plant.

475-1

475-2

Response to Commentor No. 475

475-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. This waste would not be sent to the high-level radioactive waste tank farms. High-level radioactive waste would not be generated from merely operating FFTF. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

475-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 566: Kevin Kraal

From: Kevin Kraal[SMTP:KEVINK@MICRON.NET]
Sent: Friday, September 01, 2000 2:51:48 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Plutonium production
Auto forwarded by a Rule

Sirs:

I am opposed to any plan involving the production of more Pu-238, especially at INEEL in a building already considered unsafe. I certainly understand the need for this element in various scientific endeavors, however there is, as I understand it, no need for more of this at the present or the foreseeable future. NASA has reportedly enough for its missions. There is already documented groundwater contamination under the site. Our town (Twin Falls) obtains its drinking water from the very same aquifer under INEEL. The reprocessing method will produce even more potential contamination. The current technology does not allow for truly safe disposal, and until it does, to produce yet more toxic (deadly, in fact) waste would be folly.

Most sincerely,

Kevin Kraal, MD
4155 Meadowridge Circle
Twin Falls, ID

566-1

566-2

566-3

Response to Commentor No. 566

566-1: DOE notes the commentor's opposition to enhancing its existing nuclear facility infrastructure to support production of plutonium-238 for use in future NASA space exploration missions, and in particular the use of INEEL for support of this action. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost.

A May 22, 2000, correspondence from NASA to DOE identified that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

566-2: DOE notes the commentor's concerns regarding existing groundwater contamination at INEEL and for additional groundwater impacts. DOE would not reprocess spent nuclear fuel under any of the alternatives

Commentor No. 566: Kevin Kraal (Cont'd)

Response to Commentor No. 566

considered in this NI PEIS. Options under the nuclear infrastructure alternatives include fabricating and processing neptunium-237 targets at the Fluorinel Dissolution Process Facility (FDPF) at INEEL to produce plutonium-238 for NASA space missions.

Although beyond the scope of this NI PEIS, activities to remediate existing contamination of the Snake River Plain aquifer attributable to INEEL sources are ongoing and of high priority to DOE. Section 3.3.4.2 describes the current condition of groundwater potentially affected by INEEL operations, with a specific discussion of groundwater quality of the proposed facility location provided in Section 3.3.4.2.2. Analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.2.1.4, 4.4.2.1.4, 4.5.2.2.4, and 4.6.2.2.4) addressing use of the FDPF indicate that there would be no discernible impacts to groundwater or surface water quality at INEEL from normal operation of FDPF in support of the proposed activities. Use of Advanced Test Reactor to irradiate neptunium-237 targets would have no additional impact on water resources in the Test Reactor Area of INEEL as discussed in Section 4.4.1.1.4.

Waste that would be generated as a result of target processing are discussed in Section 4.3.2.1.13. Waste generated from the candidate facilities at INEEL under the nuclear infrastructure alternatives would be managed in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and DOE orders. INEEL also has a comprehensive waste minimization and pollution prevention program in place as summarized in Volume 1, Section 3.3.11.8 that would govern any proposed site activities.

- 566-3:** The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 567: Joanna Panter

From: Joanna Panter
[SMTP:JPANTER@EARTHLINK.NET]
Sent: Friday, September 01, 2000 3:29:37 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Please restart the FFTF
Auto forwarded by a Rule

To whom it may concern,

I am writing this brief e-mail to encourage restarting the Fast Flux Test Facility. I understand the importance of the FFTF and wish for its being brought back from stand-by mode.

Thank you.

567-1

Response to Commentor No. 567

567-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 568: Holly Conley

From: Holly Conley[SMTP:HCONLEY@KMPS.COM]
 Sent: Friday, September 01, 2000 6:57:08 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: shut down!
 Auto forwarded by a Rule

Please hear my request to NOT restart FFTF in Hanford. This reactor needs to be shut down completely, and the existing waste cleaned up as promised. Please; no more waste, no more danger, no more plutonium production at Hanford.

Thank you for your serious consideration in this matter.

Regards,

Holly Conley

568-1

568-2

Response to Commentor No. 568

568-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

568-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Public meetings were held on this formal milestone change.

With respect to plutonium processing, no weapons material will be produced within the stated mission. All proposed activities are for civilian purposes.

Commentor No. 569: Roberta Wilson

From: Roberta Wilson[SMTP:BERTAW@MICROSOFT.COM]
Sent: Friday, September 01, 2000 7:03:46 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Comments on start up of FFTF
Auto forwarded by a Rule

Please write these comments into the record:

Dear Ms. Brown,

In 1986 I walked across the country with the Great Peace March for GlobalNuclear Disarmament. I was 31, and I had left my job in the computerindustry to do this nine_month walk during which we spoke with thousands ofcitizens about the danger of nuclear weapons.

When we arrived in your neighborhood__the DC office of the Department ofEnergy__we shut the place down for awhile. I bought cookies and coffee foryour locked out workers. I figured I might be able to talk to them that way.

They were mad, of course, but we finally did talk. I think I showed themthat I was the same as they were__I had an education, a job, and I vote.Still, my voice was not being heard by my government regarding nuclearenergy and weapons.

We "anti_nuke activists" are portrayed as troublesome and dangerous at worstand silly and misinformed at best. We are neither. We are citizens who aretelling you that WE DO NOT WANT NUCLEAR TECHNOLOGY__primarily because wasteissues and accident issues are unresolved and it seems at presentunresolvable. Hanford is the most polluted site in our country, and clean_upshould be the first priority. We've waited years for it. I suspect that thereason Hanford is not cleaned up is that there is no way to clean up nuclearwaste that is seeping into the groundwater near the Columbia River.

569-1

569-2

Response to Commentor No. 569

569-1: The Commentor’s opposition to nuclear technology because of waste and accident issues is noted. The PEIS evaluates the impact on waste generation and the consequences of accidents for all alternatives in detail in Volume 1 Chapter 4. The results of this evaluation are presented in PEIS Volume 1, Section 2.7.1.

569-2: Restoration of the Hanford Site and waste management activities are the primary missions at Hanford. DOE notes the commentor’s concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to the groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Commentor No. 569: Roberta Wilson (Cont'd)

I find the medical excuse for starting the Fast Flux Test Facility to be an untenable and extremely cynical attempt to get the public back on board for nuclear power. As the doctor at the Seattle DOE hearings said, other technology is a better choice for addressing cancer than the production of medical isotopes. Even a better choice is to eliminate the causes of cancer__environmental pollutants, including nuclear.

569-3

I urge you and Secretary Bill Richards to do the right thing__Clean up Hanford (if possible) and do not start the Fast Flux Test Facility.

569-2**569-4**

Roberta Wilson
353 Wallace Way NE #14
Bainbridge Island, WA 98110

Response to Commentor No. 569

569-3: DOE notes the commentor's views regarding the potential use of FFTF for enhancing DOE's existing nuclear facility infrastructure and the use of isotopes in treating cancer. Cancers are believed to be caused by a combination of hereditary and environmental factors, including radiological and chemical agents. In ongoing clinical testing, therapeutic radioisotopes have proven effective in treating cancers and other illnesses while minimizing adverse side effects, making their use an attractive alternative to traditional chemotherapy and radiation treatments.

569-4: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 570: Michael Tobin

From: MTobin1907@cs.com%internet
[SMTP:MTOBIN1907@CS.COM]
Sent: Saturday, September 02, 2000 11:22:24 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: plutonium production
Auto forwarded by a Rule

Ms. Colette Brown
DOE, Office of Space and Defense Power Systems

Dear Ms. Brown,

As an Idaho resident I have these comments regarding DOE plans to produce plutonium_238 at the INEEL.

- a.. Reprocessing is not acceptable and should not be considered at INEEL or any other facility
- b.. Building 666 is a decrepit and highly contaminated building and should be decommissioned in a manner that is protective of human health and the environment
- c.. Plutonium_238 production is unnecessary and its use too risky
- d.. Using ATR at INEEL would interfere with its current mission of producing medical and industrial isotopes
- e.. Extend the comment deadline 30 days

While there is no preferred alternative in this study, which is entitled Draft Programmatic Environmental Impact Statement for Accomplishing Expanded Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility (FFTF) at Hanford, WA., DOE would prefer to accomplish the aforementioned activities at the Fast Flux Test Facility at Hanford. However, there is significant popular and political opposition within Washington state to the FFTF proposal, political opposition that does not exist in Idaho. Thus, without strong opposition in Idaho, we could well end up with this program by default.

Sincerely,

Michael Tobin
Boise

Response to Commentor No. 570

570-1: DOE would not conduct any reprocessing to produce weapons grade plutonium under any of the alternatives considered in this PEIS. The alternatives do include processing of target materials used to produce isotopes for medical and industrial uses, plutonium-238 for space missions, and nuclear materials research and development. Sections 4.3.1.1.13; 4.3.2.1.13; 4.3.3.1.13; and 4.4.3.1.13 were revised to clarify the waste management approach for waste resulting from processing of target materials for plutonium-238 production.

Building CPP-666 is divided into two parts, the Fuel Storage Facility and the Fluorinel Dissolution Process Facility (FDPF). The FDPF is under consideration in this PEIS for storage of neptunium-237 oxide, preparation of neptunium-237 targets, and separation of plutonium-238 from irradiated targets. DOE believes that this facility will meet, with further analysis and/or minor modifications, the criteria to safely conduct these operations.

570-2: DOE notes the commentor's opposition to enhancing its existing nuclear facility infrastructure to support production of plutonium-238 for use in future NASA space exploration missions. Section 1.2.2 of Volume 1 was revised to clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed production of plutonium-238 are relatively low and are discussed in detail in Chapter 4 of Volume 1 and Appendixes H, I, and J of Volume 2 in the Final NI PEIS. For over 30 years, radioisotope power systems have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. However, potential health and safety impacts associated with future launches of spacecraft utilizing plutonium-238 are not within the scope of the NI PEIS analysis, but would be addressed in the specific NEPA documentation prepared by NASA in support of such missions.

570-3: As stated in EIS Volume 1, Section 2.3.1.2, ATR would continue to meet its medical and industrial radioisotope production mission for the no action and most other alternatives considered where ATR is not used for the production of plutonium-238. If ATR were to be used as a production facility for plutonium-238 (options 1, 2, 3, 7, 8, and 9 under

570-1

570-2

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570-4

570-5

570-6

Commentor No. 570: Michael Tobin (Cont'd)

Response to Commentor No. 570

Alternative 2), it would support medical and industrial radioisotope production to the extent possible. DOE would try to minimize the impact of the new mission on current medical and industrial radioisotope production.

- 570-4:** DOE notes the commentor's request for extension of the public comment period. The Council on Environmental Quality's (CEQ) "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act" (40 CFR 1506.10(c)) require that a minimum of 45 days be allowed for public comment on the Draft NI PEIS. As stated in the Notice of Availability (65 FR 46443 et seq.), the public comment period began on July 28, 2000 and continued to September 18, 2000. In preparing the Final PEIS, DOE has assessed and considered both oral and written comments received on the Draft PEIS during the public comment period and has responded to these comments in the Final PEIS. Volume 3 of the NI PEIS contains public comments received on the NI PEIS and DOE responses to those comments. Moreover, late comments were considered to the extent practicable.
- 570-5:** As outlined in 40 CFR Part 1502.14 (e), an agency is not required to specify a preferred alternative or alternatives in the Draft EIS if one does not exist, but must do so in the Final EIS. Accordingly, DOE has identified its preferred alternative in Section 2.8 of Volume 1 and included a discussion of DOE's reasons for selecting it. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.
- 570-6:** During the comment period for the NI PEIS, DOE received comments both for and against implementation of Alternative 1, Restart FFTF. Public comment is one of the factors that will influence the Record of Decision. The Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives. DOE's decision will not default to any of the candidate sites because of popular support or opposition.

Commentor No. 571: Louis E. McMurray

From: Louis E McMurray
[SMTP:LOUMCMURRAY@JUNO.COM]
Sent: Saturday, September 02, 2000 1:27:42 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Restart of the Fast Flux Test Facility at Hanford,
WA
Auto forwarded by a Rule

To Whom It May Concern,

I have reviewed the Draft Programmatic Environmental Impact Statement(DPEIS) "for accomplishing civilian nuclear energy R&D and isotopeproduction missions in the United States." Although the report makes norecommendations, I believe it is clear that the United States must have a reliable source from which these isotopes may be procured. I believethethe only way to insure this is to manufacture them within the UnitedStates. Further, I believe that the Fast Flux Test Facility located atHanford, WA would be ideal for production of these isotopes. Thefacility is fairly new, has an excellent safety record, and has the bestcapabilities, in both equipment and personnel, to accomplish the mission.

Louis E. McMurray
3441 N. Prescott Place
Tucson, AZ 85750
520_296_2137

Response to Commentor No. 571

571-1

571-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 572: Joanna Panter

From: Joanna Panter
 [SMTP:JPANTER@EARTHLINK.NET]
 Sent: Saturday, September 02, 2000 3:41:40 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: FFTF
 Auto forwarded by a Rule

PLEASE RESTART FFTF!

The isotopes that could be produced there are the same ones that saved myuncle's life, and my grandmother's. I want them to be available to everyonewhose cancer could benefit from this treatment. Everyone wants to find a "cure for cancer" and these isotopes are a major part of this research. Dowhat is right for people with cancer and forget about ancient fears ofanything connected to the word "nuclear."

572-1

Response to Commentor No. 572

572-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 573: Kristina Lestik

From: Kristina.Lestik@directory.reed.edu%internet
[SMTP:KRISTINA.LESTIK@DIRECTORY.REED.EDU]
Sent: Saturday, September 02, 2000 3:43:13 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Portland DOE public forum on the FFTF
Auto forwarded by a Rule

To whom this may concern:

I recently attended the DOE public discussion In Portland, OR aboutpossibly re_opening the FFTF nuclear reactor, and although I had to depart earlyand so was unable to comment at the meeting, I would like to offer some commentsby email, (and this was the email address I found provided in your literature).

I would first like to thank the DOE for their efforts in creating a calm andcoherent meeting for the discussion to take place, and I was quite sorry to seethat all other attendees did not respect their efforts. I would also like to saythat, as a person residing in Portland, OR, I do highly support the reopening ofthe FFTF: it seems the most cost efficient alternative, and I do not feel that its operation would jeopardize my safety or living conditions in any way.

Thank you for your time!

_Kristina Lestik

Response to Commentor No. 573

573-1

573-1: DOE notes the commentor’s remarks concerning the Portland, Oregon public hearing.

573-2

573-2: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 574: Randy Black

From: randy black[SMTP:RANDOO1@HOME.COM]
Sent: Saturday, September 02, 2000 4:55:07 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF
Auto forwarded by a Rule

I support the restart of the FFTF Reactor Facility at Hanford to meet the national needs for medical isotopes and other peaceful nuclear materials. The FFTF is the most economical, safe, and environmental friendly method available to meet these needs.

Thank you,

Randy Black

574-1**Response to Commentor No. 574**

574-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

**Commentor No. 575: Paige Knight
Hanford Watch**

From: paige s knight[SMTP:PAIGEKNT@JUNO.COM]
 Sent: Saturday, September 02, 2000 5:01:56 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Fw: [hanfordwatch] Who will decide?
 Auto forwarded by a Rule
 _____ Forwarded message _____
 From: William Kinsella <kinsella@lclark.edu>
 To: "Hanford Watch mailing list" <hanfordwatch@telelists.com>
 Date: Sat, 2 Sep 2000 10:32:32 _0700 (PDT)
 Subject: [hanfordwatch] Who will decide?
 Message_ID:
 <LYRIS_22536_88394_2000.09.02_10.33.53__paigeknt#juno.com
 @telelists.com>

On page S_2 of the PEIS cost study there's an interesting sentence:

"The programmatic decisions to be made in connection with the NIPeIS are the responsibility of the DOE Office of Nuclear Energy, Science and Technology"

How does that sentence fit with the idea that the Secretary of Energy will make the final decision before leaving office? Will the decision be made at the level of the Secretary, or at the level of the Nuclear Energy program office?

Bill

You are currently subscribed to hanfordwatch as:
 paigeknt@juno.com
 To unsubscribe send a blank email to
 leave_hanfordwatch_22536l@telelists.com

575-1

Response to Commentor No. 575

575-1: The sentence identified by the commentor was paraphrased from Section 1.3 of the Draft NI PEIS that inadvertently resulted in altering the intended meaning of the sentence. That sentence reads, "The programmatic decisions reached in association with this NI PEIS will address isotope production and civilian nuclear energy research and development missions which are the responsibility of the DOE Office of Nuclear Energy, Science and Technology." In response to the commentor, it is the Secretary of Energy who will make the decision with respect to the alternatives presented in this NI PEIS to accomplish the stated mission objectives. Decisions made will be published in the Record of Decision no sooner than 30 days after publication of the EPA Notice of Availability for this NI PEIS.

Commentor No. 576: Alfred A. Brooks

From: Alfred A. Brooks[SMTP:BROOKS@ICX.NET]
 Sent: Saturday, September 02, 2000 7:41:19 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Comments on PEIS
 Auto forwarded by a Rule

Also attached as an MSWORD 6.0/95 RTF file.

August 30, 2000

Ms. Colette E. Brown
 US Department of Energy
 19901 Germantown Road
 Germantown, MD 20874
 Via E_mail

Dear Ms. Brown

I would like to make the following comments on the Draft PEIS for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions? [DOE/EIS 03100 July 2000]:

1) The choice of the alternatives is strongly dependent on the projected isotope usage and the projected level of isotope use is at variance with other recent projections of use. Also, it is contradictory to the recent DOE decision to terminate the production of stable isotopes by the Y₁₂ calutrons some of which are necessary as feedstock to a radiation facility. The calutrons were said to be shut down due to lack of product demand. The PEIS should be augmented to explain these apparently contradictory courses of action.

2) In the absence of the stable isotopic feedstock from the calutrons, there should be some discussion in the PEIS of alternative feedstocks, their availability and their cost.

576-1

Response to Commentor No. 576

- 576-1:** DOE notes the commentor's concern. The calutrons at Oak Ridge National Laboratory produce electromagnetically enriched stable isotopes. These isotopes, in turn, are used to produce radioisotopes that are used for medical applications. Only Russia has a similar, large-scale facility with this capability. Although the ORNL calutron facilities have only operated intermittently over the past several years, DOE's existing stable isotope inventory is extensive and will supply the projected five-year demand for most stable research isotopes. DOE is currently in the process of designing a new stable enrichment unit whose capacity could be altered in the future to meet increases in demand.
- 576-2:** PEIS Section 2.3.1.1.3 and the separate cost report both state that there would be no cost for this German MOX fuel. The fuel would be reconfigured into assemblies suitable for irradiation at FFTF before shipment to the United States. The only cost attributed to the German MOX fuel is its transportation from a U.S. port to FFTF. PEIS Appendix J, Section J.3.6 discusses the history, availability, compatibility, and conversion of the unused German SNR-300 MOX fuel, which is currently in storage at Dounreay, Scotland.
- 576-3:** A determination of whether or not the wastes generated from the processing of neptunium-237 targets exhibit a hazardous waste characteristic under the Resource Conservation and Recovery Act would be made after its generation. If the waste is considered mixed waste, it will be managed in accordance with both the applicable hazardous waste and radioactive waste requirements. The Waste Isolation Pilot Plant (WIPP) has a RCRA permit and can accept mixed and nonmixed transuranic waste for disposal, not high-level radioactive waste.
- 576-4:** The facilities and locations evaluated in this NI PEIS, and for which costs are presented in the Cost Report, represent a range of reasonable alternatives for accomplishing the specified missions. Under Alternative 2, DOE's use of existing irradiation facilities (e.g., HFIR and ATR) as currently configured to accomplish the specified mission requirements would be limited by the requirement that such use would be on a not-to-interfere basis so as to not impact existing and ongoing research and isotope production activities at the facilities. However, as discussed in Volume 1, Sections 2.5.3 and 2.6.1, HFIR and ATR could not fully meet the projected long-term needs for medical isotope production and nuclear research and development, with or without adding the plutonium-238

Commentor No. 576: Alfred A. Brooks (Cont'd)

3) There is anticipated use of the German MOX fuel for the FFTF but there is no discussion of the methods, facilities and costs of preparing suitable FFTF fuel elements clad in stainless steel from the German supplies. At the same time the problems of the disposal of the mixed high level wastes resulting from the presence of chromium in the stainless steel which is classified as a hazardous material not eligible for WIPP disposal. These questions should be addressed in the PEIS.

576-2

4) After these questions are resolved, the PEIS should contain a total cost comparison of meeting as much as possible of the projected needs by fully utilizing the capacity of the enhanced HFIR and the ATR (with the installation of a hydraulic loader similar to HFIR). This cost should be compared to the cost of starting up FFTF and its associated chemical processing facilities including the full costs of contaminating new buildings and refurbishing old equipment. This comparison will shed light on the advisability of committing to the larger projected demands at this time.

576-3

576-4

I believe that it will be very important to base any comparison to the total life cycle costs of the possible alternatives and to clearly define the stability of any feed stocks that are not entirely within our control. I strongly favor utilizing inexpensive foreign sources as long as there is some certainty of their reliability. Thank you for providing the opportunity of making comments on this proposal.

Sincerely,
Alfred A. Brooks

Men are never so likely to settle a question rightly as when they discuss it freely." _ Thomas Babbington, Lord Macaulay
Southey's Colloquies on Society (1830)

"The only thing necessary for evil to prevail is for good men to do nothing." _ Edmund Burke (attributed)

Response to Commentor No. 576

production mission or with power level upgrades. As discussed in Section 2.3.1.2 of this NI PEIS, a rabbit system has been proposed for ATR to be used to enhance the production of commercial quantities of short-lived radioisotopes. However, no decision has been made on this upgrade, which would be paid for by the ATR privatization contractor and not DOE. Therefore, this possible enhancement does not affect the evaluation of current facility capabilities for meeting mission requirements and has not been considered in the Cost Report.

The neptunium-237 inventory is sufficient to support the plutonium-238 production requirement over 35 years, as evaluated in this NI PEIS. Availability of feedstock for currently envisioned medical, research, and industrial isotope production has been considered (see Appendix C of the NI PEIS), with the costs of procuring feedstock for isotope target fabrication included in the annual operating costs of the alternatives as compiled in the Cost Report.

DOE could purchase plutonium-238 from Russia to satisfy its responsibility to supply NASA with the necessary fuel to support future space exploration missions. Under the current contract set to expire in 2002, the United States is authorized to purchase up to 40 kilograms of plutonium-238, with the total available for purchase in any one year limited to 10 kilograms. However, DOE does not stockpile large quantities of Russian plutonium-238 long in advance of needs due to the additional processing, at an additional cost of approximately 1/3 of the original cost of production, that would be required to remove decay products that occur following extended storage of the material. To date, DOE has purchased approximately 9 kilograms of plutonium-238 under this contract. Future purchases from Russia would require the negotiation of a new contract with Russia.

Commentor No. 577: Sally Light

From: Sally Light[SMTP:SALLIGHT1@EARTHLINK.NET]
Sent: Saturday, September 02, 2000 6:21:16 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Attn: Colette E. Brown _ Public Comment on Pu 238
Production PEIS
Auto forwarded by a Rule

September 2, 2000

Colette E. Brown
U.S. Department of Energy
Nuclear.Infrastructure_PEIS@hq.doe.gov

Re: Public Comment on Draft Programmatic Environmental Impact
Statement(PEIS) re: Department of Energy?s (DOE) Plan to
Expand Production ofPlutonium 238 (Pu 238) for Future Space
Missions

Dear Ms. Brown,

I am writing on behalf of Nevada Desert Experience, a non_profit,
faith_based, anti_nuclear organization that has existed for 20 years,
and that has a readership of about 4,500 people around the nation
andthe world.

Although we are primarily concerned with the ongoing underground
?subcritical? nuclear tests that are being conducted at the Nevada
TestSite as well as the above_ground ?subcritical? tests being done
at theLos Alamos National Laboratory, we are also a part of the
Abolition 2000Global Network to Abolish Nuclear Weapons and the
US Campaign to AbolishNuclear Weapons, both of which oppose
the entire nuclear cycle,including nuclear power. We believe that all
nuclear technology,including nuclear power/fuel, is inherently
dangerous, posing anunacceptable risk to all life on the planet.

Response to Commentor No. 577

Commentor No. 577: Sally Light (Cont'd)

We at Nevada Desert Experience ask that DOE consider only non_nuclear technologies for powering future space missions/projects for the following reasons, among others:

1. The production of nuclear power is a messy operation that endangers the workers, the environment and the public health & safety. This was documented in the 1980s by the General Accounting Office (GAO) in a film the GAO produced as a report to Congress on the conditions inside US nuclear facilities nationwide. Technology used to produce nuclear power/fuel has not become safer since that film report was produced, and, certainly, no substantive ground has been gained since then as to how to deal adequately with the problems of the safe handling of radioactive materials in general.
2. The rockets that are used to launch space technology have an unacceptably high failure rate ? 10% or more ? so that using nuclear power as fuel, especially since the US intends to expand the number of such launches, raises the risk of widespread radioactive contamination in the case of rocket failure. Remember, all isotopes of Plutonium are so deadly that a single speck inhaled will lodge in the lung tissue where it will stay, emitting powerful alpha radiation, and the individual is very likely to develop cancer at sometime in his/her life. Radioactive impacts are now known to not only cause cancer, but also cause genetic mutations and genomic instability ? so a single rocket failure could be responsible for a worldwide plutonium exposure that will have devastating results.
3. The PEIS names three possible DOE facilities for the production of Pu238: Oak Ridge, Hanford and INEEL, all of which are already extremely contaminated Nuclear Weapons Complex sites. It would be better to develop non_nuclear technology (e.g., solar_powered fuel source) in an entirely new, uncontaminated facility, while seeing to the environmental cleanup of these three labs, and others (see #4 below).

577-1

577-2

Response to Commentor No. 577

577-1: The commentor's opposition to nuclear technology for space applications is noted. DOE also notes the commentor's interest in alternative energy sources, although issues of research and development of alternative energy sources are beyond the scope of this NI PEIS. The missions to be addressed in this PEIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies.

577-2: DOE notes the commentor's opposition to NASA's use of nuclear materials for space missions, concern for the adequacy of ongoing cleanup activities, and concern over the use of nuclear power in space based weapons. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. None of the DOE missions stated in the NI PEIS are defense- or weapons-related.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. DOE activities associated with this program would not impact the schedule or available funding for existing cleanup activities at proposed sites for implementation of the nuclear infrastructure alternatives.

Commentor No. 577: Sally Light (Cont'd)

4. The costs associated with the expanded Pu 238 production are too exorbitant to be reasonable. Historically, environmental cleanup of contaminated sites (including sites contaminated by radioactive wastes) has always been extremely underfunded in the US. For instance, the cleanup budget for Lawrence Livermore National Laboratory (LLNL) has usually been a mere 1% of LLNL's total budget ? the other 99% has gone for weapons work ? and this is just one such example of DOE's priority setting over the years. DOE would do better by developing non_nuclear technology for space launch fuel needs, and use the saved funding for cleanup of its labs, many of which are Superfund sites (i.e., ranked as among the most contaminated in the nation).

577-3

5. We are concerned about the future uses of nuclear power in space. We have in our possession the document signed by the Joint Chiefs of Staff, "Vision 2020," which clearly shows the goal of using nuclear power to gain military control of the planet from space, as well as being in the business of space_based warfighting. If space_based technology must happen, it should be non_nuclear based, and it should be for peaceful purposes.

577-2

We hope that you will give serious attention to these comments. If there are any questions, please do not hesitate to reach me at my home (510) 527_2057, or by return email.

Sincerely,

Sally Light
Executive Director
Nevada Desert Experience

P.O. Box 7849
Oakland, CA 94601
Email: sallight1@earthlink.net

Response to Commentor No. 577

577-3: DOE notes the commentor's opinion.

Commentor No. 578: Tanja Winter

From: Tanja Winter[SMTP:TANJA@CTS.COM]
Sent: Saturday, September 02, 2000 8:01:12 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: no plutonium in space
Auto forwarded by a Rule

Colette E. Brown, U.S. Department of Energy,
Dear Ms. Brown,

Urge you NOT allow expansion of plutonium production for future space missions. The danger to population and the planet are too great to proceed. No further NASA flights should be permitted until alternative fuels replace plutonium.

578-1

NASA is not doing enough to develop alternative (solar) power sources for space missions. European Space Agency (ESA) has now developed high efficiency solar cells for deep space missions.

The plutonium production/fabrication process for space nuclear power missions has recently led to several worker contamination accidents. An expansion of production will only worsen this problem.

578-2

Expanding the number of launches of nuclear powered space devices from Cape Canaveral on rockets with 10% failure rates will only increase the possibility of a deadly mishap.

578-1

The massive cost of expanded production of plutonium-238 can not be justified at a time when DoE admits it needs over \$300 billion to clean up existing problems at DoE facilities.

578-3

The military should not be promoting the use of nuclear power in space for space-based weapons technology. Using nuclear power for space war will have severe environmental implications for life on Earth. Department of Energy should not be involved in weapons production.

578-4

Tanja Winter, 8315 Paseo Del Ocaso, La Jolla, CA 932037

Response to Commentor No. 578

- 578-1:** DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternative energy sources for space missions, although issues such as NASA research priorities are beyond the scope of this NI PEIS. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. None of the missions stated in the NI PEIS are defense- or weapons-related.
- 578-2:** Plutonium-238 processing facilities can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Sections 4.2-4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from plutonium-238 processing, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that the radiological and nonradiological risks associated with plutonium-238 processing would be small.
- 578-3:** DOE notes the commentor's opinion and concern about funding available for cleanup at DOE facilities.
- 578-4:** DOE notes the commentor's concern over the use of nuclear power in space-based weapons. The scope of this NI PEIS is limited to analysis of alternatives to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238 for NASA missions, and civilian nuclear energy research and development. None of these DOE missions is defense- or weapons-related.

Commentor No. 579: Julia Hamrick

From: HamricksJD@aol.com%internet
[SMTP:HAMRICKSJD@AOL.COM]
Sent: Sunday, September 03, 2000 8:48:53 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Operation of FFTF
Auto forwarded by a Rule

To Whom it May Concern:

Although I have no specific comments on the PEIS related to operation of FFTF, I would like to strongly encourage DOE to get off the fence, and get on with a decision related to operation of FFTF. DOE has squandered many opportunities to make beneficial use of such a magnificent engineering tool as FFTF. It seems to me it is now or never. Get on with making good use of the facility in a way that benefits people everywhere.

Julia Hamrick
1108 Avalon Lane
Anniston, AL 36207

579-1***Response to Commentor No. 579***

579-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 580: *mpdragonfly@aol.com*

From: MPDRAGONFLY@aol.com%internet
[SMTP:MPDRAGONFLY@AOL.COM]
Sent: Sunday, September 03, 2000 12:42:51 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: (no subject)
Auto forwarded by a Rule

"PLEASE RESTART THE FFTF"

It's helped people in my family, please help us share the
technology and save lives.

580-1

Response to Commentor No. 580

580-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 581: Sidney J. Goodman

From: Sidney J. Goodman
 [SMTP:SJGDESIN@MINDSPRING.COM]
 Sent: Sunday, September 03, 2000 11:15:49 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Cc: Sidney J. Goodman; Global Network Against Weapons &
 Nuclear Power in Space
 Subject: Stop making more Plutonium 238
 Auto forwarded by a Rule

To: Collette E. Brown

Too much has been risked already by using Plutonium_238 in space missions. Further production of this deadly poison must be halted.

NASA isn't doing what it should to develop alternative energy sources for space missions. It has fallen behind the European Space Agency in this respect.

Contamination accidents with Pu_238 have already happened. The only way to end further incidents is to stop further usages.

An increased number of space missions using PU_238, increases the probability that the unthinkable widespread contamination will really happen.

The cost of these missions is not justified. Using several cheap smaller probes (like we did for the Mars Explorer mission), instead of fewer expensive large probes, is stupid.

Further PU_238 missions increase the probability of space based nuclear warfare. The horror of it all is incomprehensible.

NASA has told outrageous lies in their assurances that the unthinkable widespread dispersion of PU_238 can never occur. Officials who participated in this fraud should be imprisoned.

581-1

581-2

Response to Commentor No. 581

581-1: DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternative energy sources for space missions, although issues such as NASA research priorities are beyond the scope of this PEIS. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. Plutonium-238 sources are used only when they enable the mission or enhance mission capabilities.

Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed production of plutonium-238 are relatively low and are discussed in detail in Chapter 4 of Volume 1 and appendixes H, I, and J of Volume 2 in the Final NI PEIS. For over 30 years, radioisotope power systems have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. However, potential health and safety impacts associated with future launches of spacecraft utilizing plutonium-238 are not within the scope of the NI PEIS analysis, but would be addressed in the specific NEPA documentation prepared by NASA in support of such missions.

581-2: DOE notes the commentor's opposition to NASA's use of nuclear materials for space missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. None of the missions stated in the NI PEIS are defense- or weapons-related.

Commentor No. 581: Sidney J. Goodman (Cont'd)

One bad accident, which is waiting to happen, will justify a widespread demand for huge cuts in the NASA budget. I will participate in that demand.

581-2
(Cont'd)

Angrily,

Sidney J. Goodman, P.E., M.S.M.E.
170 Villanova Drive
Paramus, NJ 07652

Response to Commentor No. 581

Commentor No. 582: Marcy Stamper

From: Marcy Stamper[SMTP:MSTAMPER@POP.NWLINK.COM]
 Sent: Sunday, September 03, 2000 3:41:02 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Hanford and FFTF restart
 Auto forwarded by a Rule

Dear Ms. Brown:

It is scandalous that DOE would consider restarting FFTF and producing moreradioactive materials when they have yet to deal with the serious hazardsposed by Hanford's status as the EPA's biggest Superfund site. Containersare already leaking into the environment, endangering local residents aswell as people across the country through contamination of agriculturalareas and the Columbia River and salmon runs. The recent fire at Hanford is further proof of the dangers lurking, as well as the contempt for publicand worker health exemplified by DOE's initial denials of any radiation'sescaping into the environment during the fires.

I demand that DOE responsibly clean up the radioactive contamination andput the health of the public and the environment first, and not create anymore deadly isotopes.

Marcy Stamper

582-1

582-2

Response to Commentor No. 582

582-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

582-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The proposed activities delineated in the NI PEIS would not have an impact on Hanford cleanup activities. The potential health and environmental impacts associated with operation of the Hanford facilities during normal operations and from postulated accidents are presented in Section 4.3 of the draft NI PEIS. All impacts to human health and to ecological resources would be small in the immediate area and negligible at all distant locations.

No radioactive materials were "released" in the Hanford Wildfires of 2000. Wildfires did resuspend some materials already in the environment. The resuspended materials were low, slightly above natural background levels. The low levels required several days of analysis to quantify.

No food or water restrictions are in place outside the Hanford Reservation as a result of Hanford activities.

DOE worker and public health and safety are of paramount and primary importance to DOE.

Commentor No. 583: Joan M. Brown

From: Joan M Brown[SMTP:JOANKANSAS@JUNO.COM]
 Sent: Sunday, September 03, 2000 8:27:19 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Cc: globalnet@mindspring.com%internet
 Subject: Citizen concerns on Draft Programatic
 Environmental Impact Statement
 Auto forwarded by a Rule

Colette E. Brown
 U.S. Department of Energy
 NE_50, 19901 Germantown Road,
 Germantown, MD 20874_1290

Dear Mr. Brown,

Peace this day! I am writing about my concerns for the ongoing use and investigation into possible sources for nuclear energy for missions to space. It seems that there are other alternatives which are not being considered with enough seriousness.

My understanding is that it is possible to develop alternative solar power sources for missions to space, and that in fact, highly efficient solar cells for deep space missions have been developed by the European Space Agency (ESA). In this age of global cooperation it seems to our advantage to collaborate with the Europeans on such technology. This would be more cost effective and also eliminate the possibility of worker contamination accidents and help reduce our existing difficulty with how to deal with the long term effects upon our environment around nuclear energy, production and waste.

With the current rate of 10% failure rate on rockets from Cape Canaveral, it seems that we are playing with fire to expand the number of launches that will be nuclear powered. Possible mishaps, as you know have irreversible consequences and are not good for the future of your program or our planet.

Response to Commentor No. 583

583-1

583-1: DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternative energy sources for space missions, although issues such as NASA research priorities are beyond the scope of this NI PEIS. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. None of the missions stated in the NI PEIS are defense- or weapons-related.

Commentor No. 583: Joan M. Brown (Cont'd)

Finally the cost of expanded production of plu_238 cannot be justified at a time when DoE admits it needs over \$300 billion to clean_up existing waste problems at facilities.

583-2

Thank you for your consideration of these concerns. I would very much like to hear your responses.

Sincerely,

Joan Brown, osf
2340 Turk Blvd.
San Francisco, CA 94118

Response to Commentor No. 583

583-2: DOE notes the commentor's opinion and concern about funding available for cleanup at DOE facilities.

Commentor No. 584: Mark Wahl

From: Mark Wahl[SMTP:MATHMAN@MARKWAHL.COM]
Sent: Sunday, September 03, 2000 7:04:30 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Do Not Restart Hanford's Fast Flux Reactor
Auto forwarded by a Rule

Dear Collette Brown/Secretary Richardson,

Please accept the following as public comments incorporated into the formal administrative record and taken into consideration when adopting the final record of decision on the Draft Environmental Impact Statement on the Nuclear Infrastructure EIS.

Restarting FFTF is absolutely unacceptable. More waste is a cruel joke considering the stalled progress on the waste already at Hanford. FFTF maintenance has already gobbled up \$100 million in clean_up money and distracted from desperately needed clean_up. Tank wastes are already seeping towards OUR Columbia River. More wastes must not be added to those tanks. Clean_up must be the only priority.

By the way, you have done only an incomplete study and are asking for comments. You have not told us how you will deal with non-proliferation issues or additional waste from FFTF. Should FFTF be restarted, that decision will be illegal under Federal law and will be overturned! Do the right thing, shut down FFTF now and save the future of the Columbia River!

Sincerely,
Mark Wahl
Langley, WA
Regards,
Mark Wahl
Director, Mark Wahl Learning Services

Ph: 360_221_8842 Fax: 360_221_6946
416 Fourth Street, Langley, WA 98260
www.markwahl.com

Response to Commentor No. 584

- 584-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.
- 584-2:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford and protection of the Columbia River. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected. If the decision is made to shutdown the FFTF, then cleanup dollars will be needed to deactivate the facility, which could impact the overall Hanford cleanup schedule.

Regarding the migration of contaminants to the Columbia River, the Hanford Site has a comprehensive waste minimization and pollution prevention program in place as summarized in Section 3.4.11.8 that would govern any proposed site activities. More specific to the proposed activities presented in the NI PEIS, FFTF is located approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to the groundwater. Analyses presented in Chapter 4 of the NI PEIS (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4) indicate that there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of the existing Hanford facilities in support of the proposed activities. Also, no water quality impacts would be expected as a result of permanent deactivation of FFTF (Section 4.4.1.2.4). Finally, no waste would be added to the Hanford waste tanks as a result of FFTF restart or operation.

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Commentor No. 584: Mark Wahl (Cont'd)

Response to Commentor No. 584

- 584-3:** DOE prepared a separate Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. DOE mailed this document to about 730 interested parties on September 8, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Nuclear Infrastructure Nonproliferation Impact Assessment in Appendix Q in the Final NI PEIS.
- 584-4:** Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.
- 584-5:** See response to comment 584-1. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Commentor No. 585: Gerald Magness

From: Gerald Magness[SMTP:GERRY@FIDALGO.NET]
Sent: Sunday, September 03, 2000 11:33:20 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Restart the FFTF
Auto forwarded by a Rule

Please restart the FFTF to make medical isotopes. Cancer runs in our family and we can use allthe help we can get.

Sincerely Yours

Gerald W. Magness
16720 104th St NE
Granite Falls, Wa 98252

|| 585-1

Response to Commentor No. 585

585-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 586: Ken Walter

From: Ken Walter[SMTP:KWALTER@3_CITIES.COM]
 Sent: Monday, September 04, 2000 12:23:41 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: FFTF Restart
 Auto forwarded by a Rule

I am a former Fluor Hanford employee who worked at FFTF for 10 years. I can speak from experience about the facility. FFTF should be restarted for production of medical isotopes and NASA space craft power isotopes. The facility is in excellent condition and has many more years of useful life. It would be a terrible waste of resources and potential benefits to shut it down.

The employees I associated with have excellent safety awareness and take ownership in their work. The two employees who were recently fired for falsification of records are an exception and do not represent the attitude and work ethic of the majority.

Ken Walter
 Operations Specialist (retired)
 8714 Bell
 Pasco, WA

586-1**Response to Commentor No. 586**

586-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 587: Clark Crouch

From: Clark Crouch[SMTP:CECROUCH@OWT.COM]
Sent: Monday, September 04, 2000 12:09:36 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Radiopharmaceuticals from FFTF
Auto forwarded by a Rule

To the PEIS team at DOE...

"Isotopes: An Answer for Cancer"

For once, let's not let politics stand in the way of progress. We've listened long enough to a very vocal minority which has offered yearsof emotional opposition to recommissioning the Fast Flux Text Facility.We need now to listen to the more reasoned and caring voice of themajority and heed the scientific evidence in support of a life_savingmission for the FFTF... the production of radiopharmaceuticals

587-1

587-1: It is DOE policy to encourage public input on matters of regional, national and international importance as part of its commitment to facilitate a public participation process that is open and unbiased.

We've already invested in the FFTF and we have a tremendous opportunityto turn this legacy of the cold war into a life_saving asset. There isno reason to abandon that investment or to conduct further studies Noequivalent facility exists anywhere else in the United States. No othercity has people with the knowledge and technological depth held by ourscientific community.

587-2

587-2: DOE notes the commentor's opinion. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

Please stop the studies and the procrastination, turn away from thosefew voices crying "wolf." Commission the FFTF now to produce thoselife_saving radiopharmaceuticals. It is paid for, it is clean, it is safe, and it can be a continuing asset to this community and the nation...a positive image for nuclear energy and the Departmentof Energy.

587-3

587-3: DOE notes the commentor's support for Alternative 1, Restart FFTF.

For the record, I was employed by the Atomic Energy Commission and its successors from October 1947 until June 1978 and was directly involvedin the administration of the design and construction of the FFTF.

Clark Crouch
1541 Jadwin Avenue, Richland, WA 99352
509_946_1558

Commentor No. 588: William R. Taylor

From: William R. Taylor
[SMTP:WILLIAMTAYLOR@NECA.COM]
Sent: Monday, September 04, 2000 1:30:41 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Oppose nuclear power in space
Auto forwarded by a Rule

I support the positions of a number of scientists against the use of nuclearfuel or the placement of nuclear weapons in space.

Thank you

William R. Taylor, M.D.
<http://users.neca.com/williamtaylor>

588-1**Response to Commentor No. 588**

588-1: DOE notes the commentor's opposition to the use of nuclear materials for space missions and the placement of nuclear weapons in space. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. None of the missions stated in the NI PEIS are defense- or weapons-related.

Commentor No. 589: Marilyn Dickenson

From: Robert Dickenson[SMTP:FATBOY@GTE.NET]
Sent: Monday, September 04, 2000 11:52:31 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF
Auto forwarded by a Rule

Please restart FFTF at Richland, WA to produce medical isotopes. There is no reason to import when we have the capabilities to produce them ourselves.

Marilyn Dickenson
605 S. Buntin St.
Kennewick, WA 99336

589-1

Response to Commentor No. 589

589-1: DOE notes the commentor's support for Alternative 1, Restart FFTF

Commentor No. 590: Eileen Gottula

From: Richard Gottula
 [SMTP:GOTTULA@TELEVAR.COM]
 Sent: Monday, September 04, 2000 1:23:20 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Restart FFTF
 Auto forwarded by a Rule

Dear Sirs,
 I want to let my voice be heard in support of restarting the FFTF reactor in Washington for use indeveloping medical isotopes for the fight against cancer. This is a valuable resource for peopleof this nation.

Eileen Gottula
 1603 Amon Dr.
 Richland, WA 99352

590-1
Response to Commentor No. 590

590-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 591: Brenda and Stan Stave

From: brennda h stave[SMTP:BHSTAVE@TELEVAR.COM]
Sent: Monday, September 04, 2000 1:58:11 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF
Auto forwarded by a Rule

Please add our names in strong support of FFTF being allowed to resume operation producing medical isotopes. Nothing could be more important.

Brenda and Stan Stave
165 Edgewood Drive
Richland, WA 99352

591-1

Response to Commentor No. 591

591-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 592: John Boland

From: John Boland[SMTP:JOHNBOLAND@EARTHLINK.NET]
 Sent: Monday, September 04, 2000 4:15:53 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Re_start of FFTF for Medical Isotope Mission
 Auto forwarded by a Rule

Please objectively study the very positive and well researched pro_re_start pleas of the many scientists and cancer victims. The cost of re_start and operation of FFTF to produce medical isotopes is miniscule when compared to the cost per life saved. Our plea is absolutely backed up with sound science and engineering. The FFTF is in OUR front yard, not other's backyard. Please reject the ridiculous junk science and hysteria of the anti_nuclear pro_tagonists. We are totally comfortable as to the COMPLETE reliability and safety of the reactor, it's minimal and easily handled waste output, and its capability of making a huge impact on many types of cancer, AIDS, osteoporosis, and many other diseases, while greatly lowering medical costs to the taxpayers in the form of Medicare, Medicaid, and universal health costs.

Thanks

John Boland
 509_582_7608
 Fax 586_6139

592-1

Response to Commentor No. 592

592-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 593: Jean Beegle

From: JBEEG@aol.com%internet
[SMTP:JBEEG@AOL.COM]
Sent: Monday, September 04, 2000 4:34:39 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF
Auto forwarded by a Rule

It is very important to restart the program.

Jean Beegle
Seattle WA.

|| 593-1

Response to Commentor No. 593

593-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 594: Gary L. Troyer

From: Gary and Kris Troyer[SMTP:KANDG@URX.COM]
 Sent: Monday, September 04, 2000 6:44:00 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Draft PEIS for FFTF
 Auto forwarded by a Rule

I am in favor of restarting the FFTF for our citizens needs in the areas of medical isotope research and treatment and the production of energy sources such as Pu238. The Draft PEIS on restart presents no show stoppers, shows that restart is the quickest solution, and that the economics of scale are positive. Further, based on current experience, building a new source to offset the foreign and marginal supply will be fraught with delays just as the decision about the FFTF has lingered. In this case, an immediate tool is much better than a promised tool.

It is ironic that the small but vocal anti_FFTF people change their tune when a family member suddenly needs dread disease diagnostic and treatment tools possible through medical isotopes. Such changes to seeking the facts rather than following the anti's emotions makes it obvious that there is a need for my government to support the basic research leading to general availability of such resources.

The availability of new medical tools will directly reduce the cost of Medicare treatments and indirectly reduce personal and family suffering found with many existing and ineffective methods.

Please consider immediate restart a favorable solution to our country's needs.

Sincerely
 Gary L. Troyer

594-1

Response to Commentor No. 594

594-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 595: Frank Trent

From: Fptrent@aol.com%internet
[SMTP:FPTRENT@AOL.COM]
Sent: Monday, September 04, 2000 10:24:03 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF
Auto forwarded by a Rule

Dear Sirs, I guess its time I put in my thoughts on this reactor, should I say Medical Isotope Center. I do not think its fair to the taxpayers of this country to go to a foreign Government to buy a medical devise when we already have a way to do the same thing here. The FFTF can also produce power in the process.

I think if a poll qas taken here in the northwest you would find 90% of the people would agree.

Thanks for your time

Frank Trent.

595-1

Response to Commentor No. 595

595-1: DOE notes the commentor's support for Alternative 1, Restart FFTF. The commentor should note that the heat generated by FFTF operation will not be used for generation of electricity.

Commentor No. 596: Robert J. Thompson

From: Robert J. Thompson[SMTP:RTHOMP4@GTE.NET]
Sent: Monday, September 04, 2000 8:57:41 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Fast Flux Test Facility
Auto forwarded by a Rule

Please join us in Supporting this great venture. This is a crucial role in healing many sick people. My 7 year old nephew has been suffering from a Brain Stem Tumor for the past two years. The absolute grief he and his family has been through is incredible. Research cures people, friends and family.

Respectfully:

Robert J. Thompson

596-1**Response to Commentor No. 596**

596-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 597: Claudia Wetterling

From: The Wetterling's[SMTP:JMWETT@3_CITIES.COM]
Sent: Monday, September 04, 2000 8:14:19 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF
Auto forwarded by a Rule

Dear Secretary Richardson,

I would like to encourage you to restart the FFTF plant in Richland, Washington to produce medical isotopes. It is absurd that the U.S. needs to import 90% of the medical isotopes currently being used, when we have the ability to produce our own with the simple restart of FFTF. To think that cancer patients are dying because there are not enough isotopes to go around is unconscionable. Please consider seriously the restart of this plant and help save American lives.

Thank you.

Sincerely,
Claudia Wetterling

597-1

Response to Commentor No. 597

597-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 598: Jonas A. Lundberg, Jr.

From: jonasmel@netnet.net%internet
[SMTP:JONASMEL@NETNET.NET]
Sent: Monday, September 04, 2000 10:32:30 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: My Support
Auto forwarded by a Rule

I support the restart of the FFTF Reactor Facility at Hanford to meet the national needs for medical isotopes and other peaceful nuclear materials.

The FFTF is the most economical, safe, and environmental friendly method available to meet these needs.

Jonas A. Lundberg Jr.

598-1**Response to Commentor No. 598**

598-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 599: Frank Trent

From: Fptrent@aol.com%internet
[SMTP:FPTRENT@AOL.COM]
Sent: Monday, September 04, 2000 10:35:19 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF
Auto forwarded by a Rule

Dear Sirs, I think its about time this goverment started to think about its people more than giving our resources to anothe goverment. The FFTF can and should be restarted to produce electrical power. also, it can be used to produce the Medical Isotope to fight Cancer. We buy this isotope from out of this country. When we can produce it here and put our people to work. This reactor sits on standby, when we could be spending that money in Production. I think you will find most people in the greater northwest will Agree. Think you for your time.

Frank Trent
912 Wright ave Richland Wa. 99352.
Fptrent@aol.com

599-1

Response to Commentor No. 599

599-1: DOE notes the commentor's support for Alternative 1, Restart FFTF. It should be noted that power production is not one of the missions for which FFTF would be restarted.

Commentor No. 600: Bob Broyles

From: ROBERT BOB BROYLES
[SMTP:BBROYLES@GTE.NET]
Sent: Monday, September 04, 2000 10:48:03 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF
Auto forwarded by a Rule

PLEASE USE THE FFTF TO MAKE MEDICAL ISOTOPES.
MEMBERS OF MY FAMILY HAVE DIED FROM CANCER
THAT WOULD HAVE BEEN BETTER TREATED IF
ISOTOPES WERE AVAILABLE FOR USE.
CO_GENERATION OF ELECTRICITY SHOULD ALSO BE
CONSIDERED TO HELP OFF SET COSTS.
EVERYONE WINS

THANK YOU

BOB BROYLES
KENNEWICK, WA

600-1

600-2

Response to Commentor No. 600

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- 600-1:** DOE notes the commentor's support for Alternative 1, Restart FFTF.
- 600-2:** DOE notes the commentor's interest in offsetting costs of operation of FFTF by cogeneration of electric power. FFTF was not designed for the production of electric power, for example it has no turbine generators and actually requires some electric power for operation (see description of FFTF in Volume 1, section 2.3.1.1). The other non-commercial reactors evaluated (see Volume 1, sections 2.3.1.2, 2.3.1.3, and 2.3.1.6) are not designed for the production of electric power either.

Commentor No. 601: Castor Hawkes

From: BeegByte@aol.com%internet
[SMTP:BEEGBYTE@AOL.COM]
Sent: Monday, September 04, 2000 11:25:24 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF RESTART
Auto forwarded by a Rule

To restart FFTF to manufacture isotopes to treat those who desperately need help should be the number one goal.



601-1

Castor Hawkes

Response to Commentor No. 601

601-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 602: Frank Hammond

From: (a)home[SMTP:FRANKHAMMOND@HOME.COM]
 Sent: Tuesday, September 05, 2000 12:42:26 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: FFTF Restart at Hanford
 Auto forwarded by a Rule

04 September 2000

Secretary of Energy
 U.S. Department of Energy
 19901 Germantown Road
 Germantown, MD 20874

Dear Mr. Secretary,

This letter and an associated email sent to the DOE itemize my concerns over the restart of the FFTF at Hanford. I have been involved, or a close observer of the operations at the Hanford Reservation since the Tri-Party Agreement was signed in 1989. I am an ex-physicist and I understand the technical aspects of reactors, nuclear waste, radioisotope production, etc.

In the Tri-Party Agreement DOE agreed, in a legally binding document, to clean up the nuclear waste at Hanford and to fund this cleanup as required. In addition, in 1995 DOE promised (also in a legal document—the Hanford Cleanup Agreement) that the FFTF would be shut down and the funds used to keep this facility in a restart state would be used in the cleanup effort. DOE is now in violation of this agreement as well and proposes to be in permanent violation by restarting the FFTF. Furthermore, DOE now admits that its current budget and target budgets for the next six years are too low to meet the Clean-Up Agreement, yet would spend in excess of \$400M in the restart of a facility that is not needed.

602-1

Response to Commentor No. 602

602-1: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to “ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use.” The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

DOE notes the commentor’s concerns over the restart of FFTF and the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. A Tri-Party Agreement change was made to place the milestones for FFTF’s permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Public meetings were held on this formal milestone change. The proposed activities delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

The U.S. Congress funds Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM). Congress also funds FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

602-2: DOE notes the commentor’s opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF. DOE also notes the commentor’s concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental

Commentor No. 602: Frank Hammond (Cont'd)

The majority of citizens of the State of Washington want the FFTF shut down permanently and want DOE to get on with the cleanup. I recently attended one of the hearings regarding The Programmatic Environmental Impact Statement (PEIS). I have carefully considered the reasons why DOE wants to restart FFTF and based on the evidence available from all sources there are no valid reasons to restart FFTF or to retain it for future use. The major arguments DOE is using are discussed below.

602-2

NASA has stated (in an official NASA report) that they have no need to purchase Pu-238 for the specific space mission used to justify FFTF restart.

602-3

The FFTF will be used for research and commercial production of radioisotopes. However, DOE is ignoring its own committee's recommendations. The Subcommittee for Isotope Research and Production Planning, in its report stated "The FFTF will not be a viable source of research radioisotopes". An adequate supply of research radioisotopes is available from Canada and as far as commercial applications are concerned it is questionable that a Government Agency should be in the business of selling commercial quantities of medical radioisotopes. In addition, there are less expensive alternatives to providing commercial quantities of radioisotopes by the design of facilities that are specifically built to produce these isotopes and possibly this type of facility could be built by one or a consortium of companies for that purpose.

602-4

More than 11 years after the original Tri-Party Agreement was signed, the most dangerous wastes (those in the 200 Area) are still in leaking tanks. The Single Shell Tanks are still around and the contents of radioactive and toxic waste they contain are leaking into the soil. It may already be too late to avoid the contamination of the Columbia River from the waste that may have leaked into the groundwater. All of the other cleanup efforts at Hanford are minor in comparison to this task. Yet DOE says they have no solution at this

602-5

Response to Commentor No. 602

restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

602-3: A May 22, 2000, correspondence from NASA to DOE identified that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

602-4: The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the

Commentor No. 602: Frank Hammond (Cont'd)

time. I have discussed this situation with two distinguished (retired) professors of chemical engineering one a former department chair and the other a former department chair and dean of his engineering school. They claim that this problem can be solved and that DOE has ignored a solution. I am convinced that DOE does not really want to clean up the Hanford wastes but would rather work on more "exciting" projects such as FFTF restart.

FFTF will only add more radioactive waste to that which we already have. Do not restart FFTF. I could say much more and in more depth but this letter would turn into a book. Thanks for taking the time to read this.

Sincerely,

Frank Hammond
109 E. Roanoke Street
Seattle, WA 98102_3224
206_329_2212

602-5
(Cont'd)

602-6

602-2

Response to Commentor No. 602

use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

DOE's production and sale of radioisotopes fall into two categories, "commercial" and "research," and both types of isotope production are considered under the proposed actions. Commercial radioisotopes are those that are produced in large, bulk quantities and sold to pharmaceutical companies or distributors, or to equipment or sealed source manufacturers. Examples of commercial radioisotopes produced by DOE include strontium-82 and germanium-68 for medical applications, and iridium-192 and californium-252 for industrial applications. DOE only produces commercial isotopes when there is no U.S. private sector capability or when foreign sources do not have the capacity to meet U.S. needs reliably. In contrast, research radioisotopes are typically produced and sold in small quantities in response to specialty orders from researchers preparing experiments in the field of medicine, with small quantities of these radioisotopes also purchased by industrial researchers. Because small-quantity production of research isotopes is not financially attractive to private-sector producers and is generally not undertaken, DOE attempts to provide all research radioisotopes that are requested, subject to production capability, inventory, and financial constraints. As successful application of a specific research isotope is established, the production and sales of that radioisotope may shift from research to commercial status. In recent years, over 95 percent of DOE's sales of radioisotopes by dollar volume were commercial and 5 percent have been for research. Additional discussion of how DOE's isotope program fits into the overall U.S. and foreign isotope production capabilities was incorporated into Section 1.2.1 of Volume 1.

602-5: See response to 602-2. This NI PEIS addresses wastes produced for each alternative, as well as cumulative impacts related to waste production. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. Discussion of, or resolution of, concerns related to the remediation of existing waste are beyond the scope of this EIS and do not enter into the decision process.

Commentor No. 602: Frank Hammond (Cont'd)

Response to Commentor No. 602

602-6: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to wastes generated by other Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposal) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

Commentor No. 603: Paul Bailey

From: paul bailey[SMTP:USAF85@GTE.NET]
 Sent: Tuesday, September 05, 2000 12:14:52 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: FFTF
 Auto forwarded by a Rule

My sister died a couple of years ago from breast cancer. I don't know if any isotope from the FFTF could have helped her or not, but I wish it had been there to try.

I've lived all my life in the Tri_Cities with the exception of the 20 years I spent in the Air Force. I was here when the government released all the radiation from Hanford. I may even suffer from those releases because I do have hypothyroidism. But I don't hold anything against the facility. I did what it had to at the time with the knowledge it had.

I am concerned about the political aspect of all that is surrounding the start or non_start of the FFTF. I want common sense and economical factors considered upmost, not rhetoric. We need the isotopes. The people here should be deciding, not Olympia, not Portland or Salem.

Thank you,

Paul Bailey

603-1

603-2

Response to Commentor No. 603

-
- 603-1:** DOE notes the commentor's support for Alternative 1, Restart FFTF.
- 603-2:** Selection of facilities and site locations for accomplishing expanded civilian nuclear energy research and development and isotope production missions is not a political decision. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

Commentor No. 604: Nancy Booth

From: Nancy Booth[SMTP:NBOOTH@IJCOMPANY.COM]
Sent: Tuesday, September 05, 2000 10:36:16 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Cc: globalnet@mindspring.com%internet
Subject: PLU_238
Auto forwarded by a Rule

We do not have a need in this country to produce any more PLU_238. Remember, the earth does not belong to you, it is borrowed from future generations. If you make an attempt to manufacture this, you will have a lot of supporters rallying against it, and it will not be acceptable or allowed. We will blow this thing wide open. Why don't you take a vote from every American citizen on this issue and then go from there. You are not letting the American people decide on what's best for them. And they have the right to know for one thing, as well as decide on whether or not this is feasible. I live near the Oakridge plant, and believe me they have enough problems, without the PLU_238 problem..

I, along with several others urge you to drop this matter at this time, and move further no more.

604-1

604-2

604-1

Response to Commentor No. 604

604-1: DOE notes the commentor's opposition to enhancing its existing nuclear facility infrastructure to support production of plutonium-238 for use in future NASA space exploration missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

604-2: DOE notes the commentor's views and opposition to the production of plutonium-238. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the environmental impact analysis of DOE's proposed alternatives for meeting mission requirements. In preparing the Final NI PEIS, DOE carefully considered comments received from the public. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

Commentor No. 605: Laura J. Anderson

From: Anderson/Widener[SMTP:LEMENO@OWT.COM]
 Sent: Monday, September 04, 2000 11:16:24 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Message of support for FFTF
 Auto forwarded by a Rule

Last year, in an effort to refine a diagnosis of a pre_cancerous breast condition, my physician recommended I have a scan originally designed to diagnose heart disease. (This scan's results were curiously found to show evidence not only of women's heart disease, but also highlighting areas of previously unsuspected active breast cancer growth.)

Specifically, I was given 24.8 mCi of Technetium_99m. As the technician was preparing the injection, I asked about the source of the isotope. I was told it came from the only functioning source available to clinics in our area....Canada. And that I was lucky that the plant hadn't been shut down recently, so the Tri_City supply was adequate at that time. And that there had been many times, and would be again, when the test I had been urged to have could not be offered due to the unavailability of the isotope.

As a second generation Hanford worker, I have been concerned about the continued funding not only of the programs once so critical to our national defense, but also the development of the benefits of the "peaceful atom" touted since my childhood years in Richland. The matchless FFTF deserves to continue its long history of versatile technical excellence.

Add this to the long list of messages of support for the continued funding and development of isotope production at Hanford's Fast Flux Test Facility.

Sincerely,
 Laura J. Anderson
 2100 S. Larch PRSE
 Kennewick WA 99337_4268
 (509) 582_3368 or (509) 373_4062

Response to Commentor No. 605**605-1****605-1:** DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 606: Steve Strickland

From: Steve Strickland
[SMTP:SESTRICKLAND@MEIERINC.COM]
Sent: Tuesday, September 05, 2000 11:10:00 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF!
Auto forwarded by a Rule

A diamond in the rough! _ Please don't squander this facility, with so much of our is isotopesbeing used abroad we can not afford to eliminate this facility. It needs to be brought on_line.

Steve Strickland
sestrickland@meierinc.com

606-1

Response to Commentor No. 606

606-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 607: Gary Edmonds

From: Edmonds, Gary E(Z99911)
 [SMTP:GEDMONDS@APSC.COM]
 Sent: Tuesday, September 05, 2000 11:37:37 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: FFTF Restart
 Auto forwarded by a Rule

I support the restart of the FFTF Reactor Facility at Hanford to meet the national needs for medical isotopes and other peaceful nuclear materials. The FFTF is the most economical, safe, and environmental friendly method available to meet these needs.

THANKS.....Gary Edmonds

607-1

Response to Commentor No. 607

607-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 608: Monica Floyd

From: Monica Floyd[SMTP:IDEVGROUP@MSN.COM]
 Sent: Tuesday, September 05, 2000 1:53:24 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Draft PEIS
 Auto forwarded by a Rule

As a citizen from Virginia, it is my belief that the FFTP reactor should be utilized in order to provide us the important services that it was created to do. One of the major purposes for returning this reactor to operation is to make medical isotopes to support the growth of this strong anti_cancer medical technology and provide better treatment opportunities to cancer patients. How could one justify not utilizing this reactor, if only for this purpose (we know that FFTP provides more than medical isotopes)?

The opposition to this effort claims that there is no need for the DOE to expend these funds. I think that there is a real need to not waste this facility, and to promote the general health of the public at the same time. This is the largest of DOE's test and irradiation services reactors and the production of isotopes and support tests are unavailable from other reactors.

I thank you your time to hear my view on this matter. It is an important issue that cannot be dismissed quickly. I believe the advantages of starting up this site more than outweigh the disadvantages. Please take this into consideration.

Sincerely,

Monica Floyd
 monicafloyd@idevgroup.com

608-1

Response to Commentor No. 608

608-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 609: Costas Spalaris

From: Costas Spalaris[SMTP:CNS7@PACBELL.NET]
Sent: Tuesday, September 05, 2000 3:05:32 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF
Auto forwarded by a Rule

As a taxpayer I object to stopping the FFTF and discarding a technology which was developed at Taxpayer expense during the '70 under a HIGH priority DOE Program. The proposed use of FFTF for producing isotopes for Nuclear Medicine and other uses in manufacturing operations is a logical development. Lets have DOE do something positive for once !!

Costas Spalaris

609-1**Response to Commentor No. 609**

609-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 610: The Davison's

From: The Davison's
[SMTP:CW&JDAVISON@URX.COM]
Sent: Tuesday, September 05, 2000 3:18:35 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF For ISOTOPES!
Auto forwarded by a Rule

Gentlemen:

As a taxpayer and a long_time resident of Richland, I would strongly urge your wise consideration of FFTF for the production of isotopes. Medical research and space exploration warrant the need. Technology is here __PLEASE US IT!

610-1

Response to Commentor No. 610

610-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 611: John Zaring

From: ControlTech JZ
 [SMTP:CONTROLJZ@EMAIL.MSN.COM]
 Sent: Tuesday, September 05, 2000 2:58:22 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: FFTF
 Auto forwarded by a Rule

DOE: RESTART THE FFTF. Not to utilize the FFTF would be another slap in the face to the tax payers of this country. It is proven facility that needs to be used for medical isotopes and probably should be used to produce tritium. Our government and DOE has already made a shambles of our needs for the nuclear industry, do not compound it further by ignoring this valuable asset.

Regards,

John Zaring
 Pres. & CEO
 Control Tech

611-1**Response to Commentor No. 611**

611-1: DOE notes the commentor's support for Alternative 1, Restart FFTF, although it should be pointed out that tritium production is not one of the missions for which it would be restarted.

Commentor No. 612: Irene Mark Buitenkant

From: OHM_NONI@att.net%internet
[SMTP:OHM_NONI@ATT.NET]
Sent: Tuesday, September 05, 2000 5:19:23 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: ?Check_Subject
Auto forwarded by a Rule

To: doe
From: Irene Mark Buitenkant
Re: Hanford

It is impossible for an ordinary citizen to stay on top of the exploits of greedy people pushing for profit at any cost

I thought that Hanford was a dead issue that nuclear energy isn't cheap that no one planned on getting rid of its poisons and we could concentrate on the next problem Greedy people count on short memories of uninformed people and pursue every few years fluoridated water spraying for the gypsy moth and whatever else is changing the clean water and air that animals have evolved to need for their health. All these changes contribute to the scourge of cancer. Instead of eliminating these causes of cancer other greedy people ignoring causes make money searching for cures. No Hanford, no.

612-1

Response to Commentor No. 612

612-1: DOE notes the commentor's opposition to activities at Hanford.

Commentor No. 613: Marshall W. Cook

From: MARSHWAYNE@aol.com%internet
 [SMTP:MARSHWAYNE@AOL.COM]
 Sent: Tuesday, September 05, 2000 6:10:08 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: FFTF Restart Makes Sense!
 Auto forwarded by a Rule

I get tired and distraught by legislation that is based on sentimentality and/or fear mongering. It is time for those in charge to stand up for those things that obviously will be of benefit to our society. The restart of the FFTF certainly falls into the category of items items maligned by the ignorance of mob rule.

The knee_jerk reactions of the antinuclear crowd is reminiscent of such things as race hatred (recent) and witch hunting (ca. 1600) now hopefully overcome. It would seem that it is human to look for and embrace ideas on which to blame our ills, regardless of the truth or logic involved, and the complete absense of proof of responsibility.

Consider the facts:

Safety: There has never been a serious harmful event connected with the operation and maintenance of the FFTF __ or any other Fast Flux Reactor.

Recall: The philosophy of the FFTF was basically a machine that produces more fuel than it burns. President Carter quashed the building of a prototype facility out of fear that was engendered by advisors he had gathered around him. However, France and Japan have used Our technology to build and operate fast flux reactors that safely and economically have produced power for over a decade.

613-1**613-2****613-3****Response to Commentor No. 613****613-1:** DOE notes the commentor's views.**613-2:** Comment noted.

613-3: DOE notes the commentor's views. Chapter 4 , Volume 1 of the NI PEIS provides an estimate of waste generation and potential human health impacts associated with each of the alternatives proposed for the production of medical, industrial and research isotopes. Any additional wastes generated in support of these missions would be managed in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws, regulations, and appropriate DOE orders.

613-4: DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

613-5: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 613: Marshall W. Cook (Cont'd)

Now: We do not argue for the obvious long term benefits of power production (whose time will most certainly arrive), but for the solution of an immediate humanitarian cause ___ that of producing isotopes for medical purposes.

**613-3
(Cont'd)**

PLEASE: Do your homework. Try to understand the need for isotopes, observe the outstanding safety record of the FFTF and its ilk (a thousandfold safer than fossil fuel energy production) and recognize the very minimal production of waste material.

WHEN: Are we going to stop making bad decisions based on unfounded hysteria?

613-4

WE NEED THIS REACTOR. WE WANT IT TO OPERATE RIGHT HERE IN OUR BACKYARD. THE PEOPLE OF THIS NATION NEED WHAT IT CAN PRODUCE.

613-5

Sincerely,

Marshall W. Cook, PhD

Response to Commentor No. 613

Commentor No. 614: Ed S. Ruff

From: Edward_S_Ruff@rl.gov%internet
 [SMTP:EDWARD_S_RUFF@RL.GOV]
 Sent: Tuesday, September 05, 2000 6:53:30 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Cc: Bryan_D_Coles@rl.gov%internet;
 W_F_Jr_Bill_Brehm@rl.gov%internet
 Subject: Comments on FFTF Restart
 Auto forwarded by a Rule

Please see attached paper by Dr. William E. Schenewerk of ParsonsEngineering, Pasadena, Calif. Dr. Schenewerk discusses global population growth and energy demand, atmospheric CO2 levels and global warming.

He cites the need for strong deployment of nuclear power to prevent globalwarming due to greenhouse effect.

In his scenario, breeder reactor technology plays a central role in providing energy for the future.

Hence, Dr. Schenewerk believes that FFTF should be retained to test and develop fuels for advanced breeder reactors.

<<atomic power bill schenewerk.txt>> <<World Energy Production.xls>>

Thanks,

Ed S. Ruff, Sr. Design Engineer
 Fluor Federal Services, Hanford Spent Nuclear Fuel Project
 MCO and Fuel Basket Fabrication
 PO Box 1050, Mail Stop L6_58
 Richland, WA 99352

509_376_2140 Phone
 509_372_0638 FAX
 edward_s_ruff@rl.gov

614-1

Response to Commentor No. 614

614-1: DOE notes the commentor's support for Alternative 1, Restart FFTF. However, the purpose of this NI PEIS is to evaluate the environmental impacts of reasonable alternatives to fulfill the requirements of DOE's missions, which include the production of medical and industrial isotopes, the production of plutonium-238, and nuclear research and development and not the testing and development of fuels for advanced breeder reactors.

Commentor No. 615: Loren Wieland

From: LorenLW@aol.com%internet
 [SMTP:LORENLW@AOL.COM]
 Sent: Tuesday, September 05, 2000 8:53:28 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: replace plu_238_fueled radioisotope power systems
 Auto forwarded by a Rule

Dear Colette E. Brown, U.S. Department of Energy,

I think it has been demonstrated well enough that nuclear energy is a very dangerous toy; let's not make any more of it. My reasons for stopping the development of plu_238 are as follows:

- 1) NASA is not doing enough to develop alternative (solar) power sources for space missions. European Space Agency (ESA) has now developed high_efficiency solar cells for deep space missions.
- 2) The plutonium production/fabrication process for space nuclear power missions has recently led to several worker contamination accidents. An expansion of production will only worsen this problem.
- 3) Expanding the number of launches of nuclear powered space devices from Cape Canaveral on rockets with 10% failure rates will only increase the possibility of a deadly mishap.
- 4) The massive cost of expanded production of plu_238 can not be justified at a time when DoE admits it needs over \$300 billion to clean_up existing problems at DoE facilities.
- 5) The military is promoting the use of nuclear power in space for space_based weapons technology. Using nuclear power for space war will have severe environmental implications for life on Earth.

Thank you,

Loren Wieland, BS MA
 19021 Acorn Road, Fort Myers, FL., 33912

Response to Commentor No. 615**615-1**

615-1: DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternative energy sources for space missions, although issues such as NASA research priorities are beyond the scope of this NI PEIS. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. None of the missions stated in the NI PEIS are defense- or weapons-related.

615-2

615-2: Plutonium-238 processing facilities can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Sections 4.2-4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from plutonium-238 processing, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that the radiological and nonradiological risks associated with plutonium-238 processing would be small.

615-1**615-3**

615-3: DOE notes the commentor's opinion and concern about funding available for cleanup at DOE facilities.

615-4

615-4: DOE notes the commentor's concern for the use of nuclear power in space-based weapons. None of the missions stated in the NI PEIS are defense- or weapons-related.

Commentor No. 616: Robert J. Rohnet

Response to Commentor No. 616

Draft PEIS Comment Form

You have all the constructive evidence you asked. Now is time to do the RIGHT thing. You have the responsibility to provide for the people of the UNITED STATES a reliable, diverse, and cost-effective supply of essential isotopes. People are dying and can't must they suffer with cancer when the capability to produce life saving medical isotopes already exists in the US. The FFTF has the capacity, utilities and power capability to run P.H. all the requirements you asked.

I agree that the DOE has performed badly at the hardware cleanup mission. The FFTF is the shadow, start and end of a very few examples of the very best that DOE could do. Don't throw that away. It is built and fixed for and restarting it would cost less than any other alternative.

Do not be misled by the very vocal but minority group of activists that spend disingenuous and generate fear in people who's only fault is not being properly educated on the facts.

You know what the facts are. Please take the moral courage to act upon them. I support restart of the FFTF. I also support providing for the US people. Thank you.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
returning this comment form to the registration desk at the meeting or to the address below
calling toll-free and leaving your comments: 1-877-562-4593
faxing your comments toll-free to: 1-877-562-4592
commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): ROBERT J ROHNET

Organization:

Home/Organization Address (circle one): 625 Spinnwood Loop

City: RICHMOND State: VA Zip Code: 99352

Telephone (optional): 509-371-9505

E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19501 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



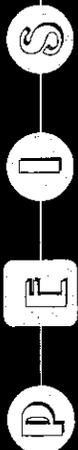
616-1

616-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 617: Judith Dirks

Response to Commentor No. 617

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

Please approve FFTF
It appears to me - to make
fiscal sense that this
facility be utilized for
providing isotopes to the U.S.

617-1

617-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
returning this comment form to the registration desk at the meeting or to the address below
calling toll-free and leaving your comments: 1-877-562-4593
faxing your comments toll-free to: 1-877-562-4592
commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Judith Dirks

Organization:

Home/Organization Address (circle one): 1108 Sanford

City: Richland State: WA Zip Code: 99352

Telephone (optional):

E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

Commentor No. 618: Glen Davis

Draft PEIS Comment Form

We need FFTF, Please restart it!
Shutting it ~~down~~ down is a very unwise
use of time, funds and resources.
Please recognize its value and use it!

618-1

618-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Glen Davis

Organization: Fluor Hanford

Home/Organization Address (circle one): 146 Riverwood St.

City: Richland State: WA Zip Code: 99352

Telephone (optional): (509) 627-6571

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



Commentor No. 619: Benton County Board of County Commissioners (Max E. Benitz, Jr., Chairman; Leo Bowman; Claude Oliver)



**Board of County Commissioners
BENTON COUNTY**

P.O. Box 190 - Prosser, WA 99350-0190
Phone (509) 786-5600 or (509) 736-3080
Fax (509) 786-5625

Leo Bowman
DISTRICT 1
Max Benitz, Jr.
DISTRICT 2
Claude L. Oliver
DISTRICT 3

31 August 2000

Colette E. Brown, Document Manager
Office of Space and Defense Power Systems (NE-50)
Office of Nuclear Energy, Science, and Technology
United States Department of Energy
19901 Germantown Road
Germantown, Maryland 20874

Re: Support for restart of the Fast Flux Test Facility

Dear Ms. Brown,

Benton County would like to restate its long-standing support for the restart and continued operation of the Department of Energy's Fast Flux Test Facility (FFTF) at the Hanford Site.

With the multi-billion dollar facility, its support and service infrastructure, a uniquely-skilled labor force, and community support already in place, restart of the FFTF is the only reasonable and prudent use of taxpayer dollars in pursuit of the missions stated by the DOE in the draft *Nuclear Infrastructure Programmatic Environmental Impact Statement* of July 2000.

Construction costs for a new facility comparable to the FFTF would be prohibitive, and such an alternative is not even under consideration. Therefore, only operation of the FFTF can provide the DOE and the Nation with the broadest range of research, development, and production capabilities, including but not limited to:

- Medical and industrial isotope production;
- Plutonium²³⁸ isotope production for NASA civilian space missions (US Pu²³⁸ supplies are currently purchased from Russia);
- Fuels, assemblies, and flux research for civilian nuclear energy applications;
- Advanced reactor, materials, and waste transmutation research and development;
- Commercial light water reactor lifetime extension research.

Operation of the Fast Flux Test Facility could provide 500-1000 family-wage jobs for the Tri-Cities area in the immediate term, with greater potential opportunities in the future. This high-level employment boost would be beneficial to the economic stability of our community as other Hanford-related employment continues to decline. Furthermore, potential support and spin-off industries would lend favorably to the long-term viability and diversification of our region's economy.

Contrary to the fears of underinformed detractors, renewed operation of the FFTF *would not*....

- generate any new quantities of high-level waste;
- support any military or weapons production programs;
- detract from or divert funding from existing Hanford Site remediation programs – the budgets and appropriations are completely separate.

Response to Commentor No. 619

619-1

619-1: DOE notes the commentors' support for Alternative 1, Restart FFTF and opposition to the remaining action alternatives.

Commentor No. 619: Benton County Board of County Commissioners (Max E. Benitz, Jr., Chairman; Leo Bowman; Claude Oliver) (Cont'd)

Based on the facility's availability, capacity for multi-product missions, demonstrated technology, cost effectiveness, minimal environmental impact, and excellent safety record, it is clear that restart of the FFTF is the only logical choice for the DOE to meet its stated objectives.

The Fast Flux Test Facility and its necessary support infrastructure are already in place and have a safe, efficient, and effective operating record (1980-1992). Restart costs for this facility are minimal when compared to construction of a new facility. Moreover, alternatives calling for construction of new "accelerator" facilities, or the use of other existing facilities will not avail the DOE of the full range of research and production capabilities afforded by the FFTF. It is pointless and imprudent to mothball or decommission such an underutilized national asset and investment of public capital when so many community, scientific, and industrial benefits can be derived from its use.

We believe that when the DOE carefully weighs its alternatives, restart of the FFTF will be the obvious choice for meeting the Department's research, development, and production objectives in the 21st Century. Thank you for the opportunity to comment on this matter.

Sincerely,

BOARD OF COMMISSIONERS,
BENTON COUNTY, WASHINGTON


 Max E. Benitz, Jr., Chairman


 Leo Bowman


 Claude Oliver

cc: US Senator, Slade Gorton (WA)
 US Senator, Patty Murray (WA)
 US Representative, Doc Hastings (WA – Fourth District)
 Governor of Washington, Gary Locke
 Gerald Pollet, Heart of America Northwest
 Tri-Cities Economic Development Council

619-1
(Cont'd)

Response to Commentor No. 619

Commentor No. 620: Robert G. Stagman

Robert G. Stagman, M.D.
7401 92nd Place Southeast
Mercer Island, Washington 98040
Phone 206-232-4867
E-mail zevdog@zipcon.com

September 1, 2000

Ms. Colette Brown
U.S. Department of Energy
19901 Germantown Road
Germantown, Maryland 20874

Dear Ms. Brown:

Plans to restart the Fast Flux Test Facility at Hanford, Washington for the production of tritium to enhance the destructive power of nuclear bombs have disastrous implications and are, frankly, insane, for the following reasons:

1) The radioactive contamination at Hanford, now documented in ground water heading for the Columbia River, is an ecologic nightmare with profound health implications for countless citizens of the Pacific Northwest. As a head and neck cancer surgeon having treated many radiation induced cancers and myself a survivor of a radiation induced thyroid tumor I can assure you that the public health implications of this contamination are potentially catastrophic, and to inflict this risk on our citizenry is unconscionable.

2) Restarting the FFTF will add enormously to the radioactive load at Hanford due both to the end products and the incoming load. The urgent necessity is to decontaminate Hanford as quickly as possible, not increase the contamination.

3) Costs of keeping the FFTF at the ready plus its operation will inevitably lead to a depletion of desperately needed clean-up funds. The first priority at Hanford, using all available funds, must be clean-up. Diversion of funds to produce more radioactive waste is outrageous.

4) Committing the FFTF to a mission for which it was not designed is widely recognized to pose unacceptable risks of a meltdown with devastating release of radioactive material.

5) More tritium is not needed by our military. Continuing disarmament agreements and recycling existing tritium will provide more than sufficient material for over 30 years. In addition, higher killing power for our bombs is hardly necessary.

6) Production of medical radioisotopes can hardly justify the continuing deterioration of perhaps the most contaminated site on the planet. These isotopes are readily available from other sources.

I urge you to come down hard on the side of shutting down the FFTF and keeping intact the milestones for cleaning up and closing down Hanford.

Thank you for your help in this vitally important issue for the people of the Pacific Northwest.

Sincerely,

Robert Stagman, M.D.

Response to Commentor No. 620

620-1: DOE notes the commentor's views. However, the purpose of the NI PEIS is to evaluate the environmental impacts of a range of reasonable alternatives to maintaining and enhancing DOE's existing nuclear facility infrastructure to support production of isotopes for medical, research, and industrial uses; production of plutonium-238 for use in future NASA space exploration missions; and U.S. nuclear research and development needs for civilian application. No component of the proposed action is for the purpose of producing tritium, nor is it for the purpose of supporting any other defense or weapons-related mission.

620-2: DOE notes the commentor's concerns regarding the migration of contaminants to the Columbia River. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

620-3: FFTF restart would not impact the schedule or available funding for existing cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram funds designated for Hanford cleanup, regardless of the alternative(s) selected. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a

Commentor No. 620: Robert G. Stagman (Cont'd)

Response to Commentor No. 620

safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE Orders. As discussed in Section 4.3.1.1.13 of the PEIS, the waste generated as a result of FFTF operations is very small compared to wastes generated by other Hanford activities.

- 620-4:** See response to 620-2. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.
- 620-5:** FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.
- 620-6:** The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements.

Although other manufacturers produce medical isotopes, DOE remains the key provider for a large number of isotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

Commentor No. 620: Robert G. Stagman (Cont'd)

Response to Commentor No. 620

Potential environmental, health, and safety impacts associated with the proposed action are relatively low, and are discussed in detail in Chapter 4 of Volume 1 and associated appendixes in the Final NI PEIS.

620-7: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 621: Charlie Bryan

September 1, 2000

Ms. Colette E. Brown
 NE-50-Office of Nuclear Science, Energy and Technology
 U.S. Department of Energy
 19901 Germantown Road
 Germantown, MD 20874
 Attn: NE PEIS

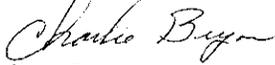
Dear Ms. Brown:

I am writing to urge the restart of the FFTF reactor in Richland Washington for the purpose of generating medical isotopes.

I have lived in the Richland area for about 50 years and have not suffered any adverse effects from the Hanford Energy works. I am concerned about the cleanup efforts staying on track.

I am convinced that the FFTF reactor will generate a minimal amount of waste, but please make plans for its disposal prior to startup.

Thank you for your time and attention.



Charlie Bryan
 220 Goethals Drive
 Richland, WA 99352

621-1

621-2

621-3

Response to Commentor No. 621

- 621-1:** DOE notes the commentor's support for Alternative 1, Restart FFTF.
- 621-2:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 621-3:** Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this NI PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

Commentor No. 622: Grant County Board of County Commissioners (Deborah Moore, Chairman; Leroy Allison; Tim Snead)



**GRANT COUNTY
OFFICE OF
BOARD OF COUNTY COMMISSIONERS**

POST OFFICE BOX 37
EPHRATA, WASHINGTON 98823
(509) 754-2011

August 31, 2000

Colette E. Brown, Document Manager
Office of Space and Defense Power Systems (NE-50)
Office of Nuclear Energy, Science, and Technology
United States Department of Energy
19901 Germantown Road
Germantown, Maryland 20874

RE: Support for restart of the Fast Flux Test Facility

Dear Ms. Brown:

Grant County would like to make clear its unwavering support for restart of the Department of Energy's Fast Flux Test Facility (FFTF) at the Hanford Site.

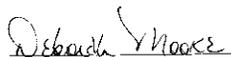
With the multi-billion dollar facility and support infrastructure already in place, restart of the FFTF is the only reasonable, fair, and prudent use of taxpayer dollars in pursuit of the missions stated by the DOE in the draft Nuclear Infrastructure Programmatic Environmental Impact Statement of July 2000.

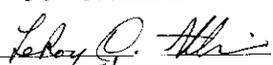
Based on the facility's availability, capacity for multi-product missions, demonstrated technology, cost effectiveness, minimal environmental impact, existing infrastructure and skilled labor force, and excellent safety record, it is clear that restart of the FFTF is the only logical choice for the DOE to meet its stated objectives.

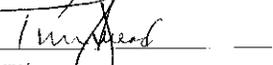
There is overwhelming support in Grant County and throughout the Mid-Columbia region for the reuse of this incomparable national asset. We are excited about both the economic benefits restart could bring to our area, and about the contributions our community can make toward meeting national and global needs in isotope research and production.

We believe that when the DOE carefully weighs its alternatives, restart of the FFTF will be the obvious choice for meeting the Department's research, development, and production objectives in the 21st Century. Thank you for the opportunity to comment on this matter.

Sincerely,

 _____, Chairman

 _____

 _____

DKM/pg

TIM SNEAD
DISTRICT 1
10599 SEWING RD. #2
MEYERS BLVD. 100 SUITE 17
PO BOX 265 9548

DEBORAH MOORE
DISTRICT 3
1805 DOLSON RD. N
YONGE ST. SW, SUITE 17
PHON 787 3199

LEROY ALLISON
DISTRICT 2
25266 RD. 1 SE
MAYFIELD, WA 98857
PHONE 349 2513

622-1

622-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Response to Commentor No. 622

Commentor No. 623: Duane K. Holsten

Response to Commentor No. 623

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

I lost my father 23 years ago to bone cancer which had metastasized from prostate cancer. He was 66 years old at the time and in good health otherwise. His father had also suffered from prostate cancer a generation earlier.

If isotope therapy had been available to my father when the prostate cancer was first detected, he would have been alive today to enjoy his retirement with my mother. Instead, our family has a hole that can never be filled. All we can do is refresh our memory of him by recounting family traditions. But, we can also hope that other families, including my progeny, are spared these devastating events by taking advantage of technology.

Because of this medical history and concern for my health in the future, I have even stronger impetus to suggest that the FFTF is the answer to cost-effective medical isotope production for the U.S. I have worked at the FFTF as an engineer from its construction days. I am proud of the facility and the integrity and knowledge of the people that operate and maintain it. I recognize that the DOE will be barraged with unfounded and ill-informed objections to its operation. I must trust the Secretary to finally base his FFTF restart decision on technical and fiscal merits and ignore the ignorant rhetoric.

I strongly support the use of the FFTF for isotope production and other needs for which it is uniquely qualified.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): _____  **Mr. Duane K. Holsten**
 1751 Brimark Street
 Richland, WA 99352

Organization: _____

Home/Organization Address (circle one): _____

City: _____ State: _____ Zip Code: _____

Telephone (optional): 509 946 1929

E-mail (optional): holsten@televar.com

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact Coletha E. Brown, NE-50
 U.S. Department of Energy • 19503 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



623-1

623-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 624: Robert and Cynthia Day-Phalen

Response to Commentor No. 624

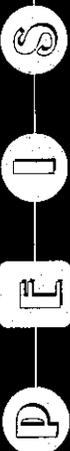
Draft PEIS Comment Form

We need FFTF - please Restart it.
 We need the technology for meeting our needs
 now & in our future. We are but a
 small voice but please hear our plea.
 Thank you!

624-1

624-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Robert & Cynthia Day-Phalen

Organization: _____

Home/Organization Address (circle one): 2616 Crane Dr.

West Richards, WA 99353

City: _____ State: _____ Zip Code: _____

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Commentor No. 625: Frieda S. Walworth

2406 Kingfisher Ln.
 Kelso, WA 98626
 Sept. 1, 2000

Collette Brown

Office of Space and Defense Power Systems (NE-52)
 U.S. Department of Energy
 19901 Germantown Road
 Germantown, Maryland 20874

Dear Ms Brown,

I am still enraged after all these years that the Department of Energy has neither cleaned up Hanford of radioactive waste nor shut down FFTF, so that no more nuclear waste will be endangering the Columbia River and all of us here in Washington and Oregon.

The Hanford Public Interest Network of seven organizations has revealed the USDOE Hanford officials have covered up Plutonium releases twice in three years. We must get that reactor shut down for all time. I understand that if needed, there are cheaper + safer ways to obtain this dangerous material. Plus this quote from the Subcommittee of Research and Planning - "The FFTF will not be a viable source of ~~research~~ ^{research} radioisotopes."

PLEASE SHUT IT DOWN!

Sincerely,

Frieda S. Walworth

Response to Commentor No. 625

625-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

625-1

DOE did not cover up release information on the two referenced events (assumed to be PFP event and the year 2000 wildfires at Hanford). The very low levels involved took several days to quantify. DOE reported information as it became available.

625-2

625-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

625-3

625-3: The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production

625-2

Commentor No. 625: Frieda S. Walworth (Cont'd)

Response to Commentor No. 625

of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production.” In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Commentor No. 626: Fred Miller

Draft PEIS Comment Form

The draft PEIS is woefully inadequate. It ignores numerous issues and key information. It ignores nuclear proliferation issues entirely. It ignores the possibility of a shipboard fire involving plutonium release into a port city, which could render that city uninhabitable. It ignores the possibility of using Pu-238 from DoD sources such as RTGs from warheads dismantled under the START treaty. It ignores an assessment of the need for Pu-238 or of the suitability of FFTF to produce medical isotopes. It ignores the lack of a suitable geologic repository for spent fuel and DOE's failure to create such a repository by its own deadline. This makes the "temporary" storage facility a permanent repository, de facto. It ignores Hanford and DOE's history of covering up problems, lying to the public, misappropriating cleanup and safety funds and persecuting whistle blowers. In effect, this history makes all safety and environmental and cost estimates unreliable. It ignores the cost of, and risks associated with, the ultimate decommissioning of the reactor, except in the case of not reopening the reactor. It ignores the effect of competition for cleanup dollars and cleanup resources when FFTF is operating and when it is being cleaned up. It is consistently biased in favor of restarting FFTF. It is consistently biased in favor of production; it is absurdly optimistic about DOE performance.

and FMEP

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Fred Miller

Organization: Peace Action of WA

Home/Organization Address (circle one): 5828 Roosevelt Way NE

City: Seattle State: WA Zip Code: 98105

Telephone (optional): 206 527-8090

E-mail (optional): 206 527-9985

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Caille E. Brown, NE-50
U.S. Department of Energy • 19001 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Response to Commentor No. 626

626-1: The NI PEIS is adequate. This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. DOE prepared a separate Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Pursuant to CEQ regulations (40 CFR 1505.1.e), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. DOE mailed this document to about 730 interested parties on September 8, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Nuclear Infrastructure Nonproliferation Impact Assessment in Appendix Q in the Final NI PEIS.

626-2: Alternative 1 does postulate that DOE might decide at some point to import mixed oxide fuel from Europe to fuel FFTF. At this time, however DOE has not proposed to import this fuel through any specific port. If DOE ultimately decides to import fuel from Europe, it would perform a separate NEPA analysis to select a port. This review would address all relevant potential impacts of overseas and inland water transportation, shipboard fires, package handling, land transportation, as well as safeguards and security associated with the import of SNR-300 mixed oxide fuel through a variety of specific candidate ports on the east and west coasts. It would consider all public comments, including local resolutions, concerning the desirability of bringing mixed oxide fuel into the proposed alternative ports.

In the event that DOE decides to enhance its nuclear infrastructure, it would not expose any population to high, unacceptable risks under any alternative. Any transportation activities that would be conducted by DOE would comply with U.S. Nuclear Regulatory Commission and U.S. Department of Transportation regulations. Associated transatlantic shipment would comply with International Atomic Energy Agency requirements. In Section J.6.2, DOE reviewed the potential maximum impacts from the marine transportation of mixed oxide fuel from Europe to a representative military port, Charleston, South Carolina, and overland transportation to Hanford. Also in that section, a bounding analysis demonstrates that the maximum potential radiological risks to the

Commentor No. 626: Fred Miller (Cont'd)

Response to Commentor No. 626

surrounding public from mixed oxide fuel shipments would be extremely small (e.g., less than 1 chance in a trillion for a latent cancer fatality per shipment from severe accidents at docks and in channels and less than 1 chance in 50 billion for a latent cancer fatality per shipment from overland highway accidents).

DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual rate of growth of medical isotope use is consistent with the Expert Panel findings. Section 1.2.1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who

Commentor No. 626: Fred Miller (Cont'd)

Response to Commentor No. 626

might consider its use for isotope production.” In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

DOE has taken the Expert Panel and NERAC report recommendations under consideration in developing the range of alternatives evaluated in the NI PEIS. These reports were made available to the public at the NI PEIS public information centers and on the Internet at www.nuclear.gov.

- 626-3:** Small plutonium-238 fueled radioisotope thermoelectric generators (RTGs) are used to power electronic systems on some strategic weapons. Some of the strategic weapons have become surplus due to strategic arms reductions. Although the exact configuration of these RTGs is classified, the amount of plutonium-238 in each unit is relatively small and the assay of the plutonium-238 is unacceptable (too low) for use in RTGs advanced radioisotope power systems, or radioisotope heater units for NASA spacecraft. Therefore, it is not a viable source for consideration in the NI PEIS.
- 626-4:** A May 22, 2000, correspondence from NASA to DOE identified that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000, letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Commentor No. 626: Fred Miller (Cont'd)

Response to Commentor No. 626

The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

626-5: The NI PEIS assumes, for the purposes of analysis, that Yucca Mountain Nevada, would be the final disposal site for DOE's high-level radioactive waste and spent nuclear fuel. As directed by the U.S. Congress through the Nuclear Waste Policy Act, as amended, Yucca Mountain is the only candidate site currently being characterized as a potential geologic repository for high-level radioactive waste and spent nuclear fuel. DOE has prepared a separate EIS, "Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High Level Radioactive Waste at Yucca Mountain, Nye County, Nevada" (DOE/EIS-0250D, July 1999), which analyzes the environmental impacts from construction, operation and monitoring, related transportation, and eventual closure of a potential geological repository. Spent nuclear fuel would be stored above ground in an interim storage facility at Hanford until the availability of a geologic repository.

626-6: Comment noted.

Commentor No. 626: Fred Miller (Cont'd)

Response to Commentor No. 626

626-7: Decommissioning FFTF, including associated costs and cleanup, is not within the scope of the NI PEIS. Before decommission activities were undertaken, DOE would prepare the appropriate environmental reviews to address the associated environmental impacts. Cost assessments would also be prepared.

DOE remains committed to cleaning up the Hanford Site independent of ultimate decision on FFTF. The amounts of wastes associated with decommissioning FFTF would be small. The schedule for cleaning up these other wastes would not be affected if FFTF were restarted.

Deactivation of FFTF is not part of implementing Alternative 1, restart FFTF. Deactivation of FFTF is part of implementing Alternatives 2, 3, 4, and 5 and including the cost of FFTF deactivation in the implementation costs for these alternatives is appropriate. The Cost Report was structured to identify the implementation costs of the various alternatives so the Secretary of Energy would have this information along with other data for consideration.

626-8: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Commentor No. 626: Fred Miller (Cont'd)

Response to Commentor No. 626

626-9: DOE has analyzed each environmental resource area in a consistent manner across all the alternatives to allow for a fair comparison among the various alternatives. DOE made every effort to obtain, analyze, and disclose all required information to make a decision on expanding nuclear infrastructure.

Section 2.7.3 of Volume 1 discusses the relative mission effectiveness of Alternatives 1, 2, 3, and 4 in achieving the goals of the three missions evaluated in this NI PEIS (i.e., medical and industrial isotope production, plutonium-238 production for space missions, and nuclear energy research and development for civilian applications). However, mission effectiveness is only one factor in DOE's decision. Other factors include environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives. All of the alternatives will be considered prior to issuance of the Record of Decision.

Commentor No. 627: James W. and LaVina Hagan

September 1, 2000

Ms. Colette Brown
DOE Office of Space & Defense Power Systems, NE-50
19901 Germantown Road
Germantown, MD 20874-1290

Subject: Draft Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, including the Role of the Fast Flux Test Facility, DOE/EIS-0310D, dated July 2000

Dear Ms. Brown:

DOE is to be commended for recognizing its responsibility to the people of the United States for an adequate supply of medical and industrial radioisotopes and for its comprehensive look at the various alternatives for meeting that responsibility.

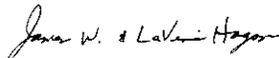
We believe Alternative 1, Restart of FFTF, is the best and only assured alternative in meeting this responsibility.

We are disturbed by the apparent weight given to vocal groups here in the Northwest who use only rhetoric rather than scientific logic in their arguments. We find little value in exaggerated comments given only to confuse and frighten those unfamiliar with nuclear technologies. We would hope that DOE would sort through such rhetoric, do the right thing in meeting its responsibility and not just listen to who makes the most noise.

I spent my career in the nuclear industry with a number of those years coordinating safety research to show that a fast reactor like FFTF could be operated without undue risk. It was my personal goal to be part of a national initiative that would ensure that this country had an adequate energy supply through the breeder program without the disturbing reliance we see today upon foreign oil and the environmental impacts of fossil fuel power plants. We've seen that initiative wane away through the lack of forthright government leadership, coupled with an uninformed and confused public.

Let us not lose this opportunity to take the right initiative for an assured supply of medical, industrial and space power radioisotopes through full FFTF utilization.

Very truly yours,



James W. & LaVina Hagan
2171 Crestview
Richland, WA 99352

Response to Commentor No. 627

627-1

627-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

627-2

627-2: It is DOE policy to encourage public input on matters of regional, national and international importance as part of its commitment to facilitate a public participation process that is open and unbiased. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

627-1

Commentor No. 629: Kathryn Roberg

Response to Commentor No. 629

Draft PEIS Comment Form

I attended the public hearing - Reckless - Aug 31 -
 AGAINST START-up of FFTF! I am highly dis-
 turbed about the "push" for restart FFTF -

629-1

629-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

My reasons:
 Lack of adequate verifiable cases of ACTUAL
 Cancer cures from use of radioisotope therapy. Does
 this warrant a restart of a Nuclear "hot" reactor!

629-2

629-2: DOE notes the commentor's views regarding the potential use of FFTF for enhancing DOE's existing nuclear facility infrastructure. In ongoing clinical testing, therapeutic radioisotopes have proven effective in treating cancers and other illnesses while minimizing adverse side effects, making their use an attractive alternative to traditional chemotherapy and radiation treatments.

Nasa has informed USDOE on May 22, 2000 that
 "Nasa headquarters no longer has identifiable planned
 requirement for Small Radioisotope Thermoelectric
 Generators (SRTG) power systems - How can a
 Nuclear Reactor have a justifiable start-up?"

629-3

629-3: The May 22, 2000, correspondence from NASA to DOE identifies that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Hanford has a horrendous clean up to do
 before anything else starts up! How can
 the DOE justify adding to the already
 over-flow stock pile of nuclear waste!

629-4

629-4: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

We are destroying this world! What a
 SINK

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Kathryn Roberg

Organization:

Home/Organization Address (circle one): 722 W. Alder St.

City: Walla Walla State: WA Zip Code: 99362

Telephone (optional):

E-mail (optional): kroberg@hscis-net

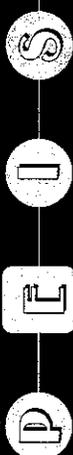
COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 630: Roy W. Brown
CORAR



Council on Radionuclides and Radiopharmaceuticals, Inc.

3911 Campolindo Drive
 Moraga, CA 94556-1551
 (925) 285-1850
 Fax: (925) 285-1850
 E-mail: corar@silkm.com

Henry H. Kramer, Ph.D., FACNP
 Executive Director

August 31, 2000

Ms. Colette Brown
 PEIS Document Manager
 Office of Nuclear Energy, Science and Technology
 U. S. Department of Energy, NE-50
 19901 Germantown Road
 Germantown, MD 20874-1290

Subject: DRAFT Programmatic EIS Including the Role of the Fast Flux Test Facility

Dear Ms. Brown:

On behalf of the Council on Radionuclides and Radiopharmaceuticals (CORAR), we are pleased to provide our comments on the above subject. CORAR is a North American trade association composed of representatives from the major manufacturers and distributors of radiopharmaceuticals, radioactive sources, and research radionuclides used in all 50 States of the United States for therapeutic and diagnostic applications, and for environmental, industrial and biomedical research and quality control.

CORAR appreciates the substantial work that the DOE has put into developing this notice. The EIS covers the many issues concerned with the operation of the FFTF. However, one key component, that is not part of the EIS, is the fiscal viability of the FFTF after the FFTF has been restarted. It is stated in a number of places in the EIS that one mission of the FFTF is to produce radionuclides for commercial and research use. At the same time in the EIS, justification for the FFTF to produce these radionuclides is based on a 1997 Frost & Sullivan market study entitled "FFTF Medical Isotopes - Market Study (2001-2020)". Based on current commercial and research usage of radionuclides, the assumptions and market projections presented in this market study were extremely optimistic and are no longer valid. Consequently, any business plan that includes revenue to the FFTF from the sale of commercial and research radionuclides based on the very optimistic assumptions and projections of the 1997 Frost and Sullivan market study will not be achievable.

CORAR strongly recommends that the DOE obtain an updated market research study prior to developing any FFTF business plan that intends to include any revenues to the FFTF from the sale of commercial and research radionuclides.

Respectfully yours,

Roy W. Brown
 Chairman, CORAR

630-1

Response to Commentor No. 630

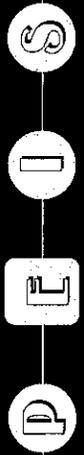
- 630-1:** DOE notes the commentor's concerns. DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

Commentor No. 631: Yvonne Ho Hsieh

Response to Commentor No. 631

Draft PEIS Comment Form

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



We need FFTF to fight cancer so please restart it!

631-1

631-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Yvonne Ho Hsieh

Organization:

(Home) Organization Address (circle one):

7738 Xavier Ct.

City: Westminster State: CO Zip Code: 80030

Telephone (optional): 303-427-2885

E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Cokelle E. Brown, NE-50 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592 E-mail: Nuclear.Infrastructure-PES@hq.doe.gov



7/12/00

Commentor No. 632: Anonymous

Response to Commentor No. 632

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Public Hearing Evaluation Form

Please place a check mark in the box next to the public hearing attended:

- August 22, 2000
American Museum of Science and Energy
300 South Tulane Avenue
Oak Ridge, Tennessee 37830
- August 25, 2000
Westcoast Idaho Falls Hotel
475 River Parkway
Idaho Falls, Idaho 83402
- August 28, 2000
Hood River Inn
1108 E. Marina Way
Hood River, Oregon 97031
- August 29, 2000
Oregon Museum of Science and Industry
1945 SE Water Avenue
Portland, Oregon 97214
- August 30, 2000
Washington State Convention and Trade Center
800 Convention Place
Seattle, Washington 98101
- August 31, 2000
Best Western Tower Inn and Conference Center
1515 George Washington Way
Richland, Washington 99352
- September 6, 2000
Crystal Gateway Marriott
1700 Jefferson Davis Highway
Arlington, Virginia 22202

Please circle the appropriate number:

	Very Good	4	3	2	Poor
Your Level of Knowledge about the PEIS before the Hearing	5	4	3	2	1
Your Level of Knowledge about the PEIS after the Hearing	5	4	3	2	1
Time and Date of Hearing	5	4	3	2	1
Location of Hearing	5	4	3	2	1
Registration Process	5	4	3	2	1
Clarity of Displays and Handouts	5	4	3	2	1
Clarity of Presentations	5	4	3	2	1
Relevancy of Issues and Concerns Addressed	5	4	3	2	1
Opportunities for Discussion	5	4	3	2	1
DOE Officials' Willingness to Listen	5	4	3	2	1
Knowledge/Responses from Staff Attending	5	4	3	2	1

How could the public hearing format and materials be improved? *I would prefer that questioners identify their values.*

Was the public hearing helpful to you? *Yes, it provided a broader perspective of medical isotope users interest. South Carolina's preference for an accelerator based upon APF.*

Please continue on the other side if you run out of space. Please return your completed evaluation form to the registration desk or mail or fax to the address below.

THANK YOU - YOUR FEEDBACK IS IMPORTANT TO US

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4893 • Toll-free Fax: 1-877-562-4892
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



632-1

632-1: DOE notes the commentor's interest in Alternative 3, Construct New Accelerator(s).

Draft PEIS Comment Form

We need the isotopes that FFTF can produce for medical research and treatment. This country needs to have its own source of isotopes and not be dependent on foreign countries for our supply. Therefore, we need FFTF, please restart it.

633-1

633-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Edna V. Bowman

Organization:

Home/Organization Address (circle one): 1719 W. 18 Drive

City: Pasco State: WA Zip Code: 99301

Telephone (optional): 509-547-4811

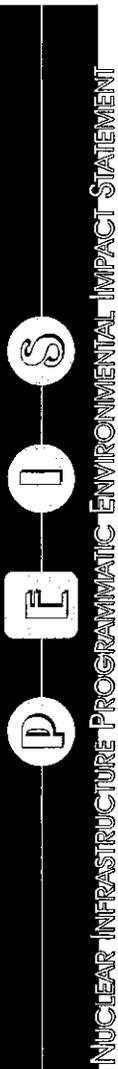
E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4692 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00



**Commentor No. 634: Jerome Delvin,
Washington State Representative**

**FAST FLUX FACILITY ENVIRONMENTAL IMPACT STATEMENT HEARINGS
AUGUST 31, 2000
BEST WESTERN TOWER INN
RICHLAND, WASHINGTON**

COMMENTS BY: REPRESENTATIVE JEROME DELVIN

- I strongly urge the Department of Energy (DOE) to adopt alternative 1 of the Draft Programmatic Environmental Impact Statement (EIS) which would reactivate the Fast Flux Test Facility (FFTF) and use it to produce medical and industrial isotopes, support space fuel needs and assist with nuclear research.
- The draft EIS prepared by DOE has identified a clear need for additional reactor capacity, capacity that can be readily provided by the FFTF. Use of the FFTF will create the greatest and most efficient use of current resources for our national research and medical isotope needs. The present cost of building a comparable facility would exceed \$2.5 billion. We are currently expending between \$35 - 40 million annually to maintain the FFTF facility. Taxpayers would be best served by putting this facility to work for both the federal government and for the economy of Central Washington.
- With the need for medical isotopes projected to increase dramatically America finds itself increasingly dependent on overseas facilities to meet its needs. Radioactive isotopes are frequently used to treat cancer and it is important that we develop a domestic facility for the production of these isotopes. Identified uses of the FFTF noted on the EIS would produce 1,000 high paying jobs and would likely translate into many more jobs providing a healthy boost to the local economy.
- In recent comments to the Spokane Chamber of Commerce executives of Hollister-Stier Laboratories, the area's chief biotech lab, noted that the Inland Northwest has the ingredients to spawn a world-class biotechnology industry. The Tri-City's convenient location to Puget Sound biotech companies, University of Washington research facilities, and the growing biotech presence of Spokane will allow isotope production here to spur a technology park environment that can spur further industrial development and help close economic development gaps between Eastern Washington and the Puget Sound region.

634-1

634-2

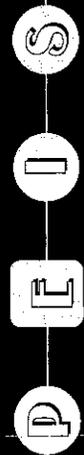
Response to Commentor No. 634

- 634-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.
- 634-2: It is possible that restarting FFTF for the stated missions could result in an influx of new business. The socioeconomic impacts of each alternative were evaluated in the PEIS. DOE acknowledges that some secondary impact is reasonably foreseeable, but the nature and extent of such economic growth is speculative at this time.

Commentor No. 635: Denelle Friar

Response to Commentor No. 635

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

The isotopes mission of FFTE could save many lives. The FFTE should be operated to provide the many benefits of a reliable source for these vital - lifesaving - medical isotopes!

635-1

635-1: DOE notes the commentor's support for Alternative 1, Restart FFTE.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Denelle Friar

Organization:

Home Organization Address (circle one): 32055 Caballo Rd

City: Kennewick State: WA Zip Code: 99338

Telephone (optional):

E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Commentor No. 636: Marjorie Worthington

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

Thank you for providing one more opportunity for citizen input in this process. Having attended DOE budget hearings over a period of several years, having sent letter after letter to the office of the DOE, with no apparent response to any of the concerns raised, I find myself shocked and saddened at finding that nothing has changed the DOE's agenda, to restart the FFTF reactor.

636-1

*Reasons given for the \$6 million cost per year of maintaining the FFTF on standby have varied, but whatever the reasons cited (and I have strong objections to the validity of any one of them), the effect has been to PRE-EMPT concerted efforts to CLEAN UP TOXIC WASTE THAT IS LEAKING INTO GROUNDWATER THAT DRAINS INTO THE COLUMBIA RIVER. Why is the Tri-Party Agreement being ignored? Why are the citizens of this area - those most affected by the mess of toxic waste not being listened to? Why should a government agency, with no direct constituency to answer to, continue to assert jurisdiction that denies the right of citizens in this area to live in a safe environment? None of the projects proposed by DOE, however couched in lofty terms purporting to be in the public interest is worth honoring the rule we learned in kindergarten: **There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:** *Own up your own mess!**

636-3

636-1

636-2

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Marjorie Worthington

Organization: _____

Home/Organization Address (circle one): 1377 Clovercrest Street

City: Enumclaw State: WA Zip Code: 98022

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Response to Commentor No. 636

- 636-1:** The purpose of this NI PEIS is to evaluate the environmental impacts of reasonable alternatives to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238 for NASA space missions, and nuclear research and development. As evaluated under Alternative 1 in this NI PEIS, FFTF would be restarted to accomplish these nondefense-related missions. Other unrelated nuclear energy and defense-related considerations are beyond the scope of this NI PEIS. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.
- 636-2:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected. DOE is fully committed to honoring this agreement.
- 636-3:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. A Tri Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Prior Public meetings were held on this formal milestone change.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE).

Public Hearing Evaluation Form

Please place a check mark in the box next to the public hearing attended:

- | | |
|--|--|
| <input type="checkbox"/> August 22, 2000
American Museum of Science and Energy
300 South Tulane Avenue
Oak Ridge, Tennessee 37830 | <input checked="" type="checkbox"/> August 30, 2000
Washington State Convention and Trade Center
800 Convention Place
Seattle, Washington 98101 |
| <input type="checkbox"/> August 25, 2000
Westcoast Idaho Falls Hotel
475 River Parkway
Idaho Falls, Idaho 83402 | <input type="checkbox"/> August 31, 2000
Best Western Tower Inn and Conference Center
1515 George Washington Way
Richland, Washington 99352 |
| <input type="checkbox"/> August 28, 2000
Hood River Inn
1108 E. Marina Way
Hood River, Oregon 97031 | <input type="checkbox"/> September 6, 2000
Crystal Gateway Marriott
1700 Jefferson Davis Highway
Arlington, Virginia 22202 |
| <input type="checkbox"/> August 29, 2000
Oregon Museum of Science and Industry
1945 SE Water Avenue
Portland, Oregon 97214 | |

Please circle the appropriate number:

	Very Good	Good	Poor		
Your Level of Knowledge about the PEIS before the Hearing	5	4	3	2	1
Your Level of Knowledge about the PEIS after the Hearing	5	3	3	2	1
Time and Date of Hearing	5	4	3	2	1
Location of Hearing	5	4	3	2	1
Registration Process	5	4	3	2	1
Clarity of Displays and Handouts	5	4	3	2	1
Clarity of Presentations	5	4	3	2	1
Relevancy of Issues and Concerns Addressed	5	4	3	2	1
Opportunities for Discussion	5	4	3	2	1
DOE Officials' Willingness to Listen	5	4	3	2	1
Knowledge/Responses from Staff Attending	5	4	3	2	1

**past experience makes a question this area*
How could the public hearing format and materials be improved? _____

Was the public hearing helpful to you? *Yes, it clarified my own long-held convictions! As I listened to the public comments (as well as those of elected officials) it became very clear to me that proponents of FFE are not even in one way or another connected with - or buying into the arguments of the "military and industrial complex" against which Dwight Eisenhower warned.*

Please continue on the other side if you run out of space. Please return your completed evaluation form to the registration desk or mail or fax to the address below.

636-1

THANK YOU - YOUR FEEDBACK IS IMPORTANT TO US

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free telephone: 1-877-562-4533 • Toll-free fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/27/00

Response to Commentor No. 636

Commentor No. 636: Marjorie Worthington (Cont'd)

60+ years ago, and it is this element that has delayed what must be our primary concern as responsible citizens (and occupants of this fragile planet): Clean up your own mess!

636-1
(Cont'd)
636-2

Commentor No. 637: J. Perre

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

0874+1207 [Barcode]

**Public comment on Nuclear Infrastructure Draft Programmatic
Environmental Impact Statement (NI PEIS)**

I am opposed to restart of the Fast Flux Test Facility reactor because:

IT OFFERS THE POTENTIAL BENEFIT TO A FEW PEOPLE
WHILE CREATING THE POTENTIAL THREAT TO MANY
PEOPLE.

Name J Perre
Address Po Box 232
City, state RHOODESDEN OR Zip 97049

Response to Commentor No. 637

637-1

637-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 639: Richard Johnson

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

0874+1207 [Barcode]

Public comment on Nuclear Infrastructure Draft Programmatic
Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

*If seems to me this
business is potentially very
hazardous and should therefore
be abandoned.*

R.J.

Name Richard Johnson

Address 91731 Smith Lake Rd

City, state Warrenton Or Zip 97146

Response to Commentor No. 639

639-1

639-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

639-2

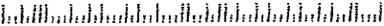
639-2: The environmental impacts associated with restart of the FFTF during normal operations and from postulated accidents are presented in Section 4.3 of the NI PEIS. The impacts to humans and also to the biosphere (air, water, and land) are shown to be small. No fatalities among workers or in the general public would be expected over the full 35-year operational period.

Commentor No. 640: Henry Mansfield

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

0874/1299 

**Public comment on Nuclear Infrastructure Draft Programmatic
Environmental Impact Statement (NI PEIS)**

I am opposed to restart of the Fast Flux Test Facility reactor because:

*I am opposed to the basic "missions" of the
D.O.E. - I don't want to support production
of rocket fuel, medical isotopes or more
research! The D.O.E. hasn't even finished
cleaning up their mess at Hanford and they
want to upstart a portion of it? Cleaning
up Hanford should be your #1
mission!! Thank-you.*

Address Henry Mansfield
1904 SE Pine St.
City, state Portland, OR Zip 97214

Response to Commentor No. 640

- 640-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 640-2:** DOE notes the commentor's views. However, it should be noted that the production of rocket fuel is not in the scope of the NI PEIS. The production of plutonium-238 for use as a fuel in radioisotope power systems that provide on-board electrical service for NASA spacecraft used for deep space exploration is one of the needs addressed in the Final NI PEIS.
- 640-3:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Commentor No. 641: Michael H. Harburg

Response to Commentor No. 641

Mr. Michael H. Harburg
1130 Quince St. NE
Olympia WA 98506-4057



Ms. Colette Brown
US Dept of Energy
Office of Space & Defense Sys. NE 50
19901 Germantown Rd.
Germantown MD 20874

874/1298

Dear Ms. Brown, Aug 30, 2000
I oppose the restart of the Fast Flux
Test Facility Reactor.

This Nuclear Weapons program has
not hurt a single enemy (thank goodness)
but has caused cancer & disease in
1,000s of Americans! I have a friend who
die of M.S because she grew up near
Hartford! Stop the Reactor please
Sincerely, *[Signature]*

641-1

641-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

641-2

641-2: As described in Section 1.2 of Volume 1, the nuclear infrastructure missions are unrelated to the national defense. Neither nuclear weapons nor components for nuclear weapons would be produced under the nuclear infrastructure alternatives (Section 2.5 of Volume 1). Sections 4.3 through 4.6 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of a range of reasonable alternatives, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with each of these alternatives would be small.

641-1

Commentor No. 642: John E. Madsen (Cont'd)

Response to Commentor No. 642

which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

Commentor No. 645: Jason Halbert

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

76 [Barcode]

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

There is no defense of space-based
nukes/ (NMD) There is little defense of earth-based
nukes. I urge you to abandon all plans
for continuing the nuclear power and weapons
program and especially the Fast Flux reactor.

Name Jason Halbert *J. Halbert*
Address PO Box 453
City, state Charlottesville VA Zip 22902

645-1

645-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

645-2

645-2: DOE notes the commentor's opposition to nuclear weapons and the use of nuclear energy. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. The DOE missions to be addressed in this PEIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies. None of the DOE missions stated in the NI PEIS are defense- or weapons-related.

Commentor No. 646: Duncan Baruch

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

0874+1207 [Barcode]

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

The leaking, highly-toxic waste spreading from Hanford Nuclear Reservation into our lives is unacceptable, as is the failure to clean ^{waste} up. Adding yet more waste from restarting the FFTE cannot be justified.

Name Duncan Baruch
Address 4502 SW Pasadena St
City, state Portland, OR Zip 97219

Response to Commentor No. 646

- 646-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
 - 646-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
 - 646-3: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to wastes generated by other Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposal) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.
- The NI PEIS addressed the environmental impacts due to the treatment storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

Commentor No. 647: P. Doyle

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

2074+1207 [Barcode]

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

It is dangerous for the land, people, animals and fish who live within 1000 miles of Hanford and for their ancestors

Name P. Doyle

Address 902 SE Franklin

City, state Portland OR Zip 97202

647-1

647-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

647-2

647-2: The health and environmental concerns expressed in this comment are noted. The environmental impacts associated with operation of the FFTF and support facilities at Hanford during normal operations and from postulated accidents are presented and discussed in Section 4.3 of the NI PEIS. All short- and long-term impacts to human health, land use, and ecological resources would be small in the immediate area of the Hanford site and negligible at all distant locations.

Commentor No. 648: William E. Morton

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power System
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

0874+1207 [Barcode]

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

*The Hanford groundwater is already
thoroughly contaminated with radioisotopes
& other toxins, endangering the Columbia River
& all its downstream users. Restarting FFTF
will only add to that contamination & risk.*

Name Wm E Morton FID
Address 755 SW 84 Ave
City, state Portland, OR Zip 97225

648-1

648-2

Response to Commentor No. 648

648-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

648-2: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford and the risk of contamination to the Columbia River. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

No food or water restrictions are currently in place outside the Hanford Reservation as a result of Hanford activities.

Commentor No. 649: Monica Maynard

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

3874+1207 [Barcode]

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

it offends and threatens my
EXISTENCE !!!

Name MONICA MAYNARD
Address 8503 SE 9th Ave
City, state PORTLAND, OR Zip 97282

Response to Commentor No. 649

649-1

649-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 650: Michael Eury

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

10874+1207 [Barcode]

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

IT WOULD VIOLATE THE 1995 HANFORD
CLEAN-UP AGREEMENT. THE DOE
SHOULD BE CLEANING UP HANFORD AND
KEEPING IT CLOSED, NOT RE-OPENING IT.

Name MICHAEL EURY
Address 1500 NE 15th AVE., #551
City, state PORTLAND, OREGON zip 97232

Response to Commentor No. 650

650-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

650-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Public meetings were held on this formal milestone change. The alternatives delineated in the NI PEIS would not have an impact on Hanford cleanup activities because of the differing funding sources.

Commentor No. 651: Anne Sunrise

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

20874+1290 [Barcode]

Public comment on Nuclear Infrastructure Draft Programmatic
Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

*Hanford already is overloaded. We need want
NO MORE WASTE that will further contamin-
ate the region and the Columbia River. I/we
want our children, grandchildren & great grand-
children, etc. to have a healthy & safe future!*

Name Anne Sunrise, RN, BSN, BA
Address 115 X St. SW # 8
City, state Tumwater, WA. Zip 98501

651-1

651-2

Response to Commentor No. 651

651-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

651-2: The restart of FFTF or any of the other proposed alternative facilities would not impact the schedule or available funding for existing cleanup activities. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Commentor No. 652: David Berger

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

0874+1207 [barcode]

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

(1) I believe the money should be spent on cleaning up Hanford.
(2) The reactor is not needed, as there are alternatives for medical isotope generation

Name DAVID BERGER
Address 9275 SW 8th Drive
City, state Portland, OR Zip 97219

Response to Commentor No. 652

652-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

652-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The stated missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

The U.S. Congress funds Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM). Congress also funds FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N 3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

652-3: See response to 652-1. Although a few radioisotopes can be produced by separating them from existing stockpiles of transuranic materials or other long-lived radioisotopes, the two primary means for producing radioisotopes are through the use of nuclear reactors or particle accelerators. DOE has evaluated as alternatives in the NI PEIS the use of a new research reactor or a new accelerator for medical isotopes production.

Commentor No. 653: Marjorie Kundiger, Bill Josephson

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

20874-1207

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

① I live in St Helens which is on the river. People here fish, swim and boat in the river. Radioactive wastes are leaking into the river. Do not add to the poorly managed situation with no good production.

Name MARJORIE KUNDIGER - Bill Josephson
Address 62418 Arxel Rd
City, state St Helens OR Zip 97051

653-1

653-2

Response to Commentor No. 653

- 653-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 653-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

It is DOE's policy that all wastes be managed (i.e., treated, stored, and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. No food or water restrictions are currently in place outside the Hanford Reservation as a result of Hanford activities.

Commentor No. 991: Marc Garland

My name is Marc Garland and I live in Washington, DC.

I've recently been doing research in reactor production of medical isotopes at the University of Maryland, particularly studying the production capabilities of the High Flux Isotope Reactor at Oak Ridge and the Fast Flux Test Facility at Hanford. My analysis of the capabilities of these reactors leads to the conclusion that both should be important components of the Department of Energy's isotope production strategy. Other reactor alternatives being considered by DOE are not truly alternatives at all; they are inferior options.

There are several reasons why FFTF and HFIR provide superior capabilities relative to conventional water-cooled nuclear reactors. The primary advantage these reactors possess is their neutron flux. As seen in this graph of neutron energy versus neutron flux, the FFTF and HFIR flux spectra have significant epithermal, fast, and high energy components. This is not the case for conventional thermal reactors which have essentially zero flux in these regions. This is significant because many medically important isotopes have large production cross sections in the epithermal region. For these isotopes it should be noted that FFTF's flux can be tailored to match the absorption resonances of the target isotopes in the epithermal region to dramatically increase production. Further, the fast and high energy neutrons allow the production of certain isotopes via reactions that can not occur in conventional water-cooled reactors. For example, Cu-67 can be produced with a very high specific activity by taking advantage of energetic neutrons. Cu-67 is typically produced by the absorption of a neutron by Cu-66. However, that reaction produces ~~if~~ Cu-67 that is contaminated by many other isotopes of copper which results in a low specific activity since Cu-67 can't be chemically separated from its other isotopes. In FFTF and HFIR, a Zn-67 target can absorb a neutron and eject a proton to become Cu-67 which can then be chemically separated from the zinc target to produce a very high specific activity product. As seen in this graph of reaction probabilities, the neutron-proton reaction requires an energetic neutron and essentially does not occur at all in conventional water-cooled reactors. Another advantage related to flux is the overall substantial flux level. Both reactors have much higher total fluxes than conventional water-cooled reactors which provides the ability to produce high specific activity isotopes in neutron capture reactions.

A second advantage, at least as far as FFTF is concerned, is the available target volume. FFTF's substantial volume enables the production of substantial quantities of medical isotopes; a capability that will not otherwise be available to meet future projected demand for medical isotopes.

A third advantage has to do with the fact that these reactors exist. It is much easier to assess the production capabilities and associated costs of a reactor with an operating and production history than for a reactor that has only been scratched out on the back of a napkin. The cost of construction of a new, unique reactor such as a 50 or 100 MW TRIGA reactor and estimates of its production capabilities and associated cost are very speculative. Relying on such an alternative (and again, such a reactor is not really an adequate alternative) introduces significant risk in cost, schedule, capabilities, and even the possibility that it would never be completed as has been the case with previously planned production facilities.

I would also like to address the interpretations of the report issued by the Nuclear Energy Research Advisory Committee on isotope production. Some critics have said that the report concludes that FFTF is not needed for isotope production. That is false. The report only addresses production of research isotopes, concluding that FFTF is not needed for that purpose, but should be considered for the production of clinical quantities of isotopes. Without trying to cast aspersions on the authors of that report since I have a tremendous amount of respect for them, I believe that report was flawed in several respects. One respect arises from the fact that none of the people on the subcommittee have a background in reactor production of isotopes. The negative consequences of that were dramatically illustrated by the report's completely incorrect analysis of production of I-131. It concluded that production of I-131 by fissioning U-235 (as is done at the Maple reactors in Canada) results in a higher specific activity than production by neutron absorption by Te-130. My calculations show that Te-130 absorption produces a much higher specific activity than can be achieved through fission production and Nordion's product literature confirms that. I also disagree with the reports conclusion that FFTF is not a viable source of research isotopes. As I have said previously, there are certain isotopes that only FFTF and HFIR could produce. Further, the business model presented by the director of the Pacific Northwest National Laboratory to NERAC last summer

Response to Commentor No. 991

991-1: DOE considered a wide range of reactor alternatives for the NI PEIS, which are presented in Chapter 2 of Volume 1. Section 2.5 presents those reactor alternatives that are analyzed in the PEIS, while Section 2.6 presents those considered and dismissed. All reactor alternatives considered in the document were carefully developed, fully analyzed, and are considered true alternatives. These alternatives are not considered inferior when compared to one another or to other non-reactor alternatives.

991-2: DOE recognizes the high energy neutron flux spectrum of the FFTF and HFIR reactors as compared to the neutron flux energy spectrum of other nuclear reactor designs and the desirability of this higher energy flux in producing certain radioisotopes. In addition, DOE is aware of the available irradiation volumes for each alternative analyzed in the EIS. The high energy accelerator alternative could also theoretically provide a high energy neutron flux for radioisotope production but the current design and size of the accelerator evaluated in the NI PEIS does not support this. The operational status of FFTF and HFIR, along with their relatively higher energy flux spectrum and large irradiation volumes, will be considered in the DOE decision making process.

991-3: DOE notes the commentor's opposition to Alternative 4, Construct New Research Reactor. A separate Cost Report was prepared to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. DOE believes cost uncertainties are addressed sufficiently in this report to support the decision-making process.

991-4: DOE notes the commentor's views. The Nuclear Energy Research Advisory Committee (NERAC) was established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. The members of the NERAC Subcommittee for Isotope Research & Production Planning were selected based upon their expertise and experience in the production, processing, distribution, and application of stable and radioactive isotopes in the biological and physical sciences, and in medicine. The members included basic and clinical scientists, administrators, and users of isotopes from academia, industry, and the federal government, with several possessing a background in reactor production of isotopes.

Commentor No. 991: Marc Garland (Cont'd)

provided for the supply of isotopes to researchers at low cost. There is no evidence that the subcommittee's report considered that business model; indeed, there is no evidence that the subcommittee performed any analysis of costs of the alternatives.

In conclusion, the Department of Energy must take advantage of FFTF and HFIR to be able to supply researchers with the broad range of isotopes that will be required to develop the most effective therapeutic radiopharmaceuticals and to provide the capacity to offer those treatments to the entire patient population following FDA approval. The volume of FFTF is required for those purposes and the availability of HFIR to produce research quantities of short-lived isotopes during FFTF routine shutdowns is necessary to assure uninterrupted supplies for researchers.

Thank you for the opportunity to provide input for this important decision.

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991-5

Response to Commentor No. 991

The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities. As stated in the Final Report, the Subcommittee had reviewed the FFTF business plan and intended to submit their observations and suggestions in a separate document. The discussion of Iodine-131 production referred to by the commentor is not presented in the Final Report.

991-5: DOE notes the commentor's support for Alternative 1, Restart FFTF, with the use of HFIR to supplement FFTF during routine shutdown.

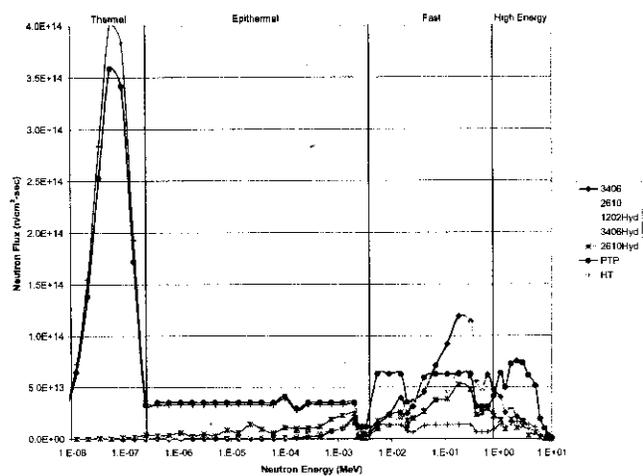


Figure 4 PTP and HFIR Flux Spectra Comparison

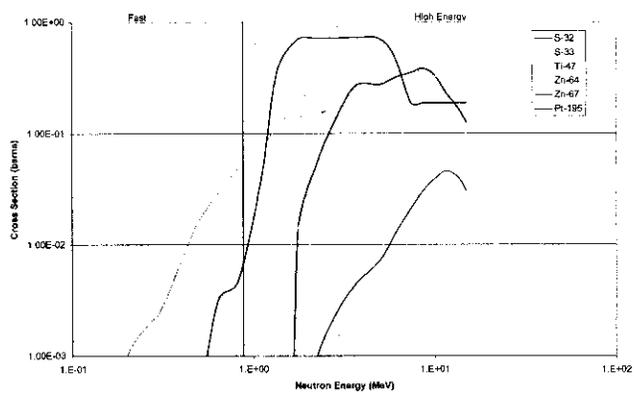


Figure 11 P-32, P-33, Sc-47, Cu-64, Co-67, Pt-195m Production Cross Sections

Commentor No. 992: Ernest S. Chaput Economic Development Partnership



Fred E. Humes
Director

**Statement for the Record
DRAFT Programmatic Environmental Impact Statement
Expanded Civilian Nuclear Energy Research and Development
September 6, 2000**

My name is Ernest S. Chaput and I represent the Economic Development Partnership of Aiken and Edgefield counties, South Carolina. We appreciate the opportunity to provide comments on this significant strategic document that will govern the future course of important Department of Energy (DOE) nuclear infrastructure programs.

For the past three years the Partnership has aggressively pursued the promise of current research in new nuclear medicine procedures. We have been equally concerned about the disruptions and missed opportunities caused by a medical isotope supply situation characterized as inadequate, unreliable and too costly. Our involvement first began by proposing that a private-sector isotope production capability be established as part of DOE's earlier proposed Accelerator Production of Tritium facility. DOE did not select the APT concept as the nation's next tritium source; however we have continued to monitor the status of nuclear medicine research, promote the promise of new nuclear medicine procedures and support the need for new isotope production capability.

An accurate and reliable forecast of market demand for individual isotopes is essential to assessing the adequacy of current and proposed medical isotope production capabilities. We recently contracted with a nationally renowned firm with specific expertise in the pharmaceutical industry to conduct a medical isotope market forecast for the period 2007/2008. The demand forecast assessment is currently in progress, and we will use its results, together with other data, to determine the extent that new isotope production capacity might be commercially feasible.

Our independent evaluations to date and assessments of other available data are consistent with, and further documents, the widely held beliefs that new nuclear medicine procedures:

- offer the potential for diagnostic and treatment procedures where none exist today .
- and
- increase treatment efficacy, reduce undesirable side effects, reduce costs, and increase patient quality of life.

Unfortunately, in many instances, this promise is being thwarted because (1) the right isotope needed for medical efficacy is not available, or (2) if the right isotope is available its supply is sufficiently unreliable or too expensive to discourage a 7 to 10 year commitment to conduct research and clinical trials. We have identified instances of new

Response to Commentor No. 992

Commentor No. 992: Ernest S. Chaput (Cont'd)
Economic Development Partnership

radiopharmaceuticals being abandoned in the latter stages of clinical trials because cost-effective isotopes are not available to support a clinical market. These are not new findings - similar statements have been made by many individuals in the profession and by respected peer review groups.

Therefore, I come today to provide comment and suggestions on those portions of the subject Draft Programmatic Impact Statement (DPFIS) that will affect the supply of medical isotopes for both research and clinical uses. In summary, our comments are four-fold:

- There are additional needs for both reactor-produced and accelerator-produced isotopes. In all instances, reliability of supply must be increased and less costly production cycles must be established. || 992-1
- DOE has the opportunity to utilize many existing DOE and other facilities to optimally allocate its limited budgetary resources in support of its total nuclear infrastructure mission, including isotope production, production of Plutonium 238 for space missions and nuclear energy R&D for civilian applications. The Fast Flux Test Facility (FFTF) should not be restarted because it: (1) is not part of a cost-effective program strategy. (2) can only support a portion of the mission need and (3) its budget requirements will adversely impact all other parts of DOE's nuclear energy mission, including production of medical isotopes. || 992-2
- DOE should take advantage of the activities and facilities associated with the proposed Advanced Accelerator Applications program by designing and integrating their state-of-the-art capabilities into the medical isotope production and other nuclear energy programs. || 992-4
- The Draft PEIS document contains several significant inaccuracies and structural deficiencies that must be corrected prior to issuance of the Final PEIS. Analysis and conclusions contained therein must be examined and modified accordingly. || 992-5

Specific comments, conclusions and recommendations follow.

Production of Medical Isotopes

To date we have identified 60 nuclear medicine procedures active in FDA clinical trials using nineteen different isotopes. Two-thirds of the proposed procedures are therapeutic and one-third are diagnostic. This data supports the general belief that future growth in nuclear medicine will be in therapeutic applications, resulting in the need for a somewhat different suite of isotopes which are available in large quantities. Some of the proposed procedures (especially diagnostic procedures) use isotopes that are readily available and generally affordable, such as Mo-99/Tc-99, F-18 and I-131. However, many procedures, most notably therapeutic, use isotopes that are not currently available in large quantities || 992-1

Response to Commentor No. 992

- 992-1: DOE notes the commentor's views. For the purposes of analyses in the NI PEIS, a representative set of isotopes was selected on the basis of the recommendations of the Expert Panel, medical market forecasts, reviews of medical literature, and more than 100 types of ongoing clinical trials that use radioisotopes for the treatment of cancer and other diseases. These isotopes are listed in Table 1-1, along with a brief description of their medical and/or industrial applications. Unlike Table C-1, which lists representative isotopes that could be produced at FFTF, the isotopes listed in Table 1-1 include both reactor- and accelerator- produced isotopes. Isotopes in Table C-1 were used to evaluate the health impacts that would result from implementation of the alternatives described in Section 2.5 of Volume 1. The absence of any specific isotope from the Table 1-1 should not be interpreted to mean that it would not be considered for production under the proposed action. Rather, these isotopes are a representative sample of possible isotopes which could be produced, and DOE expects that the actual isotopes and specific amounts produced as a result of the proposed action would vary from year to year in response to the focus of clinical research and the specific market needs occurring at that time.
- 992-2: DOE has set forth a number of alternatives, including the use of existing DOE facilities, in the NI PEIS that evaluate the use of a wide range of DOE and private (CLWR) facilities in order to accomplish its stated mission requirements. The relative costs of these alternatives were considered in a separate Cost Report.
- 992-3: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 992-4: As discussed in Section 2.8 of Volume 1, DOE plans to work over the next two years to establish a conceptual design for an Advanced Accelerator Applications facility.
- 992-5: This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR 1500 through 1508 and 10 CFR 1021, respectively). DOE has made every effort to obtain and evaluate all of the information it needs to make a decision on expanding civilian nuclear energy research and development and isotope production missions in the United States.

Commentor No. 992: Ernest S. Chaput (Cont'd) Economic Development Partnership

and usually have high cost. Lack of availability and high cost is impacting progress in pre-clinical trial research and formal clinical trial programs. In some instances, availability and cost issues have resulted in abandonment of development efforts, with additional efforts likely to be abandoned in the future.

In addition to procedures in clinical trial, researchers have identified many other isotopes as necessary to their pre-clinical trial discovery and basic development efforts. Based upon literature reviews and personal contacts, we estimate that approximately twenty additional isotopes are important for or actively used in pre-clinical trial activities.

When both clinical trial and pre-clinical trial activities are considered, our data indicates that substantial quantities at low cost are needed for about forty different isotopes. Some of the isotopes are available from commercial sources and some are being produced "in-house," but the majority will, at least initially, look to DOE as an isotope supplier. In general terms, one-third of the forty isotopes are uniquely produced in accelerators (to include cyclotrons), one-fourth are unique to reactors, twenty percent can be produced in both reactors and accelerators and about ten percent are recovered from fission products.

In this regard, your DPEIS is significantly deficient and misleading. Appendix C, page C-3 includes Table C-1 Representative Candidate Medical Isotopes. Table C-1 is described as "medical isotopes that are evaluated in this programmatic environmental impact statement," and "representative considering current and future . . . demand . . ." DOE's Nuclear Energy Research Advisory Committee (NURAC), Subcommittee for Isotope Research and Production Planning (April, 2000) and the DOE funded Expert Panel: Forecast Future Demand for Medical Isotopes (September, 1998) have identified a total of 26 medical isotopes as being important for the development, testing and production of new nuclear medicine procedures. (The NURAC Subcommittee has endorsed the recommendations of the Expert Panel report). This is an important baseline because both of these reviews included personages with world renown reputations in nuclear medicine research and the commercial radiopharmaceutical industry. Therefore it is disappointing that DOE did not include almost one-half (12 of 26) of the specific isotopes identified by these recognized experts in Table C-1. Furthermore, it is especially troublesome that all of the missing isotopes are not suited for reactor-based production, but rather require use of cyclotrons, accelerators or separation from existing stocks of fission products or fissile materials. We believe that these omissions result in a significant distortion in the demand for medical isotopes and calls into question the credibility of the entire body of medical isotope-related analysis in this DPEIS. Table C-1 and related analysis must be revised to include the isotopes recommended by DOE's own expert advisors as well as other isotopes that are being actively used in medical research, including clinical trials.

The final PEIS should also be restructured to include a new and separate alternative to construct and operate a small accelerator to meet only medical isotope and nuclear energy R&D needs, excluding the Plutonium 238 mission. The DPEIS currently includes only one alternative for new accelerators, totaling \$1.1 Billion for construction of the irradiation source. In this alternative, accelerator size and cost are dictated solely by

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Response to Commentor No. 992

992-6: Section 2.5.4 of Volume 1 of the Draft NI PEIS discussed that the Record of Decision can select any alternative or combination of alternatives or elements of alternatives. The low-energy accelerator for the production of medical and industrial isotopes in combination with Alternative 2 for the production of plutonium-238 was used as an example in the discussion. It is not unrealistic to assume that the Record of Decision would consider the low-energy accelerator for the production of medical and industrial isotopes if the No Action Alternative with the procurement of Russian plutonium-238, or Alternative 5 in combination with the procurement of Russian plutonium-238 element from the No Action Alternative, or Alternative 2 was selected.

Some DOE facilities were considered and dismissed as reasonable alternatives because surplus capacity at these was not available on a continuous basis. For example medical isotopes will be produced at the Los Alamos Neutron Science Center Linear Accelerator Isotope Production Facility. The Isotope Production Facility will be run as a parasitic load when the accelerator is in operation for other missions. It would not be cost effective to run the accelerator for only the medical isotope mission. The Sandia Annular Core Research Reactor is operated on a campaign basis by the primary user of the facility. While there may be periods during the year when this reactor could be available for the production of isotopes, these periods are not available consistently throughout the year and therefore this reactor could not support the production of a constant and reliable supply of medical and industrial isotopes.

Commentor No. 992: Ernest S. Chaput (Cont'd)
Economic Development Partnership

production requirement for the Plutonium 238 mission. Data internal to the DPEIS states that an accelerator sized to meet only medical isotope needs will cost \$35 Million. DOE has several options for meeting the Pu 238 mission, but has only one option for providing additional accelerator-based isotope production – that being construction of a small new accelerator. It is unrealistic to expect that the currently identified option would be used for production of medical isotopes if Pu 238 production were to be met by a reactor or procurement option. The final PEIS should include a separate option for DOE to construct and operate a small accelerator for isotope production independent of programmatic decisions for production of Pu 238 for the space mission.

We further recommend that DOE fully fund its existing accelerator and reactor-based medical isotope production facilities. Existing accelerators should be provided additional operating funds so that they are available throughout the year. DOE should also either complete funding for the Sandia Annular Core Research Reactor (ACRR) privatization effort or reassume its operation as a DOE operated facility. These are all low-cost steps which can increase, in the short run, the availability of medical isotopes.

We also strongly recommend that DOE take advantage of the potential for production of medical isotopes in the new accelerator facilities proposed by Congress as part of the Advanced Accelerator Applications (AAA) program. The AAA concept offers the potential for cost-sharing a large capable accelerator complex which should result in the lowest cost and fastest means of achieving new medical isotope production capacity.

Optimally Allocate Available Resources

DOE is currently facing severe budget shortfalls and this situation will not improve in the near future. Therefore, it is important for DOE to allocate its nuclear energy R&D and isotope production funding in the most cost-effective manner. Allocating \$314 Million for the restart of the FFTF facility is not a cost-effective use of scarce DOE and taxpayer funds.

Analysis of the data included in the DPEIS indicates that DOE has many options for meeting the defined nuclear energy mission and that options are available for meeting all missions for considerable less than the \$385 Million associated with FFTF restart. For example, the following scenario will meet all missions, with total construction costs being less than \$100 Million and annual operating costs of less than \$50 Million.

- Use commercial light water reactors for production of Pu 238
- Construct a small accelerator to produce medical isotopes
- Fully fund and use available DOE and other reactors to produce medical isotopes (including ATR, HFIR, ACRR and non-DOE facilities such as MURR).
- Use the unique capabilities of ATR to conduct nuclear fuels and advanced reactor development activities

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Response to Commentor No. 992

992-7: DOE notes the commentor's concern and his proposed preferred alternative consisting of elements from Alternative 2 (Use Only Existing Operational Facilities) and Alternative 3 (Construct New Accelerator(s)). As indicated in the NI PEIS, the Record of Decision can select implementation of elements from one or more alternative evaluated in the NI PEIS.

Commentor No. 992: Ernest S. Chaput (Cont'd) Economic Development Partnership

In addition to lowest cost, this scenario will result in less environmental impact than FFTF restart. Facilities and capabilities associated with the proposed Advanced Accelerator Applications program will serve to further enhance mission performance in a cost-effective manner.

Other factors that argue against the restart of FFTF include:

- Restart of FFTF, by itself, will not meet all DOE mission requirements. Specifically, FFTF cannot meet the increased need for medical isotopes unique to accelerator production.
- ATR is more suited to development and testing of thermal reactor fuel than FFTF
- The cost estimate for FFTF restart must be viewed with considerable skepticism. As compared to the cost estimates for other alternatives, there is essentially no project description or estimate detail and justification in the DPEIS. Is the estimate based on detailed design and has it been subjected to external independent review? We also note that modifications to nuclear facilities have demonstrated the highest potential for cost overruns and schedule slippage
- Restarting the FFTF reactor will present an unaffordable financial commitment to DOE's nuclear energy programs, resulting in further degradation and losses in the non-FFTF infrastructure – especially programs and facilities essential to the production and separation of medical isotopes

It is also noted that the April, 2000 NURAC Subcommittee report recommended that FFTF not be considered as a viable long-term source of research isotopes.

Integrate the Advanced Accelerator Applications Program into the Nuclear Energy Program

Integration of the facilities and capabilities associated with the proposed Advanced Accelerator Applications program into DOE's nuclear energy activities can significantly enhance mission performance in a cost-effective manner. In addition to legislative mandates for APT backup technology, transmutation of spent nuclear fuel and waste, material science and other advanced accelerator applications, AAA facilities can also support production of medical isotopes, many nuclear energy R&D requirements and, depending on accelerator size, production of Pu 238.

A major potential facility mission is its use as an irradiation source for the large-scale commercial production of medical isotopes, such as proposed for the APT project. Such a private-public partnership would further DOE's privatization objectives, minimize facility construction and operating costs and provide revenues back to DOE. By cost sharing with other internal DOE programs and with external public and private organizations, DOE has the unique opportunity to obtain and operate a multi-faceted and highly capable state-of-the-art research and production facility in the most cost-effective manner.

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Response to Commentor No. 992

- 992-8:** The ability of each alternative to meet mission objectives is one of the factors that will be evaluated by DOE in its decision making process. Each radioisotope production technology, including FFTF and accelerators has unique advantages and disadvantages relative to their specific designs. The development and testing of thermal reactor fuel, which would be more suitable for the ATR, is only one factor in the assessment of each alternative.
- 992-9:** DOE notes the commentor's view. DOE has confidence in the FFTF restart cost estimate. Restart of FFTF will result in a significant increase in the domestic infrastructure available to support the production of medical isotopes.

Commentor No. 992: Ernest S. Chaput (Cont'd)
Economic Development Partnership

Correction of DPEIS Structural Deficiencies and Inaccuracies

This section summarizes the structural deficiencies and data inaccuracies included in the DPEIS that must be corrected before issuance of the final PEIS.

1. The programmatic justification for production of medical isotopes (Table C-1) must be corrected to include all isotopes (1) recommended by DOE's NURAC advisory committee and (2) those involved in active medical research, including clinical trials. If DOE chooses to not include these isotopes in the final PEIS, the rationale for that decision should be included therein.
2. A separate alternative be established for construction and operation of a small accelerator for production of medical isotopes. Absent a new alternative, cost and impacts of meeting individual missions are not easily ascertained and the management decision process is not consistent with DPEIS alternatives.
3. The cost of FFTF deactivation must be included in all programmatic alternatives considered in the final PEIS, or in no alternative. FFTF deactivation will occur at some point in time, whether the facility is restarted or not. To only include it in the non-FFTF restart alternatives is to provide an unwarranted and erroneous reduction in the total cost of the FFTF restart option.
4. The cost estimate for a large accelerator associated with production of Pu 238 should be reexamined in light of engineering development advances and design activities which have occurred since the referenced 1997 APT Conceptual Design Report. APT preliminary design is now over fifty percent complete. Project cost estimates have been examined by three Congressional review teams and DOE's Independent Cost Evaluation (ICE) team. The most recent review was completed this summer. All reviews support the project estimate and contingency allowance. Accordingly, inclusion of \$457 Million in excess contingency in the Alternative 3 cost estimate is not supported and should be removed from the cost estimate. Table S-4 in the "Cost Report for Alternatives" document should be revised accordingly. In a similar vein, we recommend that the estimating basis for FFTF restart be reexamined to assure that the proper level of contingency is included.
5. Programs and Facilities associated with the proposed Advanced Accelerator Applications program should be included in the final PEIS. This initiative has a significant potential for providing solutions to nuclear energy mission needs, and its inclusion will enhance the likelihood that the final PEIS will be consistent with DOE management options.

Thank you for the opportunity to provide comments on your Draft Programmatic Environmental Impact Statement.

Response to Commentor No. 992

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992-10: The cost of deactivating FFTF is presented separately in the cost tables of the Cost Report and can be considered separately and subtracted from the combined estimated costs. Deactivation of existing facilities (FFTF, ATR, and HFIR) is not part of the proposed action addressed by the NI PEIS and was therefore not included in the Cost Report. As described in Section 2.5 of the NI PEIS, FFTF would be deactivated if other facilities were utilized for the production of isotopes. Deactivation of FFTF costs were therefore estimated for the Cost Report and included in the combined estimated costs of Alternatives 2, 3, 4, and 5. DOE has provided the summary of the Cost Report in Appendix P in the Final NI PEIS.

992-11: DOE acknowledges that development of the Accelerator Production of Tritium (APT) described in Conceptual Design Report LA-UR-97-1329 April 15, 1997), has progressed. However, with two exceptions, the estimated cost and contingency allowances assigned to system components of the APT were accepted for the high-energy accelerator system considered in Alternative 3 of the NI-PEIS Cost Report. The exceptions, as noted on page A-2 of the Cost Report, were the contingencies used for the target/blanket system and the accelerator system itself. The inclusion of additional contingency factors in the Cost Report reflects the difference between the two accelerator's spallation targets, uranium for the production of plutonium-238 (NI PEIS) and tungsten for the production of tritium (APT). In any event, the target blanket systems for these accelerators have not been tested under full scale production conditions. Although not identified in the Cost Report, the estimated FFTF restart costs (Alternative 1) from Hanford included contingency factors.

**Commentor No. 993: Thomas A. Coleman
Framatome Cogema Fuels**

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September 5, 2000
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Ms. Colette Brown, Document Manager
Office of Space and Defense Power Systems (NE-50)
Office of Nuclear Energy, Science and Technology
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

Attention: NIPEIS

Re: Draft Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility

Dear Ms. Brown:

We appreciate the opportunity to comment on the subject document. As we have previously stated in writing, we fully support making the U.S. self-sufficient in supplying a critical element of the nation's deep-space program by establishing a domestic capability to produce Plutonium-238 (Pu-238). We also endorse planning for the increased demand for medical and industrial isotopes to support scientific research and activities associated with the development of nuclear power for civilian use.

In our review of the subject document, however, we feel that inadequate consideration has been given to the use of commercial light water reactors (CLWRs), possibly because of a lack of familiarity with their design and operation. This concern is particularly borne out in the discussion of Alternative 2 - Use Only Existing Operational Facilities. We cite page S-18 as an example.

"Modification of CLWRs to enable online insertion and retrieval of targets for the medical and industrial isotope production missions was evaluated and dismissed as a reasonable alternative. This decision was made because the required facility modifications would be significant and would include penetrations into the reactor vessel and, potentially, the containment vessel. Additional facility modifications would be required to enable loading of the targets into a shielded cask for transport to a processing facility. Performing these modifications would require a



Framatome Cogema Fuels
3315 Old Forest Road, P.O. Box 10935, Lynchburg, VA 24506-0935
Telephone: 604-832-3000 Fax: 804-832-3653

Response to Commentor No. 993

- 993-1:** DOE notes the commentor's support for the nuclear infrastructure missions described in Section 1.2 of Volume 1.
- 993-2:** While the commentor is correct in stating that existing Westinghouse pressurized water reactors have a moveable incore flux mapping system that could be used to produce medical radioisotopes, other operational considerations would limit the usefulness of this method. During the fuel cycle, technical specifications require a minimum frequency for incore flux mapping to ensure that axial and radial power peaking factor limits are not exceeded. These periodic (i.e., usually on a monthly frequency) incore flux mapping operations would require that any medical isotope targets in the thimble tubes be removed and replaced by the flux detectors. For radioisotopes requiring a longer incore irradiation time, each removal and replacement process would require repetitive handling of radioisotopes with commensurate shielding and worker doses. In addition, the incore flux detector is a small cylinder that moves axially within the thimble tube. To produce the desired quantities of medical and industrial radioisotopes, much longer target rods would need to be inserted into the thimble tubes. The presence of these long neutron absorbing radioisotope producing targets in the fuel assembly center thimble tubes would affect the power and neutron flux distribution within reactor core fuel assemblies since a strong neutron absorber would be placed into a normally empty thimble tube. The utility would need to calculate revised peaking factors to demonstrate that technical specification peaking limits are not exceeded. Such peaking factors would be affected by the specific target material for radioisotope production, location in the core, and the time dependent production of radioisotopes with its commensurate change in neutron absorption during a core cycle. Short half-life radioisotopes require on site processing to separate the desired radioisotope from the target material and other radioisotopes that may have been produced during incore irradiation. Commercial light water reactors do not possess this separation capability. The handling of radioactive targets after removal from the bottom of the reactor vessel would involve a system that shields the targets, loads them into an appropriate shielded container and transports the container outside containment. This would require design modifications to the compartment below the reactor vessel and frequent access by utility staff to this relatively high radiation area during operation. The commentor is correct in identifying an error on EIS page B-14 regarding standard fuel cycle length. This error has been corrected in the final PEIS. A typical CLWR fuel cycle length of 18 months is correctly identified in PEIS Volume 1, Section 2.3.1.4.

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Commentor No. 993: Thomas A. Coleman (Cont'd)
Framatome Cogema Fuels

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Letter to Ms. Colette Brown
 September 5, 2000
 Page 2 of 2

extended refueling outage (with a resulting loss of power generation revenue to the CLWR owner) and could potentially extend subsequent maintenance or refueling outages to inspect, test and maintain the insertion and retrieval system, reactor vessel penetrations, and potential containment vessel penetrations. In the event that CLWRs are used for medical isotope production, the selection of isotopes to be produced would be limited to those with relatively long half-lives because there are no CLWR sites with facilities for processing irradiated targets."

Many of the existing pressurized water reactors in the United States include systems that could be used to support short-term irradiation of medical isotopes. Specifically, the moveable flux mapping system in Westinghouse units could deliver a medical-isotope target to the reactor core and retrieve the target after an appropriate length of irradiation. Penetrations into the reactor vessel and the fundamental system to perform these operations already exist at many nuclear reactors. Further, an extended refueling outage would not be required and the shipment of the irradiated targets from a commercial LWR would be no more of an issue than similar shipments from other facilities.

Another example of an incorrect statement can be found on page B-14 that states that "fuel assemblies . . . are rotated at about 180 day intervals . . ." Standard fuel cycles for most operating CLWRs extend from 18 to 24 months at which intervals fuel-shuffle patterns are executed. Such erroneous statements indicate a need for further study of the CLWR option.

Framatome has discussed the production of medical and industrial isotopes and Pu-238 with several utilities. Florida Power Corporation remains interested in the Pu-238 effort, while Entergy has expressed an interest in studying the production of medical and industrial isotopes. Using these existing facilities should be the least expensive means of producing these isotopes because the cost of operations of these units is currently absorbed through sales of electrical output. We strongly urge that DOE perform an appropriate cost-benefit analysis for using CLWRs, if not as the main source of isotope production, at least as a backup.

Very truly yours,

TA Coleman
 Thomas A. Coleman

Vice President
 Government Relations

TAC:jfd

993-2
 (Cont'd)

993-3

993-4

this is stated correctly elsewhere in the report.

we have not completed our review of the Cost Report for Alternative 2 presented in the Draft PEIS (Just received several days ago)

Response to Commentor No. 993

993-3: DOE notes that there are nuclear power utilities that are interested in studying the production of medical and industrial isotopes and plutonium 238 in their operating reactors. Options 4, 5, and 6 of Alternative 2, Use Only Existing Operational Facilities, will be given equal consideration among the other alternatives and options during DOE's decision process. A summary of Mission effectiveness for Alternatives 1 through 4 is provided in Section 2.7.3 of Volume 1.

993-4: DOE notes the commentor's view on using CLWRs as an irradiation source for the production of medical and industrial isotopes and plutonium-238.

The CLWR is considered a reasonable alternative for the plutonium-238 production mission. As indicated in Volume 1, Section 2.6.1, CLWRs were considered and dismissed as a reasonable alternative for the production on medical isotopes. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Estimated costs for the range of reasonable alternatives evaluated in the NI PEIS are presented in the Cost Report, and are summarized in Volume 2, Appendix P, of the Final NI PEIS.

Commentor No. 994: Raphael S. Daniels

Draft PEIS Comment Form

I would like to see the question of longer term storage of Np-237 at SRS to address resource it requires several options.

994-1

Response to Commentor No. 994

994-1: The management of neptunium-237 at SRS (including stabilization and storage) was fully analyzed in the final environmental impact statement, "Interim Management of Nuclear Materials" (DOE/EIS-0220, October 20, 1995), and further discussed in subsequent Records of Decision, the last of which was published in the Federal Register of Friday, November 14, 1997 (page 61099). If DOE decides not to retain this neptunium-237 inventory for possible future plutonium-238 production, then the material management strategies discussed in these documents would be implemented.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Raphael S Daniels

Organization: DNFSB

Home/Organization Address (circle one): DNFSB
625 Indiana Ave, NW, Suite 700

City: Washington State: DC Zip Code: 20004

Telephone (optional): 202-694-7116

E-mail (optional): RAYD@DNFSB.GOV

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19001 Germantown Road • Germantown, MD 20874
Toll free telephone: 1-877-562-4593 • Toll-free fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



Commentor No. 995: Darlene Coyne

Response to Commentor No. 995

SEP-06-2000 WED 10:01 AM MARKEL BHG

FAX NO. 509 735 1440

P. 01

Draft PEIS Comment Form

NUCLEAR INFRASTRUCTURE PEIS

We support the restart of the FFTF Reactor Facility at Hanford to meet the national needs for medical isotopes and other peaceful nuclear materials. The FFTF is the most economical, safe, and environmental friendly method available to meet these needs.

Very truly yours,

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Darlene Coyne

Organization: Coyne Construction

Home/Organization Address (circle one): 1120 S. Balboa

City: Kennewick State: WA Zip Code: 99338

Telephone (optional):

E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Collette E. Brown, NE-50 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874 Toll-free telephone: 1-877-562-4593 • Toll-free fax: 1-877-562-4592 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

995-1

995-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 996: Anonymous

NI PEIS Toll_Free Telephone

9/5/00

Anonymous

Hi. I am calling in regards to Colette Brown's message and information given out to me onrequest. This is regarding the current issues of your nuclear waste carelessness. I would just liketo say that you shouldn't start that reactor until it's safe for operations. Thank you.

996-1

996-2

Response to Commentor No. 996

-
- 996-1:** DOE notes the commentor's concern regarding radioactive waste management. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.
- 996-2:** FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Commentor No. 997: Lois Powers

Response to Commentor No. 997

Draft PEIS Comment Form

NUCLEAR INFRASTRUCTURE EIS

We support the restart of the FFTF Reactor Facility at Hanford to meet the national needs for medical isotopes and other peaceful nuclear materials. The FFTF is the most economical, safe, and environmental friendly method available to meet these needs.

Very truly yours,

Lois Powers

997-1

997-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): Lois Powers

Organization: _____

Home/Organization Address (circle one): 5200 S. Olympia

City: Kennewick State: WA Zip Code: 99337

Telephone (optional): 509-586-7311

E-mail (optional): lpowers1@juno.com

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Collette E. Brown, NE-SO
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

P. 01/02

FAX NO. 909 735 1440

SEP-06-2000 MED 10:02 AM MARKEL:RHG

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 998: Jack Henneberry

SEP-06-2000 WED 10:09 AM MARKEL BHG

FAX NO. 559 735 1443

P. 01

Draft PEIS Comment Form

NUCLEAR INFRASTRUCTURE EIS

We support the restart of the FFTF Reactor Facility at Hanford to meet the national needs for medical isotopes and other peaceful nuclear materials. The FFTF is the most economical, safe, and environmental friendly method available to meet these needs.

Very truly yours,

Jack Henneberry

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): JACK HENNEBERRY

Organization: _____

Home/Organization Address (circle one): 7909 W. GRAND RONDE AVE.

City: KENNEWICK State: WA Zip Code: 99336

Telephone (optional): _____

E-mail (optional): j.henneberry@pacbell.com

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Collette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

Response to Commentor No. 998

998-1

998-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 999: Angel Kelly

NI PEIS Toll-Free Telephone

9/6/00

Angel Kelly
503_231_4114

I am calling because I am looking at the summary of the PEIS. It seems like there are so many unanswered questions, and in particular, with regard to accidents and cleanup and stuff. It just doesn't seem very clear to me. I am not in favor of this project moving forward. I believe I am in favor of Alternative 5.

999-1

999-2

I am not in favor of new development of nuclear research and nuclear energy in the northwest or any part of the country.

999-3

I think that DOE should prioritize cleanup and containment of leaking waste as their number one priority. I think they have an obligation to do that before they start anything else. Thank you.

999-4

Response to Commentor No. 999

- 999-1:** The commentor's concern about the clarity of the accident and waste cleanup presentations in the NI PEIS is noted. The impacts from postulated accidents in facilities associated with nuclear infrastructure operations are presented in Volume 1, Chapter 4, "Environmental Consequences." Detailed discussions and calculational methodologies are given in Volume 2, Appendix I, "Evaluation of Human Health Effects from Facility Accidents." The management of wastes generated as the result of nuclear infrastructure operations is also discussed in Chapter 4, along with potential impacts to the environment.
- 999-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 999-3:** DOE notes the commentor's views. Information on the need for nuclear energy research and development is provided in Section 1.2.3 of Volume 1.
- 999-4:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Commentor No. 1000: Anonymous

NI PEIS Toll_Free Telephone

9/6/00

Anonymous

This message is in care of Colette Brown. Just calling as a concerned citizen of the state of Washington. The nuclear reactor here should not be restarted for obvious reasons, such as public safety.

1000-1

There was plutonium released into the air after the recent fire. There has already been people downwind of Hanford getting cancer, and the Columbia River already has nuclear waste in it.

1000-2

We don't feel that it is a very good idea to restart this nuclear reactor. In fact, it is crazy because we know medical isotopes, that is what they are called, will not cure cancer. They may help cure cancer in some way, but Hanford is not a good place to make them. There are other capacities besides a nuclear facility that are safer to make it, which should be the first priority, and there is not as much of a need as NASA expressed in the letter openly stating they don't need isotopes as they did before. Please do not restart this.

1000-1

1000-3

There will be a lot of people calling as well. I wish you would take their concerns into consideration. Your job first is safety and second to make money. Actually it should be about 20th on your list, but I am sure that it what it is second.

1000-4

1000-5

Do not restart the FFTF nuclear reactor.

1000-1

Response to Commentor No. 1000

1000-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF. Included in the NI PEIS are the results of analyses that show that the risks associated with operating the FFTF are very small.

1000-2: With regard to the Hanford wildfire of 2000, the DOE Richland Operations Office, the State of Washington Department of Health, and U.S. Environmental Protection Agency performed environmental monitoring on and around the Site to assess potential radiological impacts. The wildfire did not cause a release of radioactive materials from any Hanford facilities but did result in resuspension of radioactive materials which were already in the environment. The very low levels of radioactive materials that were resuspended were slightly above natural background levels and required several days of analysis to quantify. Information on this event has been made available to the public and can be accessed at <http://www.Hanford.gov/envmon/indes.html>. This site also provides a link to information on the independent offsite air monitoring that was conducted by the U.S. Environmental Protection Agency.

As discussed in Section 3.4.9.3 of Volume 1, the question of whether residents in the Hanford area are subject to elevated cancer rates is unresolved. Existing studies and data suggest that cancer mortality rates in counties adjacent to the Hanford Site are not elevated. Prevailing winds at the Hanford Site blow toward Grant County, Washington from the south (14.2 percent of the time) and south-southwest (11.5 percent of the time) directions. Hence, Grant County would be expected to bear a major burden of wind borne contamination from the Hanford Site. However, if an excess cancer mortality risk is present in Grant County, it was too small to be identified at the county-level of resolution in the survey and available National Cancer Institute data discussed in Section 3.4.9.3. Epidemiological studies in Benton and Franklin counties provided no conclusive evidence of elevated congenital defects in the two counties.

As discussed in Section 4.3 of Volume 1, implementation of the alternatives described in Section 2.5 would not be expected to have a significant impact on the Columbia River. There are no radiological liquid effluent pathways to the Columbia River from FFTF.

1000-3: DOE notes the commentor's opposition to restarting FFTF for enhancing its existing nuclear facility infrastructure. In ongoing clinical testing,

Commentor No. 1000: Anonymous (Cont'd)

Response to Commentor No. 1000

therapeutic radioisotopes have proven effective in treating cancers and other illnesses while minimizing adverse side effects, making their use an attractive alternative to traditional chemotherapy and radiation treatments. Although a few radioisotopes can be produced by separating them from existing stockpiles of transuranic materials or other long-lived radioisotopes, the two primary means for producing radioisotopes is through the use of nuclear reactors or particle accelerators.

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Although research to identify other potential fuel sources to support these space exploration missions has been conducted, no viable alternative to using plutonium-238 has been established. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost.

A May 22, 2000, correspondence from NASA to DOE identified that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000, letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and

Commentor No. 1000: Anonymous (Cont'd)

Response to Commentor No. 1000

need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

- 1000-4:** In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.
- 1000-5:** The health and safety of workers and the public is a priority of the nuclear infrastructure program, regardless of which approach is chosen. Operation of the facilities would comply with applicable Federal, State, and local laws and regulations governing radiological and hazardous chemical releases.

**Commentor No. 1001: Frank Reckendorf
Reckendorf & Associates**

09/09/2000 18:03 503-399-9421

RECKENDORF&ASSOC.

PAGE 01

RECKENDORF & ASSOCIATES

950 Market St. NE
Salem, OR 97301-1130

email: frackend@operating

(503) 364-6681
Fax: (503) 399-9421

September 9, 2000

U.S. Department of Energy
19901 Germantown Road
Germantown Road, MD
20874
(FAX) 1(877) 562-4598

Dear Sir:

I am concerned with the shutdown of the Fast Flux Test Facility, since it still has twenty years of remaining design life. This leaves us 90% dependent on foreign sources of isotopes that could be produced by FFTF.

We need FFTF. Please restart this reactor.

Sincerely,



Frank Reckendorf

1001-1

Response to Commentor No. 1001

1001-1: DOE notes the commentor's support for Alternative 1, Restart FFTF. It should be noted that FFTF would operate for 35 years under Alternative 1.

Commentor No. 1002: Ken Stowell

From: Ken Stowell[SMTP:KSTOWELL@BENTONREA.COM]
 Sent: Thursday, September 07, 2000 11:36:15 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Fast Flux Test Facility
 Auto forwarded by a Rule

Hello!

I just wanted to share my thoughts on the restart of FFTF. I FULLY support the restart of FFTF. As an employee of Hanford, I know the Hanford Project is currently in cleanup mode. I STRONGLY feel the Hanford area needs a mission once again. We NEED a mission here to keep our many talented people here, working to better our future. Hanford and the surrounding community has already lost many, many talented people since the mission of production days. In the not so distant past, Hanford and its workers have developed countless revolutionary products and ideas that have benefited the private sector as well as the Government. It would be a sin to abandon all that has been accomplished as a result of the Hanford Project.

I don't want to sound like I am praising nuclear weapons and such, but what I am commending is all the team work, projects, ideas, that were results of the Hanford Project. So much was accomplished by many very talented people that were united by the Hanford area. FFTF is "the mission" that will keep it all together. FFTF is very capable of doing almost any task that it will be assigned. It is the mission to keep the great people we have, working together, bettering our future for many years to come.

Thanks for allowing me to provide feedback on this very important issue.

Ken Stowell
 P.O. Box 70
 Mabton, WA. 98935
 kstowell@bentonrea.com
 kb7csp@wa7v.#sewa.wa.usa.noam

1002-1

1002-2

1002-1

Response to Commentor No. 1002

- 1002-1:** DOE notes the commentor's support for Alternative 1, Restart FFTF.
- 1002-2:** DOE notes the commentor's support for using the FFTF for the enhancement of its nuclear facility infrastructure.

Commentor No. 1003: Elizabeth Marie Heaston

From: Liz Heaston[SMTP:LLLHEASTON@HOTMAIL.COM]
Sent: Wednesday, September 06, 2000 5:25:14 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Restart FFTF!!
Auto forwarded by a Rule

Dear Secretary Richardson:

Over 1500 people die of cancer each day. The Fast Flux Test Facility is our nation's newest, most versatile reactor capable of producing large quantities of high quality medical isotopes for treating cancer, arthritis and other diseases.

We already face isotope shortages for research and treatment. Human clinical trials for breast cancer were cancelled due to a unavailability of Cu_67. Last year, the Seattle area faced shortages for the isotope "seed" treatment for prostate cancer.

The FFTF is desperately needed to produce isotopes for the treatment of bone pain associated with cancer. If you have ever witnessed a family member or a friend with terminal cancer with excruciating bone pain, you know what a God_send pain relief from medical isotopes are. This type of isotope cannot be produced in an accelerator__it must be produced in a reactor.

Restarting the FFTF will save lives and enable us to utilize cutting_edge technologies for the 21st century.

I implore you to make the right decision for the citizens of our nation. RESTART the FFTF!!! The life you save may be that of a family member, a friend, or your own.

Elizabeth Marie Heaston
3010 22nd Ave. #13
Forest Grove OR, 97116

1003-1

Response to Commentor No. 1003

1003-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1004: Alan Wang

From: Alan Wang
[SMTP:ALAN W@STAVELEYNDT.COM]
Sent: Wednesday, September 06, 2000 7:05:01 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Please restart FFTF for medical isotopes
Auto forwarded by a Rule

Please restart FFTF for medical isotopes

1004-1***Response to Commentor No. 1004***

1004-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1005: Dave Lemak

From: Lemakpd@aol.com%internet
[SMTP:LEMAKPD@AOL.COM]
Sent: Wednesday, September 06, 2000 8:34:25 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF at Hanford
Auto forwarded by a Rule

Dear HQ DOE

My family and I strongly support Alternative #1, the restart of the FFTF for the production of medical and commercial isotopes, the production of Pu_238 and for nuclear research. I am a cancer patient survivor. If the option of medical isotopes had been available, I could have avoided some extremely painful radiation treatments. Moreover, in 1989 my wife died of large cell lymphoma and left me a widower with two children aged 2 and 5 (she was 36 when she died). The research and isotopes available today could have saved her life. Let's not let even more people die because some radical environmentalists prefer ideology over science. Restarting FFTF means saving lives. Let's get on with it!

Sincerely,

Dave Lemak, cancer survivor

1005-1

Response to Commentor No. 1005

1005-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1006: Ernest Empey

From: Ernest Empey[SMTP:EMPEY1@TELEVAR.COM]
 Sent: Wednesday, September 06, 2000 11:31:41 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: FFTF
 Auto forwarded by a Rule

I believe that FFTF should be restarted. It is the newest and best kept reactor in the DOE complex. It Would be unwise to build accelerators because it is not proven on that large of scale and would not be cost effective.

Ernest Empey
 Ernest@Empey.com

|| **1006-1**

|| **1006-2**

Response to Commentor No. 1006

1006-1: DOE notes the commentor's support for Alternative 1, Restart FFTF, and opposition to Alternative 3, Construct New Accelerator(s).

1006-2: See response to comment 1006-1.

Commentor No. 1007: Steve Chastain

From: Steve Chastain[SMTP:SMCHASTAIN@USA.NET]
Sent: Wednesday, September 06, 2000 11:33:29 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Cc: smchastain@usa.net%internet
Subject: Proposed Restart of the FFTF at Hanford
Auto forwarded by a Rule

Dear Sir,

I am sending this message to register my position regarding restart of the Fast Flux Test Facility Reactor near Richland, Washington on the Hanford Reservation. I believe it should be restarted to provide medical isotopes badly needed for treatment of cancer victims. Perhaps, there are additional missions that the FFTF could be used for as well. For example, production of Uranium 238 for use by NASA.

Having reviewed other options for production of medical isotopes, the FFTF is clearly the best alternative for production of medical isotopes for the next few decades. Thus it should be restarted.

Steve Chastain

1007-1

Response to Commentor No. 1007

1007-1: DOE notes the commentor's support for Alternative 1, Restart FFTF. The commentor should note that plutonium-238, not uranium-238, fuels radioisotope power systems.

Commentor No. 1008: Frank Allen

From: Frank Allen[SMTP:FRANKA@CMC.NET]
 Sent: Thursday, September 07, 2000 12:46:09 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Draft PEIS Comment
 Auto forwarded by a Rule

Nuclear Infrastructure Programmatic Environmental Impact
 Statement Draft PEIS Comment Sept 6, 2000

The Fast Flux Test Facility, FFTF is the most flexible option.
 It can meet all specified elements for isotope production, nuclear_
 based research and development program for the future.

- a. It can be a dependable source of research isotopes for medical and industrial uses.
- b. It can produce plutonium_238 for use in advanced radioisotope power systems for future NASA space exploration missions.
- c. It can provide the Nation's nuclear research and development needs for civilian application.

The FFTF is the perfect solution because it was designed specifically as a testing facility and is well suited as a training facility for workforces in the future.

Without the FFTF the US is dependent on others such as Russia and Germany to meet our planned research and testing programs. In case of hostilities, these sources may not be available. The US should not have to rely on others for these critical needs.

The budget for restart of the FFTF should be totally separate from and must not affect the ongoing Hanford cleanup program. The budget must also include funds for eventual shutdown and clean up of the FFTF.at the end of its useful life.

1008-1**1008-2****Response to Commentor No. 1008**

- 1008-1:** DOE notes the commentor's support for Alternative 1, Restart FFTF.
- 1008-2:** The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Commentor No. 1008: Frank Allen (Cont'd)

Anti_nuclear activists who want to dismantle the FFTF should realize that more nuclear research will allow design of safer and more efficient nuclear power. In the long run safe nuclear power will reduce use of fossil fuels which will in turn reduce greenhouse gases and save lives in the production of fossil fuels. Far more lives have been lost in coal production for power plants than lives lost supporting nuclear power.

Frank Allen, Chemical Engineer
18160 Cottonwood Rd. PMB 229
Sunriver, OR 97707_9317
franka@cmc.net

1008-3

Response to Commentor No. 1008

1008-3: DOE notes the commentor's support for the use of FFTF to conduct nuclear research and development.

Commentor No. 1009: James Fu

From: CFU@wnp2.com%internet[SMTP:CFU@WNP2.COM]
 Sent: Thursday, September 07, 2000 2:25:42 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Support Restart of FFTF
 Auto forwarded by a Rule

Dear Secretary,

As a nuclear professional, I strongly support the restart of FFTF. FFTF can produce and supply a large quantity of isotopes for treatment of cancer, heart disease and arthritis. It also will serve our nation's need for Pu_238 for space batteries, for "hardening" computer chips, and research for new non_proliferative fuels and transmuting our nation's plutonium wastes.

1009-1

Unfortunately, the decision to restart FFTF is mired in politics, with irrational and misguided allegations from the anti_nuclear community. I urge you to make this important decision to restart FFTF.

1009-2**1009-1**

James Fu

Response to Commentor No. 1009

1009-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

1009-2: Selection of facilities and site locations for accomplishing expanded civilian nuclear energy research and development and isotope production missions is not a political decision. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

Commentor No. 1010: Del Senner

From: DRSENNER@wnp2.com%internet
[SMTP:DRSENNER@WNP2.COM]
Sent: Thursday, September 07, 2000 2:24:49 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: RESTART FFTF
Auto forwarded by a Rule

Please restart FFTF. This facility is a valuable asset to our nation and should be used to generate medical isotopes and batteries for space exploration. I have worked at a Government production reactor (N Reactor) and at the FFTF reactor and they are not in the same league. FFTF was built and maintained to modern ASME Section III, Division II standards which is very similar to the requirements that commercial nuclear facilities were fabricated and operated under. I am quite confident that FFTF could easily satisfy NRC requirements and scrutiny that commercial operating reactors are subjected to.

Del Senner
Quality Auditor

1010-1

1010-2

Response to Commentor No. 1010

- 1010-1:** DOE notes the commentor's support for Alternative 1, Restart FFTF.
- 1010-2:** DOE notes the commentor's support for the safety of the FFTF.

Commentor No. 1011: Scott B. Johnston

From: Scott_B_Johnston@rl.gov%internet
 [SMTP:SCOTT_B_JOHNSTON@RL.GOV]
 Sent: Thursday, September 07, 2000 2:25:54 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: In Favor for the Start Up of FFTF
 Auto forwarded by a Rule

Ms. Colette E. Brown, U.S. Department of Energy,

It is my opinion that FFTF is a safe, state of the art facility. It would be such a waste to shut down this reactor. This facility will help keep the United States the leader of medical isotope technology and at the fraction of the cost. This facility will also be producing electrical power as a byproduct, something that is growing short in the Northwest. With all the advances in technology today, no one can say what other discoveries and developments could be achieved through the use of this facility. But WE must have this facility available for all this to happen. It is a shame that so many people are uninformed, or just plain ignorant of the many uses a facility like this could provide to the United States to the World.

Thank You,

Scott B. Johnston
 Kennewick, Washington
 (509)376_5462

1011-1

1011-2

1011-1

Response to Commentor No. 1011

1011-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

1011-2: FFTF would not be used for the generation of electrical power under the proposed action. The purpose of the NI PEIS is to evaluate the environmental impacts of a range of reasonable alternatives to maintaining and enhancing DOE's existing nuclear facility infrastructure to support production of isotopes for medical, research, and industrial uses; production of plutonium-238 for use in future NASA space exploration missions; and U.S. nuclear research and development needs for civilian application.

Commentor No. 1012: Sandra L. Nuxall

From: SLNUXALL@wnp2.com%internet
[SMTP:SLNUXALL@WNP2.COM]
Sent: Thursday, September 07, 2000 3:50:31 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Restart the Fast Flux Test Facility (FFTF)
Auto forwarded by a Rule

ACTION _ Please restart FFTF for medical isotopes.

FFTF can produce and supply a large quantity of isotopes for treatment of cancer, heart disease, and arthritis. It also will serve our nation's need for Pu_238 for space batteries, for "hardening" computer chips, research for new non_proliferative fuels, and transmuted our nation's plutonium wastes.

Sandra L. Nuxall
Voter in Benton County
Resident of Richland, WA

1012-1

Response to Commentor No. 1012

1012-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1013: David L. Beeches

From: DLBEECHER@wnp2.com%internet
[SMTP:DLBEECHER@WNP2.COM]
Sent: Thursday, September 07, 2000 4:02:45 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF Restart
Auto forwarded by a Rule

To Whom It May Concern,

I am fully in favor of restarting the FFTF for the very important mission of producing medical and other radioisotopes used in industry. Humanity is in need of these products and it makes sound fiscal sense.

Regards,

David L. Beeches
Senior Quality Services Auditor
Energy Northwest
(509) 377_4671

1013-1***Response to Commentor No. 1013***

1013-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1014: kmengbarth@wnp2.com

From: KMENGBARTH@wnp2.com%internet
[SMTP:KMENGBARTH@WNP2.COM]
Sent: Thursday, September 07, 2000 4:53:44 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF
Auto forwarded by a Rule

Please start FFTF for use with medical isotopes.

|| 1014-1

Response to Commentor No. 1014

1014-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1015: John Fleming

From: John (038) Marti Fleming
 [SMTP:FLEMING12@DELLNET.COM]
 Sent: Friday, September 08, 2000 1:39:47 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Cc: cmi@gwt.com%internet
 Subject: Fast Flux Test Facility
 Auto forwarded by a Rule

Secretary Bill Richardson/Ms. Colette E. Brown,

I am a concerned citizen of Eastern Washington State. I truly believe the Fast Flux Test Facility (FFTF) located out side of Richland, WA on the Hanford_site, should be restarted for production of medical isotopes. As you are aware it can uniquely provide a wide variety of high grade isotopes, some of which cannot currently be produced in the U.S. At a minimum many our fellow citizens are ill with cancer and doctors need the products to help in curing or developing a cure for them.

So, lets use this operational facility to help the citizens of our country and those of the world. Please do not throw it away as the U.S. DOE has done with so many others projects (i.e., the Supercollider) at the direction of our political establishment just for the sake of political capital or in some cases lack of interest.

By golly, it may even pay for itself ___ if money for the sale if isotopes were applied to FFTF operations, payroll, and maintenance and kept out of the general fund (the politicians hands) imagine a government project actually allowed to operate as a real business.

Regards,

John Fleming
 4201 W. Rainy Ln
 Benton City, WA 99320
 (509) 588_6801

Response to Commentor No. 1015

1015-1

1015-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

1015-2

1015-2: DOE notes the commentor's views regarding revenues from isotope production in FFTF. The estimated costs of the range of reasonable alternatives are presented in the Cost Report, summarized in Appendix P of the Final NI PEIS. However, the Cost Report is not a cost-benefit analysis. While it is reasonable to believe that the benefits of medical isotopes are substantial, the purpose of this NI PEIS is to describe the nuclear infrastructure missions (Section 1.2 of Volume 1), a range of reasonable alternatives for satisfying the mission requirements (Section 2.5 of Volume 1), and the environmental impacts that would result from implementation of the alternatives. According to 40 CFR Section 1502.23, if a cost-benefit analysis exists, it must be reported and summarized in the NI PEIS.

Commentor No. 1016: yeefoo@aol.com

From: Yeefoo@aol.com%internet
[SMTP:YEEFOO@AOL.COM]
Sent: Friday, September 08, 2000 1:56:40 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Please restart FFTF for medical isotopes
Auto forwarded by a Rule

Please restart FFTF for medical isotopes

|| 1016-1

Response to Commentor No. 1016

1016-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1017: *lyang59854@aol.com*

From: LYang59854@aol.com%internet
[SMTP:LYANG59854@AOL.COM]
Sent: Friday, September 08, 2000 1:57:55 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Please restart FFTF for medical isotopes
Auto forwarded by a Rule

Please restart FFTF for medical isotopes

|| 1017-1

Response to Commentor No. 1017

1017-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1018: butterfly200350@aol.com

From: Butterfly200350@aol.com%internet
[SMTP:BUTTERFLY200350@AOL.COM]
Sent: Friday, September 08, 2000 1:59:12 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Please restart FFTF
Auto forwarded by a Rule

Please restart FFTF

|| 1018-1

Response to Commentor No. 1018

1018-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1019: Yosen Liu

From: Liu, Yosen[SMTP:YOSEN.LIU@PNL.GOV]
Sent: Friday, September 08, 2000 1:03:38 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF Restart
Auto forwarded by a Rule

Please restart FFTF for producing medical isotopes.
Thanks!

Yosen Liu

|| 1019-1

Response to Commentor No. 1019

1019-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1020: clrobinson@wnp2.com

From: CLROBINSON@wnp2.com%internet
[SMTP:CLROBINSON@WNP2.COM]
Sent: Friday, September 08, 2000 1:00:33 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: RESTART FFTF
Auto forwarded by a Rule

Please restart FFTF for medical isotopes.
THANKS
CAL
509_377_2379

|| 1020-1

Response to Commentor No. 1020

1020-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1021: Keith Reher

From: WebsterReher[SMTP:WEBSTERREHER@HOME.COM]
 Sent: Friday, September 08, 2000 2:57:12 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Fast Flux Test Facility Restart Proposal
 Auto forwarded by a Rule

Dear Sir:

Please consider this communication as part of the public comment on the proposal to restart the FFTF.

I strongly oppose any attempt to restart the FFTF at Hanford.

1021-1

The contamination problems at the Hanford site are HUGE enough without creating further waste by operating the FFTF.

1021-2

I urge the DOE to direct the maximum effort to control the existing plutonium contamination at Hanford, rather than adding to the problem with further reactor operations.

1021-3

Sincerely

Keith Reher
 Sammamish, WA

Response to Commentor No. 1021

1021-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1021-2: FFTF restart would not impact the schedule or available funding for existing cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram funds designated for Hanford cleanup, regardless of the alternative(s) selected. As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous waste. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is very small compared to waste generated by other Hanford activities. It is DOE's policy that all waste be managed (i.e., treated, stored, and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

1021-3: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are a high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Commentor No. 1022: Regina Hagen

From: Regina Hagen
 [SMTP:REGINA.HAGEN@JUGENDSTIL.DA.SHUTTLE.DE]
 Sent: Friday, September 08, 2000 3:43:10 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Comment to Draft NI PEIS
 Auto forwarded by a Rule

Dear Mrs. Brown,

I want to limit my comment to the Draft Nuclear Infrastructure Programmatic Environmental Impact Statement (Draft PEIS) to the planned production of plutonium-238. The Draft PEIS states, that this isotope is required "for use in advanced radioisotope power systems for future NASA space exploration missions". The Draft PEIS lists three of these missions: Pluto-Kuiper Express (7.4 kg), Europa Orbiter (3 kg) and Solar Probe (3 kg). In addition, approx. 0.3 kg Pu-238 are said to be needed for each of the NASA Mars Surveyor missions in RHUs.

1. I know that DoE is not responsible for the planning of NASA but rather supplies the isotope material requested by NASA for their missions. When investigating into the above listed missions, I found that there is contradictory information on the need for isotope power sources for two of these missions. For Europa Orbiter as well as Solar Probe, NASA departments have stated that those missions could be done by using solar panels instead of plutonium generators. (Pluto-Kuiper Express, however, can only be done if RTG or the new ARPS generators are used.)

2. The German company ASE in Heilbronn developed LILT solar cells for Rosetta, ESA's mission to comet Wirtanen. Their development manager, Dr. Strobl, has repeatedly confirmed that they could improve those cells to be used up to the distance of Saturn (cold environment with little light). One NASA department reported that solar cells are available to deal with the particular environment close to the sun (lots of light and very hot). Therefore, for two of the missions, not radioisotope power sources are required.

1022-1

Response to Commentor No. 1022

1022-1: Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Potential health and safety impacts associated with future launches of spacecraft utilizing plutonium-238 are not within the scope of the NI PEIS analysis, but would be addressed in the specific NEPA documentation prepared by NASA in support of such missions.

Commentor No. 1022: Regina Hagen (Cont'd)

3. Missions that can not be done solar should be left to the next generations. The dangers attached to the production cycle and the launch are not acceptable. The Draft PEIS says, that RTGs and RHUs have been used for more than 30 years. "These radioisotope power systems have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions." You do not, however, mention, that out of 71 US and Russian space missions that used RTGs or nuclear reactors, 10 had serious or even fatal problems. If you need more details, see my report "Nuclear Power Space Missions _ Past and Future" which may be found at <http://www.space4peace.org>. The failure rate is 1:7 _ not exactly safe and reliable. The problem is not the safety and reliability of the RTGs (and RHUs), but the failure rate of space launches and missions in general.

4. The production of plutonium_238 will always include the risk of hazards. Not long ago, eight workers were exposed to above_limit radiation doses in the course of RHU production. Plutonium production means that the production cycle would be taken up again, up to the point where huge amounts of radioactive wastes must be dealt with. Currently, there does not exist a safe method to deal with any kind of nuclear waste. And contamination of workers and the environment can never be fully avoided in the production cycle. History showed that the dangers related with the process have always been underestimated and downplayed.

5. The Draft PEIS states, that considerably less plutonium_238 has been purchased from Russia than would have been possible according to the appropriate contract (9 kg out of a maximum of 40 kg). "Larger individual quantities have not been purchased by DOE due to budget constraints." This is ridiculous. Considering the costs to take up again plutonium_production plus all costs that will result from it (including waste management), it is ridiculous to say that existing plutonium_238 was not purchased "due to budget constraints".

**1022-1
(Cont'd)**

1022-2

1022-3

1022-2

1022-4

Response to Commentor No. 1022

- 1022-2:** Plutonium-238 processing facilities can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Sections 4.2-4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from plutonium-238 processing, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that the radiological and nonradiological risks associated with plutonium-238 processing would be small.
- 1022-3:** DOE would not conduct any reprocessing to produce weapon-grade plutonium under any of the alternatives considered under this PEIS. The alternatives do include processing of target materials used to produce isotopes for medical and industrial uses, plutonium-238 for space missions, and nuclear materials research and development. Sections 4.3.1.1.13; 4.3.2.1.13; 4.3.3.1.13; and 4.4.3.1.13 were revised to clarify the waste management approach for waste resulting from processing of target materials for plutonium-238 production.
- 1022-4:** DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Commentor No. 1022: Regina Hagen (Cont'd)

The nuclear legacy we leave to the next generations, for many thousands of years, is huge already. It is fully irresponsible to add to this burden for the sake of research space missions to the very deep space. I fully support space exploration _ as long as it is done sustainably. Nuclear energy is dangerous and must therefore not be used for space missions. Not for research missions, not for commercial missions, and not for military ones.

Sincerely
Regina Hagen

Regina Hagen
Teichhausstrasse 46
64287 Darmstadt
Germany

1022-5

Response to Commentor No. 1022

1022-5: DOE notes the commentor's opposition to NASA's use of nuclear materials for space missions and concern over the use of nuclear power in military and research missions. The DOE missions to be addressed in this NI PEIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. None of the DOE missions stated in the NI PEIS are defense- or weapons-related.

Commentor No. 1023: Judson L. Kenoyer

From: Kenoyer, Judson L
[SMTP:JUDSON.L.KENOYER@PNL.GOV]
Sent: Friday, September 08, 2000 3:46:30 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF
Auto forwarded by a Rule

FFTF should be identified as the appropriate alternative choice.

|| 1023-1

Judson L. Kenoyer
Manager, Dosimetry Research and Technology
Battelle, PO Box 999, K3_55
Richland, WA 99352
(509) 375_4574
(509) 375_6936 (FAX)
judson.l.kenoyer@pnl.gov <mailto:judson.l.kenoyer@pnl.gov>
(email)

Response to Commentor No. 1023

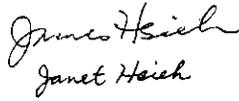
1023-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1024: James and Janet Hsieh

Date: September 8, 2000

To: Ms. Colette Brown

From: James and Janet Hsieh
955 S. Summitridge
Diamond Bar, CA 91765



Subject: Comments on the FFTF

We support the restart of FFTF to produce medical isotopes for cancer treatment, especially for the young children. Are you aware that every hour one child in the United States gets cancer? It is so sad to see bald children suffering from the side effects of chemotherapy on their young and fragile bodies.

Restarting the FFTF will give them and their parents hope that we are getting these children the best possible cure.

1024-1

Response to Commentor No. 1024

1024-1: DOE notes the commentor's support for Alternative 1, Restart FFTF

Commentor No. 1025: Carol Thayer Cox

09/10/2000 20:53 5403715537

PAGE 01

Carol Thayer Cox
130 Spring Wood Drive
Fredericksburg, VA 22401-7026

Colette E. Brown
 U.S. Department of Energy, NE-50
 19601 Germantown Road
 Germantown, MD 20874-1290

September 10, 2000

Dear Dr. Brown

I am writing in support of stopping the nuclearization and weaponization of space. It is imperative that the Department of Energy cease its development of Plutonium-238 for future space missions. Why can't NASA work towards the development of environmentally benign sources for space missions? The European Space Agency (ESA) has now created high-efficiency solar cells for deep space missions, which is immanently safer than using Plutonium-238.

I am concerned that the plutonium production/fabrication process for space nuclear power missions has recently led to several worker contamination accidents. An expansion of production will only worsen this problem. Furthermore, extending the number of launches of nuclear powered space devices from Cape Canaveral on rockets with 10% failure rates will only increase the possibility of a deadly mishap.

The massive cost of expanded production of plu-238 can not be justified at a time when the Department of Energy admits it needs over \$300 billion to clean-up existing problems at its facilities.

The military is promoting the use of nuclear power in space for space-based weapons technology. It is time to take stock of the graveness of this situation. **Using nuclear power for space war will have severe environmental implications for life on earth.** Please do what you can to change this calamitous course towards destruction.

Thank you

Sincerely,


 Carol Thayer Cox

1025-1

1025-2

1025-1

1025-3

1025-4

Response to Commentor No. 1025

- 1025-1:** DOE notes the commentor's concern for NASA's use of nuclear materials for space missions, interest in the development of alternative energy sources for space missions, and concern over the use of nuclear power in space-based weapons. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. None of the DOE missions stated in the NI PEIS are defense- or weapons-related.
- 1025-2:** Plutonium-238 processing facilities can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Sections 4.2-4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from plutonium-238 processing, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that the radiological and nonradiological risks associated with plutonium-238 processing would be small.
- 1025-3:** DOE notes the commentor's opinion and concern about funding available for cleanup at DOE facilities.
- 1025-4:** DOE notes the commentor's concern for the use of nuclear power in space-based weapons. The scope of this Nuclear Infrastructure PEIS is limited to analysis of alternatives to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development. The three missions are civilian nuclear energy missions and are not defense-related.

Commentor No. 1026: Madeline E. Marcus

Sep 08 00 10:04a ABC Pediatrics 509-586-5744 p.1

Date: September 8, 2000
To: Ms. Colette Brown
U.S. Department of Energy
Fax Number 1-877-562-4592
From: Madeline Marcus, M.D.
Kennewick, Washington
Subject: Comments on FFTF

(I support the restart of FFTF to produce the essential medical isotopes for cancer treatment. As a Pediatric Oncologist, I.....)

feel that this modality shows great promise in targeting specific tumors and leukemias while minimizing background toxicities.

Historical concerns regarding risks from background radiation can now be ameliorated by the use of molecular biology technologies to more specifically target cancer cells.

Only through effective research of new modalities of treatment can we hope to succeed in the therapy of diseases that heretofore have been beyond our clinical reach.

Sign



Response to Commentor No. 1026

1026-1

1026-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1027: Erik Ringelberg Keep Yellowstone Nuclear Free

KEEP YELLOWSTONE NUCLEAR FREE
P. O. BOX 4838 JACKSON, WY 83001 307-732-2040 www.yellowstonenuclearfree.com

DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT
(NI PEIS 03410D)

September 8, 2000

Colette E. Brown,
U.S. Department of Energy, NE-50,
19901 Germantown Road,
Germantown, MD 20874-1290

Dear Ms. Brown,

Keep Yellowstone Nuclear Free, a Jackson, Wyoming-based 501c3, has several comments for the record regarding the Nuclear Infrastructure Draft PEIS (NI PEIS 03410D). It is obvious from this Programmatic Environmental Impact Statement that the Department of Energy (DOE) nuclear program is searching desperately for a post-cold war mission. The premises for programmatic expansion seem based on a single "expert" panel's recommendation and a stated lack of institutional ability (or interest) to use existing DOE facilities and programs, operating at only 50% capacity (S-4). No compelling rationale is put forth for support of this expansion, or for how this expansion will avoid the missteps of the previous DOE nuclear programs.

The expressed primary need for this program and potential related-facilities at the Idaho National Engineering and Environmental Laboratory (INEEL) is the stated "...lack of alternative power sources for space missions." This basic premise, from which an entire expansion program hinges upon, is not supported by the facts:

NASA already has a well-developed electric battery fuel cell program. The European Space Agency has high-efficiency solar cells developed for deep space missions. Numerous private vendors, with existing agreements with NASA, also have suitable high-efficiency solar cells used for long-range probes.

Even if this premise was correct, the existing plutonium production/fabrication process has an egregious history, and even recently led to worker contamination. Further expansion of production will only worsen this problem and threaten the general public's safety from radioactive contamination.

Our own experience with the DOE's "management" of similar projects at INEEL is that this type of program leads to massive cost overruns, worker deaths, and a multi-generational legacy of radioactive contamination. It is hard to understand why the DOE is planning this massive expansion of plutonium-238 production when DOE admits it needs over \$300 billion to "clean-up" existing problems at these same facilities.

1027-1

1027-2

1027-3

1027-4

Response to Commentor No. 1027

1027-1: DOE notes the commentor's views. However, the purpose of the NI PEIS is to evaluate the environmental impacts of a range of reasonable alternatives to maintaining and enhancing DOE's existing nuclear facility infrastructure to support production of isotopes for medical, research, and industrial uses; production of plutonium-238 for use in future NASA space exploration missions; and U.S. nuclear research and development needs for civilian application.

DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual rate of growth of medical isotope use is consistent with the Expert Panel findings. Section 1.2.1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost-efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production

Commentor No. 1027: Erik Ringelberg (Cont'd) Keep Yellowstone Nuclear Free

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P. O. BOX 4838 JACKSON, WY 83001 307-732-2040 www.yellowstonenuclearfree.com

The PEIS disingenuously ignores these *current* problems and the immense social resistance to the expansion of nuclear power and the consequent radioactive contamination. For example, the PEIS specifically mentions the supportive public commentary in Idaho Falls, ID. Notwithstanding that the EIS process is not a public vote by law, the use of "factory towns" whose primary income comes from the DOE as the source of public opinion is flawed at best and an abuse of the National Environmental Policy Act (NEPA). KYNF and the other plaintiffs of the KYNF et al. vs. Richardson settlement agreement have repeatedly requested that the DOE include other communities in its scoping process that face the direct environmental consequences of the DOE's radioactive contamination.

1027-5

In spite of the obvious bias of the respondents, the DOE identified from public commentary the same three issues KYNF has with this PEIS: increased radioactive waste production and the lack of effective cleanup, lack of justification for proposal, and cost issues. Nowhere in the PEIS are these issues addressed.

1027-6

1027-7 1027-5

A second set of NEPA issues also raised by the plaintiffs, and ignored again in the PEIS, are the use of very broad categories of alternatives and poorly described options within each category, and the selective recombination of alternatives/options without substantiation of the difference in impacts between combinations. It is virtually impossible to provide alternative technical analysis and substantive comment on each combination. This is particularly problematic since no "preferred alternative" has been identified until the "final". The net result of the DOE method of outlining alternatives is that reviewers are unable to make directed comments to the substance of the technical issues and have their comments rejected ("out of scope"), or oversimplified and responded to in vague generalities.

1027-5

For example, comments on the premise "...lack of alternative power sources for space missions.", although one of the main reasons put forth for the PEIS, are considered "out of scope" N4.1-2;N-8-9). The environmental impacts of not producing p-239 are in fact part (albeit minor, as it is clearly not a preferred alternative [see chapter 4.1] of the PEIS. This is a clear example of the abuse of the intent (if not the letter of the law) NEPA inherent in the document and the review of public comments.

For a different example of the defective nature of this document, Alternatives 2, 3, and 4 all involve the INEEL facility. Each alternative, and in fact, each option suite, has substantially different environmental and social impacts *specific to INEEL*. Unfortunately, the DOE uses a "generic site" approach, with the details to be parsed out in follow-up documents.

In the rare case where specific of potential impacts are discussed (in the environmental justice section), the analysis presents two conditions, well-distributed poverty and patchy minority population distribution for INEEL. Yet, the analysis states that essentially there are no potential additional environmental justice impacts. This is belied by the statement that the "estimates...could be noticeably influenced by assumptions..."(K-7). This is our point; the broad estimates and unsupported assumptions in boilerplate text render this document's "analysis" moot. The analyses all assume homogeneous dispersion of radioactive contamination, an idea refuted by *all* actual releases documented by the DOE at the site (pg. 24 INEL Historical Dose Evaluation [Vol.1], 1991).

1027-8

Even more disturbing is the failure to mention the risks and potential impacts of the *combination* of hazardous and radioactive emissions from this project, or the cumulative risk in combination with INEEL's other toxic emissions. Surely, since both radioactive and hazardous wastes are generated concurrently, there are at least additive and more likely multiplicative health effects from both operations and systems failures.

1027-9

Response to Commentor No. 1027

of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

DOE has taken the Expert Panel and NERAC report recommendations under consideration in developing the range of alternatives evaluated in the NI PEIS. These reports were made available to the public at the NI PEIS public information centers and on the Internet at www.nuclear.gov.

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Under the No Action Alternative, DOE would continue to purchase plutonium-238 to meet the space mission needs for the 35-year evaluation period considered in the NI PEIS. However, DOE recognizes that any purchase beyond what is currently available to the United States through the existing contract would likely require negotiation of a new contract and may require additional NEPA review.

The May 22, 2000, correspondence from NASA to DOE identifies that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit

Commentor No. 1027: Erik Ringelberg (Cont'd)

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The sole technical detail that we can comment on is the estimated generation of **2,593,067 pounds of nuclear and hazardous waste** if INEEL is selected. This waste is completely unacceptable to Keep Yellowstone Nuclear Free and the people of this region who do not have an economic stake in this project.

We do not believe that the Draft PEIS contains enough detail and scope of information for us to make other substantive comments on the specifics on this program. It is our hope that a much more comprehensive examination of the known and potential environmental impacts of this program is provided in the Final PEIS.

Sincerely,



Erik Ringelberg
Executive Director

1027-10

1027-5

Response to Commentor No. 1027

reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires one-third less plutonium-238 as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000, letter to DOE that large RTGs be maintained as backup. Section 1.2.2 was revised to clarify plutonium-238 mission needs.

DOE's production and sale of radioisotopes fall into two categories "commercial" and "research" and both types of isotope production are considered under the proposed actions. Commercial radioisotopes are those that are produced in large, bulk quantities and sold to pharmaceutical companies or distributors, or to equipment or sealed source manufacturers. Examples of commercial radioisotopes produced by DOE include strontium-82 and germanium-68 for medical applications, and iridium-192 and californium-252 for industrial applications. DOE only produces commercial isotopes when there is no U.S. private sector capability or when foreign sources do not have the capacity to meet U.S. needs reliably. In contrast, research radioisotopes are typically produced and sold in small quantities in response to specialty orders from researchers preparing experiments in the field of medicine, with small quantities of these radioisotopes also purchased by industrial researchers. Because small-quantity production of research isotopes is not financially attractive to private-sector producers and is generally not undertaken, DOE attempts to provide all research radioisotopes that are requested, subject to production capability, inventory, and financial constraints. As successful application of a specific research isotope is established, the production and sales of that radioisotope may shift from research to commercial status. In recent years, over 95 percent of DOE's sales of radioisotopes by dollar volume were commercial and 5 percent have been for research. Additional discussion of how DOE's isotope program fits into the overall U.S. and foreign isotope production capabilities was incorporated into Section 1.2.1 of Volume 1.

1027-2: DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternative energy sources for space missions, although issues such as NASA research priorities are beyond the scope of this PEIS. NASA establishes the need and requirements for space missions and undergoes a thorough

Commentor No. 1027: Erik Ringelberg (Cont'd)
Keep Yellowstone Nuclear Free

Response to Commentor No. 1027

NEPA evaluation for each launch. Plutonium-238 sources are used only when they enable the missions or enhance mission capabilities.

1027-3: Plutonium-238 processing facilities can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Sections 4.2-4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from plutonium 238 processing, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that the radiological and nonradiological risks associated with plutonium-238 processing would be small.

1027-4: DOE notes the commentor's concern over DOE's past management and safety practices and the adequacy of ongoing cleanup activities. DOE activities associated with this program would not impact the schedule or available funding for existing cleanup activities at candidate sites for implementation of the nuclear infrastructure alternatives.

The health and safety of workers and the public is a priority of the nuclear infrastructure program, regardless of which approach is chosen. Operation of the facilities would comply with applicable Federal, state, and local laws and regulations governing radiological and hazardous chemical releases.

1027-5: The purpose of this NI PEIS is to evaluate the environmental impacts of reasonable alternatives to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238 for NASA space missions, and nuclear research and development. Although beyond the scope of this NI PEIS, activities to remediate existing contamination at INEEL and at the other DOE sites under consideration are ongoing and independent of the expanded programs analyzed herein. However, public input is of immense importance to DOE as part of a policy of encouraging vigorous public participation on matters of regional, national and international importance. In doing so and in compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the environmental impact analysis of DOE's proposed alternatives for meeting the mission requirements, and gave equal consideration to all comments, regardless of how or where they were received. This has included holding scoping meetings in communities potentially subject to environmental, health, or economic impacts as well as in communities

Commentor No. 1027: Erik Ringelberg (Cont'd)
Keep Yellowstone Nuclear Free

Response to Commentor No. 1027

removed from any direct or indirect effects but that nevertheless have a substantial stakeholder interest in the stated missions being considered. Based on the scoping comments received, the scope of the NI PEIS was expanded in a number of areas as outlined in Section 1.4 of the NI PEIS.

The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. DOE mailed this document to about 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site <http://www.nuclear.gov> and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P in the Final NI PEIS.

The Draft and Final NI PEIS have been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR 1500 through 1508 and 10 CFR 1021, respectively). DOE does not agree with the commentor's characterization that the alternatives and options presented are poorly described so as to dissuade substantive comment. The combination of alternatives and options were selected to provide a range of site locations and facilities for accomplishing the stated missions in accordance with NEPA guidelines. The presentation of environmental consequences for each alternative option enables clear differentiation between the alternatives and options on the basis of potential environmental and human health impacts. DOE's use of the generic site approach for Alternatives 3 and 4 was intended to "level the playing field" with regard to evaluating the relative merits of the accelerator and research reactor options in the absence of any existing sites' operational constraints. In doing so, this also results in bounding the assessment of environmental impacts.

- 1027-6:** The restart of FFTF or use of any of the other proposed alternative facilities would not impact the schedule or available funding for existing cleanup activities at Hanford, INEEL, or ORR. DOE notes the commentor's concern regarding waste generation. The NI PEIS

Commentor No. 1027: Erik Ringelberg (Cont'd)
Keep Yellowstone Nuclear Free

Response to Commentor No. 1027

addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

- 1027-7:** DOE notes the commentor's views. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its nuclear facility infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and for which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Purpose and need are discussed in Section 1.2 of the NI PEIS.
- 1027-8:** Figures K-2 and K-3 of Appendix K highlight block groups for which the percentage of minority and low-income residents, respectively, exceed the national percentages of minority and low-income persons residing in the Continental United States. Although the maps in Figures K-2 and K-3 emphasize areas with higher concentrations of minority and low-income residents, minority and low-income persons reside throughout the potentially affected area surrounding Idaho National Engineering and Environmental Laboratory. All persons potentially impacted by radiological releases under normal and accident conditions were included in the analyses.

As discussed in Section H.2.2.2 of Appendix H, the analyses did not assume homogeneous dispersion of radioactive contamination. Rather, the dispersion was estimated from averaged annual meteorological measurements at the candidate sites. The meteorological data include wind speed, direction, and stability class. As discussed in Volume 1,

Commentor No. 1027: Erik Ringelberg (Cont'd)
Keep Yellowstone Nuclear Free

Response to Commentor No. 1027

Section 2.7.1.1 of the NI PEIS, radiological impacts at the candidate sites are driven by the geographical dispersion of the surrounding populations and fabrication/processing activities, as well as meteorological conditions.

1027-9: The impacts to humans from hazardous chemical and radioactive emissions result in different types of adverse health effects which cannot be combined in a meaningful way. Conservatively, all radiation is assumed to increase the risk of cancer fatalities. In contrast, hazardous chemicals can be carcinogenic and/or noncarcinogenic and exposure need not be fatal. Health effects associated with exposure to carcinogenic chemicals are measured in terms of total cancers, both fatal and nonfatal. Noncarcinogenic chemicals have the potential to produce adverse toxic effects, but not cancer. The measure of health effects for these chemicals is the hazard quotient. If exposure to several of these noncarcinogenic chemicals occurs simultaneously, the hazard quotients are summed to give a Hazard Index. If the Hazard Index exceeds unity, adverse health effects may result.

Because of the differences in the types and characterizations of these health effects, the magnitudes of each type are presented separately in the NI PEIS, and are not combined. In general, one type of health effect dominates, and no combination is even necessary.

A detailed discussion of health effects associated with exposure to radiation is given in Section H.2.1.2 of the Draft NI PEIS; a detailed discussion of health effects associated with exposure to hazardous chemicals is given in Section H.3.

1027-10: DOE notes the commentor's concern regarding waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored, and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 1027: Erik Ringelberg (Cont'd)
Keep Yellowstone Nuclear Free

Response to Commentor No. 1027

If INEEL were selected for the irradiation of targets and processing and fabrication of irradiated targets (plutonium-238), the total radioactive and hazardous waste generation over the 35-year period for nuclear infrastructure operations would be about 3,340 cubic meters. As shown in Section 4.8.2.4 of the NI PEIS, this would represent a small amount of additional waste in comparison to the INEEL's current site activities.

Commentor No. 1028: Ray V. Rose

NI PEIS Toll_Free Telephone

9/8/00

Ray V. Rose
4508 Riverhaven Blvd
Pasco, WA 99301
509_547_2006

Leaving a message on the FFTF. As a physician, I am quite certain my profession is now on the verge of an exponential increase in the use of medical isotopes, especially for cancer therapy. Accordingly, I now strongly favor the reactivation of the FFTF reactor at Hanford, Washington, to minimize our dependency on importation of these isotopes. Although this may involve a short term loss, I am certain that it will lead to a very significant long term gain. Your consideration of this need will be greatly appreciated. Sincerely.

1028-1***Response to Commentor No. 1028***

1028-1: DOE notes the commentor's support for Alternative 1, Restart FFTF

Commentor No. 1029: Jean Petty

NI PEIS Toll_Free Telephone

9/7/00

Jean Petty
400 Sea Berry Drive
#5164
Bloomfield, CT 06002

I am very disturbed at the possibility of getting into production of Pu_238. It is very dangerous stuff. If it is involved in space exploration, it poses many threats in terms of possible accidents with launches and so forth.

1029-1

Furthermore, we should be devoting our energy to developing the solar power. Europe does have and has been working on a satisfactory substitute, which is far safer.

1029-2

In no way should we expand and open up new plants to produce this. It is very dangerous also to the workers in those plants. I think it is absolutely essential that DOE not go ahead with oking this plan to expand plutonium production. Thank you.

1029-3

1029-4

1029-3

Response to Commentor No. 1029

1029-1: As used by NASA, plutonium-238 is encapsulated and shielded to minimize any hazards to personnel or to the environment, even in the event of a catastrophic launch accident or inadvertent earth re-entry. In addition, NASA prepares NEPA documentation prior to each of its deep space missions. The documentation evaluates radiological and other risks that could result from the entire mission. NASA uses radioisotope power systems only when they enable the mission or enhance mission capabilities.

1029-2: DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternative energy sources for space missions, although issues such as NASA research priorities are beyond the scope of this PEIS. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch.

1029-3: DOE notes the commentor's opposition to expanding its existing nuclear facility infrastructure to support production of plutonium-238 for use in future NASA space exploration missions. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

1029-4: Plutonium-238 processing facilities can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Sections 4.2-4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from plutonium-238 processing, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that the radiological and nonradiological risks associated with plutonium-238 processing would be small.

Commentor No. 1030: Rochelle Becker

09/11/2000 10:42 6192734576

BECKER

PAGE 01

Thomas J. Becker, DDS
 Rochelle Becker
 1037 Ritchie Rd.
 Grover Beach, CA 93433
 (805) 489-7420

Collete E. Brown
 US Dept of Energy
 NE-50
 19901 Germantown Rd.
 Germantown, MD 20874
 (877) 562-4592

September 11, 2000

Dear Ms. Brown,

We are writing to request that NASA be required to develop alternative (solar) power sources for space missions. The technology is workable and has been developed in Europe.

We strongly feel the current path of increased Plutonium production is not justified by the health risks to workers or the safety risks to the public at large. Nor is the astronomical costs of plu-238 which drains the economy for decades to come.

Please push forward a space program that our country can be proud of and will not increase possibilities for massive environmental pollution of our earth.

Sincerely,



Rochelle Becker

1030-1

1030-2

1030-3

1030-1

Response to Commentor No. 1030

- 1030-1:** DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternative energy sources for space missions, although issues such as NASA research priorities are beyond the scope of this PEIS. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch.
- 1030-2:** The facilities evaluated in the NI PEIS can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Sections 4.2-4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from implementation of the alternatives, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that the radiological and nonradiological risks associated with each of the alternatives would be small.
- 1030-3:** DOE notes the commentor's opinion.

Commentor No. 1033: Sharon Lee

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

103374+1207

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

Please consider future generations.

I am opposed to restart of the Fast Flux Test Facility reactor because:

the Hanford Nuclear Reservation is the most radioactively polluted site in the U.S. It is next to the Columbia River and has leaked radiation into the river, the ocean, and the water table. ^{all efforts need to} focus on clean up.

Name Sharon Lee
Address 8840 NW Lovejoy St.
City, state Portland, OR Zip 97229

1033-1

1033-2

1033-1

Response to Commentor No. 1033

1033-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

1033-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1036: Dave Frankunas

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

0874+1207 [Barcode]

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

the Hanford area is extremely polluted with nuclear waste. I live down stream of Hanford and this concerns me.

Name Dave Frankunas

Address 3018 NE 8th

City, state Portland, OR Zip 97212

1036-1

1036-2

Response to Commentor No. 1036

1036-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1036-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford and potential risk of contamination to the Columbia River. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

No food or water restrictions are in place outside the Hanford Reservation as a result of Hanford activities.

Commentor No. 1037: Phil Mitchell

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

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Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

9-5-00

What of the word no that you do not understand ?

The D. O. E. and Co. want to start F. F. T. F.

again ? Let's get going on clean- up before it

is to late / You may be to late as it is?

Name Phil Mitchell

Address 333 S.E. 45 Avenue

City, state Portland, OR Zip 97215- 1015

1037-1

1037-2

Response to Commentor No. 1037

1037-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1037-2: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Commentor No. 1039: Jody Heatlie

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U. S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

0874+1207 [Barcode]

*What's such a joke, Hanford is one of the most
Public comment on Nuclear Infrastructure Draft Programmatic
Environmental Impact Statement (NI PEIS)
Topic: nuclear sights in the world.*

I am opposed to restart of the Fast Flux Test Facility reactor because:

*We do not need medical isotopes
from Hanford. There are plenty isotopes
in the U.S. & around the world, so don't
try to fool us with this. We don't want
plutonium in our area either. We
want AN END NOW to dangerous
nuclear reactors at Hanford. I am
a victim of Hanford's radiation.
The only, rational, responsible plan is to
clean up the debris, now.*

Name Jody Heatlie
Address 2237 SE 70th
City, state Portland, Oregon Zip 97215

Response to Commentor No. 1039

1039-1: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to “ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use.” The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

1039-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

1039-3: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings.

Commentor No. 1039: Jody Heatlie (Cont'd)

Response to Commentor No. 1039

The United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily Molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

- 1039-4:** FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Commentor No. 1041: Daniel E. Peterson

Draft PEIS Comment Form

Since the death of our son Scott in 1975 we have followed events at Hanford with increased interest as public disclosure shed light on those of us who lived "down wind"

I have attended numerous hearings and I vote for alternative 5 - Deactivate FFFTF with no new mission. However I am convinced by 4 of Washington State's testimony there is no need for isotope production as Canada provides all US needs.

Any alternative proposed must not interfere with Hanford clean-up.

The attempt for Sen Gordon and John Corley to project Hanford FFFTF start up as quickly as ever research affords those of us who have lost family members to "down wind" Bill out.

1041-1

1041-2

1041-3

1041-1

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): Daniel E. Peterson

Organization: _____

Home/Organization Address (circle one): 9727 45th Ave NE,
Seattle

City: _____ State: WA Zip Code: 98115

Telephone (optional): 206-524-0526

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Collette E. Brown, NE-50
U.S. Department of Energy • 1990 Germantown Road • Germantown, MD 20874
Toll-free telephone: 1-877-562-4593 • Toll-free fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

Response to Commentor No. 1041

- 1041-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.
- 1041-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFFTF.
- 1041-3:** DOE notes the commentor's view. DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

The United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes



Commentor No. 1041: Daniel E. Peterson (Cont'd)

Response to Commentor No. 1041

considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements.

Although other manufacturers produce medical isotopes, DOE remains the key provider for a large number of isotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

Commentor No. 1042: Roger A. Rohrbacher

1612 So. Dawes St.
 Kennewick, WA 99338
 September 1, 2000

Ms. Colette Brown
 DOE Office of Space & Defense Power Systems, NE-50
 19901 Germantown Road
 Germantown, MD 20874-1790

Dear Ms. Brown:

My reasons to restart and operate FFTF are as follows:

It is a low cost option for the U.S. to produce needed medical isotopes to diagnose and fight cancer and other diseases. It can produce a steady stream of different medical isotopes simultaneously. Lives can be saved by saving FFTF.

The FFTF has unique capabilities for international research. (I understand Japan is still interested.)
 a stream of high energy neutrons is a valuable tool.

It is a safe facility. During its previous years of operation it had an exemplary safety record - negligible radioactive emissions and effluents and extraordinarily low worker exposure to radiation.

Sincerely,
 Roger A. Rohrbacher

Mr. Roger A. Rohrbacher
 1612 S Dawes St
 Kennewick, WA 99338

Response to Commentor No. 1042

1042-1

1042-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

1042-2

1042-2: DOE notes the commentor's views regarding the use of FFTF to support international nuclear research and development. Researchers from many foreign countries use DOE's high-flux research reactors for materials testing and experimentation. These facilities have the capability to maintain a high density of neutrons in a given test volume for materials testing; shorten the time needed for such testing; tailor the neutron flux to simulate the different reactor types and conditions; and instrument the core for close monitoring of the test conditions. Although the NI PEIS analyzes the expansion of U.S. civilian nuclear research and development, it is anticipated that FFTF would play a role in the continuing international research conducted in the United States. As described in Section 1.2.3 of the NI PEIS, some specific areas of research identified are advanced reactor development including materials and nuclear fuel research for advanced terrestrial or space reactors and for the Accelerator Transmutation of Waste system.

1042-3

1042-3: The commentor's positions on restarting FFTF and the safety record at FFTF are noted. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Commentor No. 1043: Clark B. McKee

16900 232nd Pl. SE
Monroe, WA 98272
425-788-5810
8/29/00

Colette E. Brown, NE-50
U.S. Department of Energy
Office of Nuclear Energy, Science and Technology
19901 Germantown Road, Room A-270
Germantown, MD 20874-1290

Dear Ms. Brown:

I am a newcomer to the issue of how to best meet the nation's needs for radioisotopes and Pu-238, and have not seen the full PEIS. However I did attend the 8/30/00 hearing in Seattle, and would like to offer some comments based on that experience, plus my ten years in quality assurance management for the FFTF during its design, construction, startup testing and initial operation (until 1981).

First, I believe, and am sure you will agree, that the final EIS should be based only on relevant facts and objective analysis. It was abundantly clear at the Seattle meeting that those opposed to FFTF restart were telling at least some falsehoods (e.g., adding waste to the underground storage tanks), distorting the PEIS, and trying to discredit the FFTF by linking it to other completely unrelated problems and incidents on the Hanford reservation. Politics may well be a factor in the Secretary's final decision but must be kept out of the EIS.

Second, and most important, there was no mention in the 8/15/00 summary of how each of the alternatives would affect the number of fatalities from those cancers and other diseases that can be treated with radioisotopes. The summary does include the numbers of fatalities expected from conducting each of the alternatives, but I'm sure that for alternatives 1, 3 and perhaps 4, the lives to be saved outnumber the added fatalities by many orders of magnitude. DOE has a moral obligation to maximize its contribution to public health and safety. In this case that means bringing major additional isotope production on line as soon as possible. And that would seem to favor FFTF restart because FFTF has the largest production capacity and can very likely be brought on line in a matter of months rather than years. The EIS must address this question, preferably quantitatively, but at least qualitatively. If it doesn't, DOE could legitimately be accused of not caring about the people whose lives might be saved with radioisotope treatment.

Third, for each alternative, what happens to the wastes from the associated processing facilities?

Finally, the following question should be asked about alternative 1 if it hasn't already: Based on FFTF's design, construction and operating history, can the plant be considered

Response to Commentor No. 1043

- 1043-1:** DOE notes the commentor's views on the necessity for reliance on objective, factual information as the basis for sound decisionmaking. DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and to providing ample opportunity for public comment on those actions. Selection of facilities and site locations for accomplishing expanded civilian nuclear energy research and development and isotope production missions is not a political decision. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.
- 1043-2:** No evaluation has been made in the NI PEIS of the health benefits associated with treating people with the radioisotopes produced under any of the alternatives assessed. The purpose of the PEIS is to determine the environmental impacts associated with each alternative being considered for implementation by DOE.
- 1043-3:** The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options, including the waste associated with processing and fabricating the irradiated targets. These discussions can be found in the Waste Management sections of Chapter 4 of Volume I. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.
- 1043-4:** DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1043: Clark B. McKee (Cont'd)

safe to operate? For design and construction, my answer would be yes. The plant was designed to the highest standards and on the basis of extensive development testing. It was managed by people who had been either in the nuclear navy or in the Westinghouse divisions that supplied the nuclear navy. It was certified to the ASME Boiler and Pressure Vessel code. It received and passed an NRC operating license review (No license was issued, of course, because NRC has no jurisdiction over federal reactors.) And we had a quality assurance program then that was at least as rigorous as any in use at commercial nuclear power plants today.

I left Westinghouse shortly after operation began, so had little experience with that phase. I understand, however, that its operation was free of major incidents (and that the original concern about possible sudden reactivity insertions proved unfounded.) But there is certainly a wealth of audit reports, management assessments, etc., that could shed light on how safely it operated.

Looking toward the future, several factors strongly suggest that the FFTF would continue to be safe. One is the absence of corrosion in the vessels and heat transport system. Liquid sodium is non corrosive to the materials of construction and soaks up any oxygen that happens to get inside, in preference to the stainless steel. The system operates at low pressure, and emergency core cooling can be effected through natural convection alone. And the fact that two employees were recently fired for falsifying records shows that management remains committed to strong enforcement of the rules.

I hope these comments will be useful. Again, I would like to stress the need for the EIS to address the lifesaving potential for each of the alternatives.

Very truly yours,



Clark B. McKee

1043-4
(Cont'd)

1043-2

Response to Commentor No. 1043

Commentor No. 1044: Mikal Dobbins

Response to Commentor No. 1044

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

As someone who lives in the Portland area (the area that will be affected by Hanford activity), I vehemently oppose any effort by the DOE to re-open Hanford or build new reactors. I think the DOE should concentrate on cleaning up the nuclear waste that is already there. I believe if there are problems that need to be resolved that manufacturing plutonium-238 is not the answer. Medical isotopes that cause cancer is not necessary since cancer is caused by nuclear production. I do not care about NASA exploration. According to your report NASA does not even want your product, so please stop pushing this non-issue! Listen to the people. NO DONOR WANT HANFORD REOPENED EVER!!! NO YOU GET IT NOW!! PLEASE DO NOT IGNORE US PLEASE!!

1044-1
1044-2
1044-3
1044-4
1044-3
1044-2

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Mikal Dobbins

Organization: _____

Home Organization Address (circle one): 2520 NE Couch St.

Apt 10

City: Portland State: OR Zip Code: 97232

Telephone (optional): _____

E-mail (optional): mikal.d@yahoo.com

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 1901 Germantown Road • Germantown, MD 20874
Toll-free telephone: 1-877-562-4593 • Toll-free fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



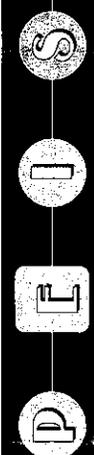
7/12/00

- 1044-1:** DOE notes the commentor's opposition to Alternative 1, Restart FTF, and Alternative 4, Construct New Research Reactor.
- 1044-2:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.
- 1044-3:** DOE notes the commentor's opposition to enhancing its existing nuclear facility infrastructure to support production of plutonium-238 for use in future NASA space exploration missions. A May 22, 2000, correspondence from NASA to DOE identified that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large RTGs may be maintained as a backup. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.
- 1044-4:** The commentor's concern about cancers caused by nuclear production is noted. Chapter 4 of Volume 1 and Appendixes H through J provide the results of the evaluation of potential health impacts that would be expected to result from implementation of any of the range of reasonable alternatives presented in the PEIS, including normal operations and a spectrum of accidents that included severe accidents. The environmental

Chapter 2—Written Comments and DOE Responses

Commentor No. 1044: Mikal Dobbins (Cont'd)

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Public Hearing Evaluation Form

Please place a check mark in the box next to the public hearing attended:

- | | |
|--|--|
| <input type="checkbox"/> August 22, 2000
American Museum of Science and Energy
300 South Tulane Avenue
Oak Ridge, Tennessee 37830 | <input type="checkbox"/> August 30, 2000
Washington State Convention and Trade Center
800 Convention Place
Seattle, Washington 98101 |
| <input type="checkbox"/> August 25, 2000
Westcoast Idaho Falls Hotel
475 River Parkway
Idaho Falls, Idaho 83402 | <input type="checkbox"/> August 31, 2000
Best Western Tower Inn and Conference Center
1515 George Washington Way
Richland, Washington 99352 |
| <input type="checkbox"/> August 28, 2000
Hood River Inn
1108 E. Marina Way
Hood River, Oregon 97031 | <input type="checkbox"/> September 6, 2000
Crystal Gateway Marriott
1700 Jefferson Davis Highway
Arlington, Virginia 22202 |
| <input checked="" type="checkbox"/> August 29, 2000
Oregon Museum of Science and Industry
1945 SE Water Avenue
Portland, Oregon 97214 | |

Please circle the appropriate number:

	Very Good	4	3	2	Poor
Your Level of Knowledge about the PEIS before the Hearing	5	4	3	2	1
Your Level of Knowledge about the PEIS after the Hearing	5	4	3	2	1
Time and Date of Hearing	5	4	3	2	1
Location of Hearing	5	4	3	2	1
Registration Process	5	4	3	2	1
Clarity of Displays and Handouts	5	4	3	2	1
Clarity of Presentations	5	4	3	2	1
Relevancy of Issues and Concerns Addressed	5	4	3	2	1
Opportunities for Discussion	5	4	3	2	1
DOE Officials' Willingness to Listen	5	4	3	2	1
Knowledge/Responses from Staff Attending	5	4	3	2	1

How could the public hearing format and materials be improved? *the only reason i knew about the hearing was through tvart of america. the DOE made no attempt to publicize the meeting.*

Was the public hearing helpful to you? *yes, but i believe the environmental impact of reopening the hanford reactor was not clearly or deeply explored*

Please continue on the other side if you run out of space. Please return your completed evaluation form to the registration desk or mail or fax to the address below.

THANK YOU - YOUR FEEDBACK IS IMPORTANT TO US

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free telephone: 1-877-562-4551 • Toll-free fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/27/00

Response to Commentor No. 1044

analysis showed that radiological and nonradiological risks associated with each of these alternatives would be small. Specifically at Hanford, over the 35-year operational period no fatalities would be expected among workers or in the general public in the vicinity of Hanford or at distant locations. See, for example, Sections 4.3.1.1.9, 4.3.2.1.9, and 4.3.3.1.9 in Chapter 4 and the Summary Tables in Chapter 2 of Volume 1 of the NI PEIS.

Additionally, the NI PEIS evaluated the maximum cumulative radiation exposure to the public from all reasonably foreseeable Hanford Site activities over the 35-year time-frame. As shown in Section 4.8, less than 1 additional latent cancer fatality would be expected to occur among the local population as a result of radiation exposure from 35 years of Hanford operations.

The annual doses to the public from the Hanford site and proposed NI PEIS activities above are insignificant. For perspective, the radiation dose the average American receives from natural sources is about 300 mrem each year. Based on the same 35 year time period used above, approximately 2,000 latent cancer fatalities would be expected among the same population as a result of this natural (non-Hanford related) radiation exposure. In that same 35 years, about 19,000 cancer fatalities from all causes (non radiological causes included) would also be expected in the same population.

1044-5

1044-5: DOE provided notice of scheduled public hearings in accordance with the requirements of CEQ and DOE regulations (i.e., 40 CFR Parts 1503.1 and 1506.6 and 10 CFR Part 1021.313, respectively). This included announcement of the hearings in the Federal Register as well as in the local media. In addition, copies of the Draft NI PEIS and/or the Summary (including the public hearing schedule) were sent to each individual or group listed to receive it at the address on record. Meeting notices were also sent to 6,459 organizations and individuals on the NI PEIS mailing list. Meeting minutes were mailed to 3,576 organizations and individuals in the States of Washington and Oregon.

Commentor No. 1045: Bruce K. Gagnon
Global Network Against Weapons and Nuclear Power
in Space



**Global Network Against Weapons
and Nuclear Power in Space**

September 5, 2000

Ms. Colette Brown
DoE
Office of Space & Defense Power Systems.
NE-50
19901 Germantown Rd.
Germantown, MD 20874

Dear Ms. Brown:

I am writing to give our organizational comments to DoE's Draft PEIS concerning the expansion of DoE facilities in order to produce plu-238 for future NASA space missions.

First it should be noted that NASA does not need nuclear power for deep space missions as the European Space Agency (ESA) has now developed high-efficiency solar cells for deep space. While NASA claims that this is not possible, in fact ESA will be sending a mission called Rosetta beyond Jupiter using such new technologies.

It is clear to us that NASA and DoE do not want to acknowledge the existence of such alternatives because it runs counter to plans to expand the use of nuclear power into space.

The expansion of the use of nuclear power into space will of course mean that there will be an exponential number of launches from Cape Canaveral in coming years on rockets with 10% failure rates. We did not see anything in the PEIS that acknowledged the growing risk to life on Earth in the event of a launch accident with nuclear devices on-board.

We are aware that very recently eight workers were contaminated at LANL while fabricating future space nuclear powered devices. We are also aware that prior to the Cassini launch there was an epidemic of contaminations at LANL while they fabricated the RTG's for that mission. It is obvious to us that the expansion of nuclear power production and fabrication for future space missions will only mean many more cases of contamination of workers and the local environment.

P.O. Box 90083 • Gainesville, FL 32607 • (352) 337-9274
globanet@mindspring.com • www.space4peace.org



Response to Commentor No. 1045

1045-1: DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternative energy sources for space missions, although issues such as NASA research priorities are beyond the scope of this PEIS. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and conducts a thorough NEPA evaluation for each launch.

1045-2: The commentor's concerns about worker and environmental contamination are noted. Eight workers were exposed to plutonium-238 the Los Alamos National Laboratory on March 17, 2000. Their exposure to plutonium-238 was caused by a leaking pipe connection in a support system serving a glovebox. As a result of this accident, the Secretary of Energy ordered a series of actions to increase worker safety and health and to avoid further accidental exposures.

Plutonium-238 processing facilities can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Sections 4.2-4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from plutonium-238 processing, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that the radiological and nonradiological risks associated with plutonium-238 processing would be small.

Commentor No. 1045: Bruce K. Gagnon (Cont'd)
**Global Network Against Weapons and Nuclear Power
 in Space**

2

We know that the Pentagon is pushing NASA and DoE to expand nuclear power production for space. We know that the military has major plans for the use of nuclear power for space-based weapons and bases on the moon. Therefore we understand that the Pentagon must get the DoE to prepare the industrial infrastructure for this long-range program.

We also understand that the DoE has yet to undertake a serious clean-up of existing plutonium contamination at their facilities around the country. It is known that over \$300 billion is needed to complete such a clean-up program. Before DoE undertakes this new agenda for space nuclear power, which will only worsen the existing problem, we believe that you should spend our tax dollars on cleaning up the present mess!

The future of life on this planet is already under attack by past DoD and DoE nuclear activities. Now DoE, NASA and the Pentagon want us to fork over our hard earned dollars to move this nuclear nightmare into the heavens.

We strongly protest this proposed action and call upon DoE to pick the "No Action" alternative.

Sincerely,



Bruce K. Gagnon
 Coordinator

1045-3

1045-4

1045-3

1045-5

Response to Commentor No. 1045

- 1045-3:** The commentor's concerns over the use of nuclear power in space-based weapons and other space-based facilities are noted, although issues such as these are beyond the scope of this NI PEIS. The nuclear infrastructure missions described in Section 1.2 of Volume 1 are unrelated to the national defense. Neither nuclear weapons nor components for nuclear weapons would be produced under the nuclear infrastructure alternatives described in Section 2.5. The scope of this NI PEIS is limited to analysis of alternatives to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development.
- 1045-4:** DOE notes the commentor's opinion and concern about funding available for cleanup at DOE facilities.
- 1045-5:** DOE notes the commentor's support for the No Action Alternative 1.

Commentor No. 1046: Mark Darienzo

Response to Commentor No. 1046

Draft PEIS Comment Form

I'm against the restart of the Fast Flux Test Facility.

1046-1

I'm for cleaning up Hanford and closing it down.

1046-2

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): Mark Darienzo

Organization: _____

Home/Organization Address (circle one): 1634 N Alberlast

Portland, OR

City: Portland State: OR Zip Code: 97217

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

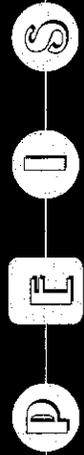
- 1046-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 1046-2:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 1047: C. C. Clements

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

We need FFTF, please restart it

1047-1

Multiple horizontal lines for additional comments.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): C.C. Clements

Organization:

Home/Organization Address (circle one): 6802 CR 225

City: Brownwood State: TX Zip Code: 76801

Telephone (optional): (915) 646-2830

E-mail (optional): CARCARCLEM@AOL.COM

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874 Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



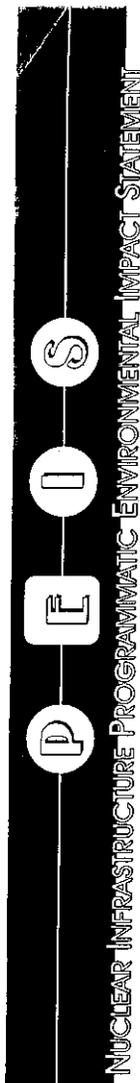
7/12/00

Response to Commentor No. 1047

1047-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1048: Claire Greiner

Response to Commentor No. 1048



Draft PEIS Comment Form

*I affirm the restrictive cap
FFTF.*

1048-1

1048-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

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- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments. 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): CLAIRE GREINER
 Organization: QWEST
 Home/Organization Address (circle one): 302 TORBETT PMB 106
RICHLAND WA 99352-2604
 City: RICHLAND State: WA Zip Code: 99352
 Telephone (optional): 509 372-8868
 E-mail (optional): claire.e.greiner@rl.gov

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free telephone: 1-877-562-4593 • Toll-free fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Commentor No. 1049: Duane Burstad

Response to Commentor No. 1049

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

It is apparent from the PEIS that there is a need for both medical isotope production and Pu-238 production. I believe depending on other nations for our sources and needs is not prudent. I applaud DOE for heading in a direction of self-sufficiency.

I am particularly interested in the area of medical isotopes. Our country has been sadly lacking in this area. This is an area where DOE can help the individual, present treatment for cancer creates a great deal of suffering along with the drug. My six year old niece died from the cancer (ie, use of chemo therapy).

Of the choices provided I believe the start up of FFTF is by far the best.

It appears to be most effective (the facility already exists). It has the capability and capacity to provide all options of production. Minimal waste stream production. An adequate facility-like. A history of similar production capability. A proven safety record.

Both technically and costwise FFTF is the best option and should be restarted.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Duane Burstad

Organization: _____

Home/Organization Address (circle one): 3894 Hampton Dr.

City: West Riveland State: VA Zip Code: 99353

Telephone (optional): _____

E-mail (optional): burstadd@gte.net

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Collette E. Brown, NE-50
 U.S. Department of Energy • 19001 Germantown Road • Germantown, MD 20874
 Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

1049-1

1049-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1051: Vicki Y. Eddy

Response to Commentor No. 1051

Draft PEIS Comment Form

See Attached Letter

Multiple horizontal lines for writing a comment.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
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- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Vicki Y. Eddy

Organization: FLUOR HANFORD - FFTF

Home/Organization Address (circle one): 602 S. Rainier
Kennewick, WA 99336

City: _____ State: _____ Zip Code: _____

Telephone (optional): Day 509-376-2323

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 1051: Vicki Y. Eddy (Cont'd)

Response to Commentor No. 1051

August 30, 2000

Dear Ms. Brown,

I understand that I am to give my comments to you as I am asking for FFTF to be selected as the preferred alternative for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions.

I have been working at FFTF for the last 13 years as a clerk. My position requires me to spend a great deal of time updating procedures in all areas of the plant. At FFTF we all undergo continuous safety training and the qualifications that are required for the work that we each do. We are very proud of our safety record, our work integrity and our ability to work together as a family from janitors up to plant managers.

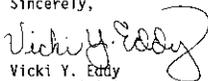
Under a lot of pressures during our years of being in standby mode, we have managed to keep our plant in top condition, think positively and have not compromised our safety standards. In spite of the reputation that our Hanford Area has inherited, we feel that we are the hope that may be able to overshadow that reputation and show that this Area can produce products that may someday help to erase the devastating effects of cancer and bone deteriorations. We have also shown that we are capable of many other missions in nuclear and industrial research.

We are not the liars or deceivers that environmental groups in Washington and Oregon are trying to make people believe. So many of those groups have instilled fear and uncertainty to uninformed people who chose not to take the time to look at the facts for themselves. We are not trying to "cover up" anything such as bomb production which is just one of the many fears that they are spreading.

My family moved to this area in 1950 and have lived here ever since except for the few years I was away. My children and grandchildren all live here. Our major commodities in this area are agriculture and vineyards, land development and our retirement communities. Do you think that I, as a mother and grandmother, would be working for a company that would bring devastation to my family, community or nation? If I felt that we were not one of the safest facilities that I could possibly be working in, then I would be the first to stand up and rally against it.

I can see only the good that we can do for our nation. And I hope that you can too.

Sincerely,


Vicki Y. Eddy
602 So. Rainier
Kennewick, WA 99336

1051-1

1051-1: DOE notes the commentor's support for Alternative 1, Restart FFTF. The purpose of this NI PEIS is to evaluate the environmental impacts of reasonable alternatives to fulfill the requirements of the proposed missions, which include the production of medical and industrial isotopes, the production of plutonium-238, and nuclear research and development. The Record of Decision for the PEIS will be based on a number of factors including environmental impacts, costs, nonproliferation issues, schedules, technical assurance, policy, and program objectives.

1051-2

1051-2: DOE notes the commentor's views and concerns.

1051-1

**Commentor No. 1052: Michael J. Sullivan
Sheet Metal Workers' International Association**

SHEET METAL
WORKERS'
INTERNATIONAL
ASSOCIATION



MICHAEL J. SULLIVAN
General President

1750 New York Avenue, N.W.
Washington, D.C. 20006-5386
Phone: (202) 783-5880
Fax: (202) 662-0894

September 6, 2000

Colette E. Brown, NE-50
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

Dear Ms. Brown:

Concerning the NI PEIS alternatives, I am writing this letter in support of restarting the FFTF. This facility is capable of fulfilling the isotope production responsibilities of the Department of Energy under the Atomic Energy Act.

The PEIS states, "Of particular need over the longer term are dependable sources of research isotopes and reactor facilities providing high volume flux irradiation for nuclear fuels and materials testing". The FFTF is well positioned to quickly and reliably provide this research and development program. I agree that the nation must move forward in clinical medicine, scientific research, and industrial endeavors, and this already existing facility has a proven track record in reliability for this program.

Previous studies have noted inhibited growth in the use of radioisotopes to provide a better life for our citizens. We have drifted towards a reliance on foreign suppliers, which is detrimental to the best interests of our country. First, we place our country in the position of having to rely on a foreign entity, but more important we are funding jobs outside this country. We need to assure that we take steps to sustain our loyal workers.

I fully support the intent of the NI PEIS in trying to determine the best answer to filling the gaps in the DOE infrastructure. The decision that the DOE has to make is not an easy one. There are many complex science and technical issues that need to be addressed. Choosing an already existing facility that is the newest in the DOE complex with a replacement value of almost \$2 billion makes the most sense to me. For the reasons mentioned above, I urge you to consider restart of the FFTF as the best alternative.

Sincerely,

MICHAEL J. SULLIVAN
General President

MJS/tsl

cc: A. T. Zlotopolski, Gen. Sec. Treas.



Response to Commentor No. 1052

1052-1

1052-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

1052-2

1052-2: DOE notes the commentor's viewpoint on the United States reliance on foreign suppliers for medical isotopes. If DOE decides to expand its nuclear infrastructure, this will reduce our reliance on foreign suppliers for medical isotopes.

1052-1

Commentor No. 1053: Lynn Lewis

Response to Commentor No. 1053

Draft PEIS Comment Form

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

I live here, downriver of the Hanford plant.
 Please put all your resources into safe cleanup
 of the entire area - and do not start up
 any production of anything whatsoever.
 Thank you.

1053-1

1053-2

1053-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

1053-2: DOE notes the commentor's opposition to Alternative 1, Restart FTFE.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): Lynn Lewis

Organization: _____

Home Organization Address (circle one): 3762 Rocky Ridge Ct

City: Hoad River State: OK Zip Code: 97031

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19001 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

Commentor No. 1054: Sara M. Garrido

Response to Commentor No. 1054

Draft PEIS Comment Form

I support the restart of FFTF ->
PLEASE RESTART FFTF FOR
MEDICAL ISOTOPES

Sara M. Garrido

1054-1

1054-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): DR. Sara M. Garrido
 Organization: Columbia Basin Hematology/Oncology
 Home/Organization Address (circle one): 7350 W Deschutes
Kennewick
 City: Kennewick State: WA Zip Code: 99312
 Telephone (optional): (509) 7838744
 E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colella E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



Commentor No. 1055: Kim Burkland

To: Collette Brown, NE-50 8/31/2000
USDOE
19901 Germantown Rd.
Germantown, MD 20874

From: Kim Burkland
410 9th Street (POB 401)
Hood River, OR 97031

These are my written comments on the draft Environmental Impact Statement on FFTF Restart: As I have testified before, the USDOE should permanently shut down FFTF at Hanford. Please choose either Alternative 5 (1st choice) & shut down Hanford permanently or choose Alternative 2, an option that would also permanently shut down Hanford, but produce the medical isotopes and NASA's plutonium 238 at alternative sites.

First, the USDOE's compilations of prior public comment are extremely lacking and show your failure to listen to the public. The number of comments must be stated so that Secretary Richardson is very clear on where the people of the NW stand. Also failed to mention the FIVE city council resolutions against Hanford Restart.

1055-1

1055-2

Response to Commentor No. 1055

- 1055-1:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, or Alternative 2, Use Only Existing Operational Facilities.
- 1055-2:** While all comments received during the scoping periods for both the Plutonium-238 Production EIS and the NI PEIS are part of the Administrative Record for the NI PEIS, Section 1.4 of Volume 1 and Appendix N are intended to provide a summary of the issues and associated trends identified during the scoping process rather than a tabulation of comments by specific issue. It should be noted, however, that NEPA and CEQ regulations do not require an agency to include and respond to each scoping comment as is required for public comments on a Draft EIS. In preparing the NI PEIS, DOE carefully considered scoping comments received from the public. Any perceived discrepancy in the grouping of comments raising any one particular issue or set of issues is attributable to the manner in which they were originally categorized and counted. For example, a number of statements, letters, or resolutions signed by multiple persons, such as city council resolutions mentioned by the commentor, were received by DOE (both for and against FFTF restart) in response to the request for scoping comments. Each such comment document was considered and counted as a single comment in the NI PEIS comment tracking system. The Office of Nuclear Energy, Science and Technology works closely with the Office of the Secretary to keep him informed of the progress on the NI PEIS, including stakeholder input.
- 1055-3:** DOE notes the commentor's opposition to restarting FFTF for enhancing its existing nuclear facility infrastructure. DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production

Commentor No. 1055: Kim Burkland (Cont'd)

USDOE failed to demonstrate a compelling need ⁽¹⁾ for the:

- 1) production for space;
- 2) medical or research isotopes; and
- 3) nuclear energy research.

Not is there adequate justification for producing them all at one site or domestically.

Next, you must include the recommendations of the blue ribbon panel (subcommittee for isotope research and ^{production} planning) that advised against the use of FFTF for medical isotope production.

Next, you must include the demand estimates ^{from NASA} for plutonium 238. According to my sources, the USDOE estimates are artificially high and do not take into account the possibility to renegotiate a ^{current} contract with Russia.

Next, it is improper to release the draft EIS for public comment without the following information—

- 1) cost analysis of restart and all alternatives
- 2) studies of treatment of waste at all proposed sites; and
- 3) non-proliferation impacts from FFTF and the importation of its radioactive fuel from Europe - this may be a treaty violation!!

1055-3

1055-4

1055-5

1055-6

1055-7

1055-6

Response to Commentor No. 1055

activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Under the No Action Alternative, DOE would continue to purchase plutonium-238 to meet the space mission needs for the 35-year evaluation period considered in the NI PEIS. However, DOE recognizes that any purchase beyond what is currently available to the United States through the existing contract would likely require negotiation of a new contract and may require additional NEPA review. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

In January 1997, President Clinton tasked his Committee of Advisors on Science and Technology (PCAST) to evaluate the current national energy research and development portfolio and to provide a strategy that ensures the United States has a program to address the Nation's energy and environmental needs for the next century. In its November 1997 report responding to this request, the PCAST Energy Research and Development Panel determined that restoring a viable

Commentor No. 1055: Kim Burkland (Cont'd)

All information listed on p. 2³ must be given adequate review time for the public. ^{that is released}

1055-8

Next, USDOE failed to adequately characterize the environmental impacts from FFTF restart. The following statement is a slap in the face to the EIS statement and must be revoked and replaced with actual information:

"Environmental impacts associated with the existing inventory of spent fuel at Hanford site are minimal"

1055-9

This statement is erroneous. More than 2100 tons of corroding spent fuel is swimming in aging water filled basins adjacent to the Columbia River and poses one of the largest problems for clean up with an estimated cost of more than \$1.6 billion.

Next, USDOE must include the cost of FFTF and all companion facilities decontamination and decommissioning in the restart - not just every other alternative.

1055-10

Next, the USDOE fails to assess all existing contaminant sources at Hanford.

1055-11

Next, the USDOE fails to assess the cumulative impact of additional waste from the proposed

Response to Commentor No. 1055

nuclear energy option to help meet our future energy needs is important and that a properly focused research and development effort to address the potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) was appropriate. The PCAST panel further recommended that DOE reinvigorate its nuclear energy research and development activities to address these potential barriers. Section 1.2.3 provides information on the nuclear energy research and development mission.

There is no requirement to conduct all of the proposed actions at one site. In the Record of Decision process, DOE could choose to combine components of several alternatives in selecting the most appropriate strategy. For example, DOE could select a low-energy accelerator to produce certain medical, research, and industrial isotopes, and an existing operating reactor to produce plutonium-238 and conduct nuclear research and development. Should FFTF be selected for restart in support of these missions, DOE expects it could utilize a 15-year supply of mixed-oxide fuel that would be available from Germany under favorable economic terms (i.e., no charge for the fuel).

1055-4: The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost-efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may

Commentor No. 1055: Kim Burkland (Cont'd)

FFTF restart to the existing waste sources. (A)

1055-11

Next, USDOE fails to adequately assess alternatives such as subsidizing university reactors or buying time @ private facilities.

1055-12

Next, the NO action alternative (5) must include the complete shut down of FFTF - NOT maintaining it on standby.

Next, USDOE failed to address the conflict of interest in using PNNL's evaluations when they (the company) are a proponent of restart and stand to gain from it financially.

Next, USDOE fails to assess the legality of introducing new programs and wastes into the highly contaminated 306 e or 325 buildings at Hanford that would be used w/ FFTF restart.

1055-13

And, FINALLY, you must admit that the real reasons to restart FFTF are in a hidden agenda that includes preserving jobs and starting up new weapons research or classified missions.

This action will not be tolerated by the public!

Shut down FFTF permanently, Make actual CLEAN-UP the priority of the rule at the Hanford site.

1055-1

Comply with the law, do your job right, and listen to the people!

1055-14

Thank you for the opportunity to comment.
Kim Burkland

Response to Commentor No. 1055

possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

DOE has taken the Expert Panel and NERAC report recommendations under consideration in developing the range of alternatives evaluated in the NI PEIS. These reports were made available to the public at the NI PEIS public information centers and on the Internet at www.nuclear.gov.

1055-5: See response 1055-3. DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

1055-6: The costs and nuclear nonproliferation impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. DOE mailed these documents to more than 730 interested parties on August 24 and September 8, 2000, respectively. Both reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided summaries of the Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment in Appendixes P and Q, respectively, in the Final NI PEIS.

1055-7: The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization

Commentor No. 1055: Kim Burkland (Cont'd)

Response to Commentor No. 1055

programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. It is DOE's policy that all wastes be managed (i.e., treated, stored, and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

- 1055-8:** DOE notes the commentor's request for extension of the public comment period. The Council on Environmental Quality's (CEQ) "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act" (40 CFR 1506.10(c)) require that a minimum of 45 days be allowed for public comment on the Draft NI PEIS. As stated in the Notice of Availability (65 FR 46443 et seq.), the public comment period began on July 28, 2000 and continued to September 18, 2000. In preparing the Final PEIS, DOE has assessed and considered both oral and written comments received on the Draft PEIS during the public comment period and has responded to these comments in the Final PEIS. Volume 3 of the NI PEIS contains public comments received on the NI PEIS and DOE responses to those comments. Moreover, late comments were considered to the extent practicable.
- 1055-9:** The discussion in the Summary and Section 4.8.3.5 of Volume 1 on the cumulative impacts for spent nuclear fuel management at Hanford was revised to clarify that the management of the existing spent nuclear fuel at Hanford results in a dose of less than 0.1 millirem per year of the maximally exposed member of the public. This dose is well within the DOE limits given in DOE Order 5400.5. As discussed in that Order, the dose limit from airborne emissions is 10 millirem per year, as required by the Clean Air Act; drinking water is 4 millirem per year, as required by the Safe Drinking Water Act; and the dose limit from all pathways combined is 100 millirem per year. DOE has committed to remove the spent nuclear fuel at Hanford for ultimate disposition in a geologic repository.
- 1055-10:** DOE assumes that the commentor is referring to deactivation, not decommission. Decommission costs were not included for any alternative. Deactivation of FFTF is not part of implementing

Commentor No. 1055: Kim Burkland (Cont'd)

Response to Commentor No. 1055

Alternative 1, FFTF Restart. Deactivation of FFTF is part of implementing Alternatives 2, 3, 4, and 5 and including the cost of FFTF deactivation in the implementation costs for these alternatives is appropriate. The Cost Report was structured to identify the implementation costs of the various alternatives so the Secretary of Energy would have this information along with other data for consideration.

1055-11: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The current inventory of wastes managed at the Hanford Site is identified in Section 3.4.11.1 of Volume 1. In addition, the generation rates of wastes associated with the NI PEIS options that use Hanford facilities are compared with the current waste generation rates at the site in Section 4.3 of Volume 1. As stated in Sections 4.3.1.1.13, 4.3.3.1.13, and 4.4.3.1.13, the generation rates of wastes at Hanford associated with the options that utilize either FFTF, FMEF and/or RPL/306-E would be much smaller than the current waste generation rates at the site. These volumes would also be small in comparison to the existing inventory at the site (Section 3.4.11.1, Volume 1). These comparisons were also made for the other options which involved INEEL and ORR facilities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

1055-12: A number of facilities, including those already producing isotopes, were considered but were dismissed from further consideration (see Volume 1, Section 2.6). Among the reasons that some were dismissed was the

Commentor No. 1055: Kim Burkland (Cont'd)

Response to Commentor No. 1055

fact that they lacked sufficient neutron production capacity, were fully dedicated to existing missions, were not capable of steady-state neutron production, had insufficient power to sustain adequate steady-state neutron production, were unable to produce a constant, reliable source of neutrons due to dependency on operating schedules of their primary missions, are under construction with capacity fully dedicated to other planned mission, or have been permanently shut down. It should be noted that CLWRs were considered for plutonium-238 production, but were dismissed from further consideration for medical and industrial isotope production because facility modifications to produce isotopes with a short half life would be significant.

The No Action alternative is required under Council on Environmental Quality regulations (40 CFR 1502.14(d)). It provides a point of comparison for the action alternatives. The No Action Alternative generally represents the status quo; that is, it includes those actions that would normally take place without the proposed action. Since the status quo involves maintaining FFTF in standby and not its deactivation, it is not appropriate to include its deactivation as part of the No Action Alternative. Deactivation of FFTF is included as Alternative 5, Permanently Deactivate FFTF, and as part of Alternative 2, Use Only Existing Operational Facilities, Alternative 3, Construct New Accelerator(s), and Alternative 4, Construct New Research Reactor.

1055-13: PNNL is not preparing this PEIS, although it has offered technical comments on it. These comments have been evaluated by DOE and the contractor preparing the PEIS. PNNL has also previously provided technical and cost analyses on matters related to the FFTF, which have undergone independent scrutiny, and have helped confirm the need for the environmental review now being independently developed. PNNL's work does not present a conflict of interest. Ultimately, DOE has full control over the contents of the PEIS.

FFTF and any associated facilities remain subject to compliance with environmental laws regardless of its future operational status. All Hanford activities are conducted in accordance with the 1998 Tri-Party Agreement (Washington Department of Ecology, U.S. EPA, and the U.S.

Commentor No. 1055: Kim Burkland (Cont'd)

Response to Commentor No. 1055

Department of Energy), which sets milestones and schedules for cleanup and restoration on all parts of the site. In August 1999, these agencies agreed to temporarily suspend FFTF M-81 series milestones until a final decision is made on the future of the facility by the Secretary of Energy. If a decision is made to restart FFTF, these agencies have agreed to consider the Agreement's milestones deleted. Should a decision be made to continue with shutdown of FFTF, appropriate negotiations must be made to create an appropriate set of new TPA milestones and target dates within (120) days of receiving proposed changes. FFTF restart would not affect the schedule or availability of funding for existing cleanup activities.

The 306-E facility is not contaminated and is being proposed as a location to conduct activities that do not involve radioactive materials. While the 325 Building has a large inventory of radionuclides associated with ongoing activities at the facility, the building is not contaminated in worker accessible areas. Operations at the 325 Building are conducted in accordance with applicable federal and state regulations and appropriate DOE Orders.

The 300 Area Revitalization Plan (DOE 1999) provides for continued multi-program R&D operations in the 300 Area, including operation of various laboratories, office facilities, and services. It also provides for consolidation (but not complete elimination) of radiological operations, with support for Hanford Site facility transition and environmental restoration efforts. The plan does not require closure of the 325 and 306-E buildings as long as they are needed for active research projects. Operation of these facilities would not violate any existing agreements between DOE and stakeholders or other legal obligations, nor would it affect ongoing or planned environmental restoration and facility transition activities.

The need to restart FFTF is described in Chapter 1 of the Final PEIS. In Chapter 4, the socioeconomic impacts of restarting FFTF are described. The economic welfare of Hanford and all DOE sites is important to DOE. However, any economic impact is secondary to the proper expenditure of taxpayer dollars.

As discussed in Section 1.2 of Volume 1, plutonium-238 would be produced to support NASA's deep space missions. Plutonium-238 is not

Commentor No. 1055: Kim Burkland (Cont'd)

Response to Commentor No. 1055

used to produce nuclear weapons. All missions considered in the NI PEIS are for civilian purposes.

1055-14: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Commentor No. 1056: Ivan Green

2 Sep 2000

From: Ivan Green
 1212 NE 26th Ave Apt 8
 Portland OR 97232

To: Colette Brown, US DOE
 Subj: PEIS, FFTF Hanford

In 1989, the DOE signed the Tri-Party Agreement for cleanup of Hanford. What compelling need has now arisen?

- 1) Plutonium in space? Threat to all earthlings!
- 2) Nuclear power? Economically dead issue!
- 3) Medical isotopes? Yes, I heard compelling testimony, but long-term carcinogenic effects on all of us must override the few!
- 4) Unstated goals? Weapons?

I urge the choice of Alt 5 or Alt 2:
 No further development: cleanup the mess.

Ivan Green

Thanks for hearing at OMSI, Portland.

Response to Commentor No. 1056

1056-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

1056-2: DOE notes the commentor's views regarding the potential use of FFTF for expanding DOE's existing nuclear facility infrastructure. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs:

- 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;
- 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and
- 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. However, no component of the proposed action is for the purpose of supporting any defense or weapons related mission. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

1056-3: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, or Alternative 2, Use Only Existing Operational Facilities.

Commentor No. 1058: Anonymous

Response to Commentor No. 1058

Draft PEIS Comment Form

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Restart FFTF!
We need the medical isotopes
to save lives.

1058-1

1058-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): _____

Organization: _____

Home/Organization Address (circle one): 32055 Caballo Rd

Kennecook, WA

City: _____ State: _____ Zip Code: _____

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Commentor No. 1059: Crystal Rae

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

I would like for my elected officials to really 'educate' themselves about the FFTE and consider the facts over 'public pressure' in making your decision regarding the future of medical isotopes & the FFTE.

I am in favor of this very important health issue. Please keep the FFTE open for continued research projects. It is truly an asset to our nuclear infrastructure.

1059-1
1059-2

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Crystal Rae

Organization: none

Home Organization Address (circle one): PO Box 1096

City: Corvado State: CA Zip Code: 95428

Telephone (optional): _____

E-mail (optional): wistaria@saber.net

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19001 Germantown Road • Germantown, MD 20874
 Toll-free telephone: 1-877-562-4592 • Toll-free fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Response to Commentor No. 1059

- 1059-1:** DOE notes the commentor's views on the necessity for reliance on objective, factual information as the basis for sound decisionmaking. DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and to providing ample opportunity for public comment on those actions. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.
- 1059-2:** DOE notes the commentor's support for Alternative 1, Restart FFTE.

Commentor No. 1060: Nathan Koenig

Response to Commentor No. 1060

Draft PEIS Comment Form

I am thoroughly opposed to the re-start-up of the Hanford Nuclear Power Plant. The site needs to be cleaned up and no more nuclear power of any kind shall be generated at the plant.

1060-1

1060-2

1060-1: DOE notes the commentor's opposition to Alternative 1, Restart FTF; however, it should be pointed out that the FTF is a research reactor and not an electrical power generating facility.

1060-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The FTF is not capable of producing power in the form of electricity. The proposed activity is to produce medical and industrial isotopes, produce plutonium-238 for NASA space missions, and for research and development.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Nathan Koenig

Organization: _____

Home/Organization Address (circle one): 1214 Loxala St

City: HR State: OR Zip Code: 97031

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 1061: Jeff and Lori Washburn

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

I am in support of FFTF restart for medical isotopes, Pu-238 production and nuclear research & development. To scrap FFTF and its support buildings (EMEF + MASE) to build a new research reactor with less capability is ridiculous.

1061-1

Response to Commentor No. 1061

1061-1: DOE notes the commentor's support for Alternative 1, Restart FFTF, and opposition to Alternative 4, Construct New Research Reactor.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Jeff Washburn / Lori Washburn

Organization: _____

Home/Organization Address (circle one): 5409 Mt. Air Way

City: Yakima State: Wa. Zip Code: 98901

Telephone (optional): (509) 452-1386

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



Commentor No. 1062: Pam Ankrum

Response to Commentor No. 1062

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

Our community needs FFTE, please restart it!
 FFTE provides many opportunities for our future,
 Take a hard look at all of the positive
 aspects of restarting FFTE.

1062-1

1062-1: DOE notes the commentor's support for Alternative 1, Restart FFTE.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-IEIS@hq.doe.gov

Name (optional): Pam Ankrum

Organization: Society of Women Engineers

Home/Organization Address (circle one): 231 Rachel Rd.

City: Kennawick State: WA Zip Code: 99333

Telephone (optional): (509) 627-1702

E-mail (optional): ankrum@3-cities.com

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19501 Germantown Road • Germantown, MD 20874
 Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Commentor No. 1063: Marvin Lewis

NI PEIS Toll_Free Telephone

9/11/00

Marvin Lewis
3133 Fairfield Street
Philadelphia, PA 19136
215_676_1291

This is a comment for the record. Please don't send me any more paper. I have enough.

First of all, NASA is not doing enough to develop alternative, namely solar power sources for space missions.

1063-1

Two, we have some pretty nasty problems with worker contamination accidents at some of these production facilities. We don't need more.

1063-2

Third, expansion of the number of launches and nuclear power space vehicles from Cape Canaveral on rockets with noticeable failure rates, sometimes over 10 percent, will only increase the possibility of a deadly mishap, like a few pounds of this being smeared across Washington, D.C. and hopefully not Philadelphia because that is my address.

1063-3

The massive cost of expanded production of plutonium_238 cannot be justified at a time when DOE admits it needs over \$300 billion to clean up it's existing problems at DOE facilities.

1063-4

The military is promoting use of nuclear power in space for space_based weapons technology. Using nuclear power for space war will have severe environmental implications for life all over the earth, even though I am particularly worried about the U.S. because that is where I live.

1063-5

Response to Commentor No. 1063

1063-1: DOE notes the commentor's interest in the development of alternative energy sources for space missions, although issues such as NASA research priorities are beyond the scope of this Nuclear Infrastructure PEIS. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch.

1063-2: Plutonium-238 processing facilities can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Sections 4.2-4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from plutonium-238 processing, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that the radiological and nonradiological risks associated with plutonium-238 processing would be small.

1063-3: DOE notes the commentor's concern for NASA's use of nuclear materials for space missions.

1063-4: DOE notes the commentor's opinion and concern about funding available for cleanup at DOE facilities.

1063-5: DOE notes the commentor's concern for the use of nuclear power in space-based weapons. The DOE missions stated in this PEIS are not defense- or weapons-related.

Commentor No. 1063: Marvin Lewis (Cont'd)

This whole idea is stupid. The only reason for it is to make money for global corporations. You can say that the reasons are other things, but I don't have to believe you and I don't.

1063-6

Those are my comments, I hope you got them. I hope you got the flavor of them too. Namely, I don't like the whole idea of space_based weapons, specially plutonium in space, because it has a habit of coming back. And it might miss you and hit me, and I don't need that. Thank you.

1063-5

Response to Commentor No. 1063

1063-6: DOE notes the commentor's views. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs:

- 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;
- 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and
- 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

Commentor No. 1064: James O. Dittmer

Draft PEIS Comment Form

The FFTF must be restarted to provide an irradiation source to make nuclear medicine isotopes and Pu 238 for NASA so that deepspace probes can continue. Also the FFTF could be used for future irradiation mission that have not be identified. The USA has very limited nuclear irradiation facilities and any new reactor or accelerators would be very expensive and couldn't do what FFTF has and could continue to do. The staff and infrastructure is still in place at FFTF.

Nuclear medicine has made great strides with procedures that are so much less risk and with much greater success. I have had two personnel experiences with the use of ~~radio~~ isotopes used to detect potential blockages around the heart, and this method was less intrusive than angiogram method.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): James O. Dittmer
 Organization: Flou Daniel Hanford (currently disabled)
 Home/Organization Address (circle one): 5217 W26A

City: Kennewick State: WA Zip Code: 99338

Telephone (optional): 509-783-9949
 E-mail (optional): jadittmer@earthlink.net

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Response to Commentor No. 1064

1064-1

1064-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.



Commentor No. 1065: Douglas J. McCarron
United Brotherhood of Carpenters and Joiners of America



UNITED BROTHERHOOD OF CARPENTERS AND JOINERS OF AMERICA

Douglas J. McCarron
General President

September 8, 2000

Colette E. Brown, NE-509
U.S. Dept. of Energy
19901 Germantown Road
Germantown, MD 20674

Dear Ms. Brown:

The official position of the United Brotherhood of Carpenters is in support of restarting the FFTF as outlined in the NI PEIS alternatives. The country needs the isotope production capabilities that are the responsibilities of the Department of Energy under the Atomic Energy Act.

The PEIS states, "Of particular need over the longer term are dependable sources of research isotopes and reactor facilities providing high volume flux irradiation for nuclear fuels and materials testing." This reactor built by our members is efficient and capable of supporting the research and development program. America must pursue clinical medicine, scientific research, and industrial endeavors, and FFTF has a proven track record in reliability for this program.

Studies have noted inhibited growth in the use of radioisotopes to provide a better life for our citizens. The health of our workers is at risk by a reliance on foreign suppliers, which is detrimental to the best interests of our country. This also means we are funding jobs outside this country. We need to be assured that DOE take the actions to ensure union members keep their operating and construction jobs.

Let's go forward under the NI PEIS in trying to determine the best answer to filling the gaps in the DOE infrastructure. The decision that the DOE has to make is not an easy one. There are many complex science and technical issues that need to be addressed. Choosing an already existing facility that is the newest in the DOE complex with a replacement value of almost \$2 billion makes the most sense to me. For the reasons mentioned above, I urge to consider restart of the FFTF as the best alternative.

Sincerely,

Douglas J. McCarron
GENERAL PRESIDENT

DJM/jb

Response to Commentor No. 1065

1065-1

1065-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

1065-2

1065-2: DOE NOTES the commentor's view. If DOE decides to enhance its nuclear infrastructure, this will reduce our reliance on foreign suppliers. However, it is not the intention of the DOE to become the sole supplier of domestic medical isotopes.

1065-1

Commentor No. 1066: Fred T. Matica

Draft PEIS Comment Form

NATURE HAS GIVEN US THE BEST NUCLEAR POWER PLANT, FIND AT A SAFE LOCATION — THE SUN AT 93 MILLION MILES IS FREE, CLEAN, REQUIRES NO MAINTENANCE & WILL OPERATE FOR BILLIONS OF YEARS TO COME! BUT DO USE CAUTION — SKIN CANCER, YOU KNOW!

SPACE PROGRAMS & ISOTOPES ARE WONDERFUL, BUT LETS FIRST SHOW HOW WE CAN SOLVE PROBLEMS ON EARTH USING THE "PAID-FOR" SPACE TECHNOLOGIES & PREVENT DISEASES RATHER THAN HAVING TO USE DANGEROUS SUBSTANCES TO "NUKE" TUMORS.

PLEASE COMPLY WITH THE "3 PARTY AGREE - / MENT & CLEANUP & SHUT DOWN HANFORD. I NO LONGER BELIEVE OR TRUST THE INTENTIONS OR ACTIONS OF THE D.O.E.

COLETTE, YOU DIDNT LOOK VERY GOOD AT THE PORTLAND MEETING. YOU ARE ON THE RECEIVING END OF A LOT OF HOSTILITY & IT IS TAKING ITS TOLL. PLEASE TAKE CARE OF YOURSELF. I WILL SAY A PRAYER FOR YOU.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): FRED T. MATICA

Organization: _____

Home/Organization Address (circle one): _____

1105 NW 79 TH CIRCLE

City: VANCOUVER State: WA Zip Code: 98665

Telephone (optional): (360)546-3806

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19001 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



1066-1

1066-1: DOE notes the commentor's interest in solar energy. Consistent with its mandates under the Atomic Energy Act, DOE is proposing this enhancement for the purposes of addressing three primary needs: 1) to support the increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238 a fuel source that is required for deep space missions and for which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear energy research and development in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio.

1066-2

1066-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Commentor No. 1067: Vera Dafoe

September 6, 2000

9449 SW 62nd Drive
Portland, OR 97219

Colette E. Brown
NE-50, U.S. Dept. of Energy
1990i Germantown Road
Germantown, MD 20874

RE: DRAFT EIS FFTF

Dear Ms. Brown:

I want to register my strong objection to all alternatives in the Draft EIS wherein the FFTF would be started up.

In my opinion, the plan to re-start the nuclear reactor is insane. We seem to have a group of mad scientists operating the Department of Energy when they would even consider such a plan.

There is already massive, uncontrolled contamination at Hanford. The Department seems unable to clean it up before the whole mess leaks into the Columbia River.

The general public--and those in Oregon, in particular--does NOT want the reactor restarted.

I don't want it restarted.

Hanford is a disaster waiting to happen.

How many hearings, how many letters, how many phone calls will it take to get across that we do NOT want this restart?

I say NO!

No reactor startup.

Money and energy should be directed to cleaning the existing and dangerous waste that is already at Hanford.

Sincerely
Vera Dafoe
Vera Dafoe

Response to Commentor No. 1067

1067-1

1067-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1067-2

1067-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

1067-1

1067-2

1067-1

1067-2

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Commentor No. 1068: Vincent D. Dobbin

Draft PEIS Comment Form

Ms. Colette E. Brown, NE-50
U.S. Dept. of Energy
19901 Germantown Road
Germantown, MD 20874

Please - RESTART the FFTE Facility at Hanford!! Medical Isotopes are needed so badly, both for diagnostic procedures, & to treat & cure many of the cancers that are killing so many people! Building new reactors would take so many more years, and meanwhile we watch so many friends & relatives suffer from the cancers, chemotherapy & still do not live long!
The public deserves what the FFTE is able to provide!!

1068-1

1068-1: DOE notes the commentor's support for Alternative 1, Restart FFTE, and opposition to Alternative 4, Construct New Research Reactor.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Vincent D. Dobbin

Organization:

Home/Organization Address (circle one):

7150 S.W. Minter Bridge Road

City: Hillsboro State: OR Zip Code: 97123

Telephone (optional): 503-648-4028

E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 1069: John E. Nolan

Response to Commentor No. 1069

411 Snyder Rd.
Richland, WA. 99352
September 6, 2000

Ms. Colette E. Brown
NE-50- Office of Nuclear Science
Energy and Technology
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

Dear Ms. Brown:

I hope someone reads these responses rather than just takes a head count of who is for or against. Nevertheless, for head count purposes I'm for the restart of FFTF.

However, the issue is bigger than the restart of the world's newest and best test reactor. The issue is basic to the purpose of the Department of Energy and the reason it exists to assure an energy supply for the United States of America. A reliable energy supply is vital for everyday living. It supports life as we know it, relieves drudgery, and lifts people out of poverty. Lack of energy can create havoc and disease in our cities.

DOE decisions should be based on scientific fact and not emotions — and be driven by the long term best interests of the citizens of our nation. Who in DOE will step forward and take those best interests seriously, and not be driven by the latest poll? Who will look at the long term needs and not today's snapshot? Who will look at the long term impact on taxpayers.

Today's snapshot of medical isotopes and P^{238} supply are valid reasons for restart; however, the ability of the USA to obtain reliable scientific data for energy supply decisions in the future should not be lost by abandoning this safe, versatile test reactor.

Sincerely yours,

John E. Nolan
RECIPIENT / DOE Distinguished Associate Award, April 1990

1069-1

1069-1: DOE policy encourages effective public participation in its decision making process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

1069-2

1069-2: DOE notes the commentor's support for Alternative 1, Restart FFTF.

1069-3

1069-3: DOE notes the commentor's view. DOE's Record of Decision for the NI PEIS will be based on scientific merit and a number of other factors including environmental impacts, costs, public input, nonproliferation concerns, program objectives and schedules.

1069-2

Commentor No. 1070: Brad Yazzolino

Ms. Colette Brown
 USDOE Office of Space & Defense Power SystemsNE-50
 19901 Germantown Road
 Germantown Maryland 20874-1290

Dear Agencies involved with the DOE/EIS-03100 of July 2000,

I think alternative #5 is the only reasonable alternative, and I am favor of it and only it.

As a Portland native I have been aware of the sad history of Hanford for many decades. I lived in Richland for a while in the early 50's. I remember the landscape there, the sagebrush hills are not at all barren, and not at all a wasteland. It teems with life. I have toured Hanford twice as a photographer, and I have seen the Columbia River shores there, I agree with the great number of fish biologists that say it is the absolutely the best salmon spawning habitat on the river.

Now that the Army Corps of Engineers and the present administration has Set aside Hanford reach as A National Monument, and said that they aren't going to breach any Snake River dams soon, then that just makes the 110 miles of river or so of rivershore near Hanford all the more precious. (If your milages differ slightly from mine, fine.. but don't forget to count both sides of the river and all that island shoreline too.)

I have been to a lot of these meetings on FFTF over the last few years and I agreed with the City of Portland City Council in September 1999 when they said "NO" to re-starting the FFTF. I commend all the Senators and Congresspeople who spoke up back then, and all of those who do so now, who still say NO to the re-start. To me the DOE is behaving like a petrified fossil with it's hand still on the steering wheel, and they, like Jesse Helms, and Slade Gorton, refuse to acknowledge the tide of history that we people, make with our lives everyday.

I think that the PEIS reveals that DOE and it's corporate friends still actually want to use the FFTF for tritium production, and other things such as the purpose that is stated on page D-16 of volume two of the PEIS, which says:

"There is particular interest in materials testing associated with extension of commercial nuclear power plant license renewals."

Well, I don't want to see old ready-to-die nuclear plants retrofitted with things cooked up in a re-sarted FFTF on the shores of our Columbia River. If FFTF is allowed to restart, in a while we'll learn that medical isotopes are only some of the things that it is "good" for.

Restarting this 20 year old liquid sodium cooled reactor in a area that has been so poisoned, and so desparately needs to focus on its difficult clean up mission is totally absurd, and most people outside of the DOE and the Tri-cities area see that.

Build a new medical isotope reactor somewhere else, somewhere nowhere near one of the largest rivers on the continent please, if you must, but do not re-start the FFTF! It is too expensive, the design is flawed and incomplete, the PEIS failed to include costs in a timely manner and the waste stream plan is inadequate and incomplete.

Brad Yazzolino
 6451 SE Morrison Ct
 Portland, OR 97215

1070-1

1070-2

1070-3

1070-4

1070-2

1070-5

1070-6

1070-7

1070-8

Response to Commentor No. 1070

1070-1: DOE notes the commentor's support of Alternative 5, Permanently Deactivate FFTF.

1070-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1070-3: DOE notes the commentor's opposition to the use of FFTF for the expansion of its nuclear facility infrastructure. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs:

1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;

2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and

3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

In January 1997, President Clinton tasked his Committee of Advisors on Science and Technology (PCAST) to evaluate the current national energy research and development portfolio and to provide a strategy that ensures the United States has a program to address the Nation's energy and environmental needs for the next century. In its November 1997 report responding to this request, the PCAST Energy Research and Development Panel determined that restoring a viable nuclear energy option to help meet our future energy needs is important and that a properly focused research and development effort to address the potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) was appropriate. The PCAST panel further recommended that DOE reinvigorate its nuclear energy research and development activities to address these potential barriers. Section 1.2.3 of Volume 1 provides information on the nuclear energy research and development mission.

Commentor No. 1070: Brad Yazzolino (Cont'd)

Response to Commentor No. 1070

1070-4: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to “ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use.” The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

DOE notes the commentor’s opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Although the FFTF is 20 years old, it is DOE's newest reactor, it is in excellent condition and evaluations have been performed to show that it has sufficient life remaining to fully support the proposed 35 year mission.

1070-5: DOE notes the commentor's opinion.

1070-6: As discussed in Section 2.3.1.1, the design of the FFTF, as described in its Safety Analysis Report, was reviewed by both the U.S. Nuclear Regulatory Commission and the Advisory Committee for Reactor Safeguards prior to its operation. While some plant modifications would be made if DOE decides to restart the FFTF, the design of these modifications would be subjected to a rigorous review process. The analyses presented in the PEIS, which show very low risk associated with the operation of FFTF, reflect the changes needed to support the stated missions.

1070-7: The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of

Commentor No. 1070: Brad Yazzolino (Cont'd)

Response to Commentor No. 1070

Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. DOE mailed this document to about 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site <http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P in the Final NI PEIS.

- 1070-8:** Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Sections 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

DOE has developed a draft "Waste Minimization and Management Plan for FFTF" to incorporate pollution prevention and waste minimization practices in its consideration of the future of FFTF. If a decision were made to restart FFTF, this plan would be used to ensure that optimum opportunities are provided for characterizing potential waste streams, identifying source reduction and recycling strategies, evaluating disposition options, developing sustainable designs, and implementing effective management strategies.

Commentor No. 1071: R. Virgil Donovan

R. Virgil Donovan
14258 Dodson Rd NW
Ephrata, WA 98823-9715
Ph (509)754-0123
Fax(509)754-3919

August 27,2000

Ms. Colette Brown, U S Department of Energy,
Office of Space and Defense Power Systems, NE-50,
19901 Germantown, Maryland 200874-1290

Nuclear Infrastructure PEIS Comment:

The United States Department of Energy is being encouraged to produce tritium in the Hanford FFFR reactor or in the TVA reactors. Lobbyists, potential tritium production contractors and that camp of politicians that will gain the most from their support in this election campaign are pushing this defense production with very little knowledge about the current stockpile and economic and nuclear future of US citizens.

In the early 1950's our nuclear warhead laboratories had perfected a warhead under 100 pounds weight that would yield 100 kilotons of blast. We were capable of producing a kiloton of blast with every pound of weight in a conventional plutonium uranium nuclear warhead. The two Japanese drops showed us that each kiloton of blast could cause 10,000 immediate and 20,000 total deaths over six months. We could have built our arsenal around 100 warheads of this simplicity and size and been able to create 200 million deaths without our fancy delivery and guidance systems. Perhaps a 1500 foot height detonation would be most efficient.

Terrorists could deliver the same warheads on foot, simply setting it to detonate at ground level. A ground level detonation would waste perhaps half of the blast but produce a great cloud of radiated dust which would travel around a world hemisphere.

Instead of such simplicity, we produced 70,000 nuclear and thermonuclear (hydrogen) warheads, having as many as 36,000 in the stockpile at one time. We absolutely had no need for more than 100 of that production and never utilized any tritium or thermonuclear ability. Total cost was \$4,400 per US citizen for each of 55 years or 58 billion dollars. We must stop grandizing weapons of mass destruction and reduce the world's stockpiles to common sense size. Any nation that has 100 warheads of an average two million civilian kill size needs a new congress and administrative staff if they are foolish enough to believe they are going to protect us from total annihilation.

This election let's put people in office that will do more than fill their pockets. Elect someone who knows that we don't need to spend one third of our defense money in a bloated irresponsible nuclear game. Lets make our world safer with a sensible stock pile size and no more tritium production and contamination.

Respectfully yours



R. Virgil Donovan
Former nuclear stockpile coordinator

Response to Commentor No. 1071

1071-1

1071-1: DOE notes the commentor's interest in eliminating or reducing the arsenal of nuclear weapons. Issues of nuclear weapons production, dismantlement of weapons, and elimination of weapons systems are beyond the scope of this Nuclear Infrastructure PEIS. The DOE missions addressed in this NI PEIS are civilian nuclear energy missions and are not defense-related.

Commentor No. 1071: R. Virgil Donovan (Cont'd)

R. Virgil Donovan
 14258 Dodson Rd NW
 Ph.(509)754-0123
 Fax(509)754-3919
 Ephrata, Wa 98823

January 24, 2000

Dear Editor:

According to the Brookings Institute study released by the government about two years ago the United States government has spent \$58 trillion dollars on nuclear warhead-oriented costs. This is over the 55 years since entering into such support and production. Figuring 240 million average US population during this time, that is \$4,400 cost per year, per individual US citizen.

Let's take a look at what a citizen has bought. In the 1940's, we dropped two warheads on Japan in a wartime situation. These two warheads yielded about 27 kilotons of explosive effect and killed 132,000 people immediately. About double that many losses occurred as a result of longer term deaths, radiation and eventual injury losses. That 27 kilotons of explosive power wiped out about 20,000 people per kiloton or let us say on average, one quarter of a million people.

In the early 1950s, we showed the world that we could produce 100 kilotons of yield from less than 100 pounds of atomic warhead. That little warhead which could be carried in a sack or suitcase was not big enough. We had to have a stockpile totally converted to thermonuclear strength in the 1960s potentially yielding 164 kilotons per warhead; further we required 36,000 of these at peak stockpile size

Figuring conservatively at one and a half million lives taken per warhead and total detonation we could annihilate 54 billion lives. There are only 6 billion persons in the world today. It would appear the American people bought nine times as much stockpile as they needed to wipe out everyone on earth. I believe the world would yield to our wishes if we only wiped out one third of the population. We have spent 27 times as much as we should have and that figures nothing for the loss of life due to residual radiation.

When are we going to put some politicians in office that can look out for our future? Those that have led us down this primrose path for the mighty warhead contractors should be turned out to pasture.

Respectfully yours,



R. Virgil Donovan
 Retired nuclear stockpile coordinator.

Response to Commentor No. 1071

Commentor No. 1071: R. Virgil Donovan (Cont'd)

R. Virgil Donovan 14258 Dodson Rd. NW Ephrata, Wa 98823-9715
1 (509)754-0123 FAX 1 (509) 754-3919 rvdonovon@qosi.net

February 26, 2000

To whom it may concern:

This is an important time in the election process and one of us must insist those we elect President and Congress government has wasted our funds in many places and fi

More
ast, our
r places.

Under 55 years of government leadership, we have spent \$4,400 every year for everyone in the US on nuclear warheads, mostly thermonuclear (hydrogen warheads). We built 70,000 and kept 36,000 in the peak size stockpile (about a 22 times overkill). The costs above include the most advanced delivery, guidance and detonating systems; nothing in the way of hand delivery here.

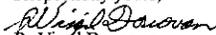
This year our government has again stepped forward and launched the planning of 8 systems of what they call triggers by the Los Alamos laboratory. In truth, 8 complete new warheads are under design and each is a thermonuclear(hydrogen) requiring the continuous processing of large amounts of new tritium. The Department of Energy is already pushing for the conversion of a reactor for tritium production. Tritium has already contaminated large areas of nuclear production plants, surrounding lands, residential areas and threatens ground water.

The first 3200 warheads will be converted for the Navy beginning in 2004. In the past, the Navy has gotten about one third of the laboratory results and the Army and Air force gets about equal shares so we are looking at another tremendously oversized expensive production or conversion of 9600 thermonuclear warheads. We will certainly continue to have an unneeded 7 times overkill.

Do we have elected Congressmen that will do more than pork barrel with these wasteful programs?. Where is the presidential or congressional candidate that will do more than take a hand out on this and when do we see this \$4,400 per year cost- per- person go for more soldiers pay and conventional defense rather than continuous overbuild and clean- up of the never ending residual nuclear mess.

100 nuclear warheads requiring no tritium (hydrogen component) still capable of yielding 100 kilotons of blast can produce a kill of 200 million people. That's one third the population of both the US and Soviet nations (twice as much as would be necessary to subdue any two nations). We never want to see a total use of this much stockpile. The lives we could live would only be what the residual radiation and its results allows. Let's elect people that think and act on this.

Respectfully yours,


R. Virgil Donovan

Response to Commentor No. 1071

Commentor No. 1071: R. Virgil Donovan (Cont'd)

R. Virgil Donovan
 14258 Dodson Rd. NW
 ph. (509)754-0123
 Fax(509)754-3919
 Ephrata, WA 98823

August 27,2000

Ms. Colette Brown, U. S. Department of Energy,
 Office of Space and Defense Power Systems, NE-50,
 19901 Germantown, Maryland 20874-1290

Nuclear Infrastructure PEIS Comment:

I intend to attend the Richland, Washington comment session August 31 at the Best Western Conference Center. I hope to be able to present this letter as well as some of my thoughts at that presentation.

As you probably know I am a former administrative engineer for the Atomic Energy Commission which was many years back but that history had a lot of bearing on my thoughts. I was one of the engineers following the FFTF through preliminary and design stages prior to any construction. I transferred to Albuquerque Weapons Headquarters and was a coordinator in nuclear weapons production, transportation and storage until transferring to Rocky Flats in Colorado. I became the lump sum contract administrator for weapons facilities there until quitting in 1972 to become active trying to stop this political nonsense. As a Washington state citizen, I campaigned against Senator Henry Jackson seriously for two years before the 1980 election but gave up in the face of huge donations from the nuclear camp.

In 1966 and 67 the Atomic Energy Commission was at the peak of converting the total nuclear warhead stockpile from fission to fusion warheads and each weapon would the require a hydrogen component in addition to plutonium and uranium. The early fusion weapons used deuterium as a hydrogen component and it was thought that it was somewhat safer than tritium. However, the government had a large source of tritium as it was a byproduct of every reactor whether for weapons or power production. This information had simply been classified up till now but the political powers were able to convince our congress to make good use of that cheap illusive tritium instead of using a more stable deuterium? Naturally the politicians approved and we went forward to require more tritium than the approved power reactors were producing and even purchased foreign tritium.

Several other things happened in 1966 and 67. We were at the maximum warhead stockpile size of 33,000 and the Soviets were still only at 28,000. It mattered little that some 19,000 were strategic and the other 14,000 were of some smaller designation. What did matter to the other eleven coordinator's in our two offices at Albuquerque Operations Office were the stories we were hearing. The new Secretary of Defense was going to reduce the stockpile to under a limit of 2,400. It was rumored that only 400 of the stockpile could be used at maximum effectiveness

1071-1

Response to Commentor No. 1071

Commentor No. 1071: R. Virgil Donovan (Cont'd)

or triggered at around 1,000 feet above the ground or no one could live in the total fallout. Thus the secretary felt that it sufficient to provide 800 or twice the lethal amount of weapons to each one of his branches of the service. The Army, the Navy and the Air force would then require 2400 warheads so they would have nothing to fuss about. Secretary McNamara found a new position as the world bank chair almost immediately. After all, President Kennedy thought we needed more weapons at that time, just after the elections.

At the present time, President Clinton and the soviets have an agreement to reduce the number of warheads in each stock pile. At last count our 33,000 is down under 18,800 and their stockpile has shrunk semiyearly. How could we have possibly justified converting to more production of tritium when we can't even justify the use of tritium ?

We should be moving toward converting back to fission weapons. They are as large as we will ever use and require no tritium. We decided years ago that large fissionable weapons are not needed but we keep them up through constant rebuild and retrofit with unneeded ,continuing expense and contamination. We need to look at retiring and cleaning up the production of all nuclear weapons and stopping the upcoming potential holocaust, not just the FFTF.

Respectfully yours,



R. Virgil Donovan,
Retired nuclear stockpile coordinator

**1071-1
(Cont'd)**

Response to Commentor No. 1071

Commentor No. 1072: Franklin County Board of County Commissioners (Sue Miller, Chair; Frank Brock; Neva Corkrum)

Neva J. Corkrum
District 1

Kathleen "Sue" Miller
District 2

Frank H. Brock
District 3



Fred H. Bowen
County Administrator

Patricia L. Shults
Executive Secretary

Mary Withers
Clerk To The Board

Board of County Commissioners
FRANKLIN COUNTY

September 5, 2000

Collette E. Brown, Document Manager
Office of Space and Defense Power Systems (NE-50)
Office of Nuclear Energy, Science and Technology
United States Department of Energy
19901 Germantown Road
Germantown, Maryland 20874

Re: **Support for restart of the Fast Flux Test Facility**

Dear Ms. Brown:

Franklin County would like to make clear its unwavering support for restart of the Department of Energy's Fast Flux Test Facility (FFTF) at the Hanford Site.

With the multi-billion dollar facility and support infrastructure already in place, restart of the FFTF is the only reasonable, fair, and prudent use of taxpayer dollars in pursuit of the mission stated by the DOE in the draft *Nuclear Infrastructure Programmatic Environmental Impact Statement* of July 2000.

Based on the facility's availability, capacity for multi-product missions, demonstrated technology, cost effectiveness, minimal environmental impact, existing infrastructure, skilled labor force, and an excellent safety record, it is clear that restart of the FFTF is the only logical choice for the DOE to meet its stated objectives.

There is overwhelming support in Franklin County and throughout the Tri-Cities area for the reuse of this incomparable national asset. We are excited about both the economic benefits restart could bring to our region, and about the contributions our community can make toward meeting national and global needs in isotope research and production.

Response to Commentor No. 1072

1072-1

1072-1: DOE notes the commentor's support for Alternative 1, Restart the FFTF.

Commentor No. 1072: Franklin County Board of County Commissioners (Sue Miller, Chair; Frank Brock; Neva Corkrum) (Cont'd)

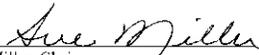
Collete E. Brown
Page 2
September 5, 2000

We believe that when the DOE carefully weighs its alternatives, restart of the FFTF will be the obvious choice for meeting the Department's research, development, and production objectives in the 21st Century. Thank you for the opportunity to comment on this matter.

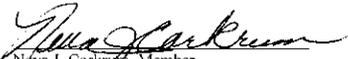
|| 1072-1
(Cont'd)

Sincerely,

BOARD OF COUNTY COMMISSIONERS
FRANKLIN COUNTY, WASHINGTON


Sue Miller, Chair


Frank H. Brock, Member


Neva J. Corkrum, Member

cc: US Senator, Slade Gorton (WA)
US Senator, Patty Murray (WA)
US Representative, Doc Hastings (WA - Fourth District)
Governor of Washington, Gary Locke
Board of Commissioners, Benton County
Gerald Pollett, Heart of America Northwest
Tri-Cities Economic Development Council

Response to Commentor No. 1072

Commentor No. 1073: Lyle H. Rath

Response to Commentor No. 1073

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

I support restart of FFTF for production of medical isotopes and I support restart of the FFTF for production of medical isotopes and fuel for space applications.

I have cancer which is in remission and we ought to be making it easier for cancer research by treatment which I feel very strongly for because I have this cancer.

I also feel that if I could sum up of fuel some day in the future and that we need nuclear energy for the rest of this century going.

1073-1

1073-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): LYLE H. RATH

Organization: _____

Home/ Organization Address (circle one): _____

City: STOVER, State: MO Zip Code: 65078

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 Email: Nuclear.Infrastructure-PEIS@hq.doe.gov



Commentor No. 1074: Anton Grambihler

Response to Commentor No. 1074

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

Please ~~keep~~ ^{put} FFTF reactor in operation for Medical Isotopes and defense needs.

1074-1

1074-1: DOE notes the commentor's support for Alternative 1, Restart FFTF; however, it should be pointed out that FFTF would not have any defense missions under the proposed action.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Anton Grambihler

Organization: _____

Home) Organization Address (circle one): 2008 Davison Ave

City: Richland State: WA Zip Code: 99352-2015

Telephone (optional): (509) 946-7837

E-mail (optional): ajgrambihler@nsga.com

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Collette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Commentor No. 1075: Archie Wilcox

228 Indian Court,
Richland, WA 99352
September 4, 2000

Colette E. Brown, NE-50
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

Dear Ms. Brown:

I attended the PEIS meeting in Richland on Thursday, August 31, 2000 and was impressed with your presentation and with the public input. I offer the following comments.

The FFTF should be restarted for the three missions that are being considered. This should be done as rapidly as possible to support both cancer treatment and cancer treatment research. I believe that the FFTF has the capacity to produce medical isotopes for both treatment and research.

I hope that the safe operating history of the FFTF is an important part of the PEIS. The FFTF operated safely for about ten years with a very minimal effect on the environment.

Dr. Robert Shenter quoted a figure of 1500 cancer deaths per day. It would be of interest to estimate how many of those deaths would be averted by the use of medical isotopes produced by the FFTF.

The cancer occurrences per year should be used to estimate the following items:

a) the fraction of these cancers that could be treated with radioisotopes.

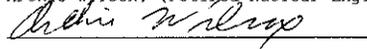
b) the percentage of successful treatments.

and c) the costs of treating these cancers.

If these calculations were done, these costs could be compared to the costs of conventional treatment. This would be a useful addition to the PEIS.

Sincerely,

Archie Wilcox, (retired Nuclear Engineer)



1075-1

1075-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

1075-2

1075-2: The operational history of FFTF (worker exposure data, annual radiological emissions, safety history and analysis) was used in the development of the human health impact assessment for all alternative options that included the restart of FFTF. DOE agrees that FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

1075-3

1075-3: No evaluation has been made in the NI PEIS of the health benefits or monetary costs associated with treating people with medical isotopes produced under any of the alternatives assessed. The purpose of the PEIS is to determine the environmental impacts associated with each alternative being considered for implementation by DOE.

Commentor No. 1077: Larry Egly

From: Ice@hotrmhmr.org%internet
[SMTP:LCE@HOTRMHMR.ORG]
Sent: Wednesday, September 06, 2000 6:21:44 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: PEIS On Expanded Production of PLU_238
Auto forwarded by a Rule

U.S. Department of Energy
NE_50, 19901 Germantown Rd.
Germantown, MD 20874_1290

Dear Ms. Brown:

The purpose of this message is to place on the public record my views for the draft Programmatic Environmental Impact Statement concerning the DoE plan to expand production of PLU_238 for future space missions.

My thoughts are summed up in three words: don't do it.

There are a variety of reasons to not expand production of PLU_238. Some of the more important considerations are listed below.

NASA should develop solar power sources for space missions before utilizing more nuclear material. The European Space Agency has already developed high_efficiency solar panels for deep space use, so we can too.

Rockets launched from Cape Canaveral have had a ten percent failure rate. Increasing the number of nuclear powered space devices placed on such unreliable launch vehicles will certainly increase the possibility of deadly accidents.

DoE has stated that it needs more than \$300 billion to clean_up existing problems at DoE sites. This should be accomplished__ to protect the public and the environment__before any funds are expended to exacerbate the clean_up back log by expanding production.

1077-1

1077-2

1077-3

Response to Commentor No. 1077

1077-1: DOE notes the commentor's opposition to the DOE production of plutonium-238 for use in future NASA space exploration missions. Section 1.2.2 of Volume 1 was revised to clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

1077-2: DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternative energy sources for space missions, although issues such as NASA research priorities are beyond the scope of this PEIS. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch.

1077-3: DOE notes the commentor's opinion and concern about funding available for cleanup at DOE facilities.

1077-4: DOE notes the commentor's concern for the use of nuclear power in space-based weapons, although issues such as the use of nuclear power sources in space-based weapons systems are beyond the scope of this Nuclear Infrastructure PEIS. The scope of this Nuclear Infrastructure PEIS is limited to analysis of alternatives to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development. The three missions, including the production of plutonium-238 for civilian NASA space exploration missions, are civilian nuclear energy missions and are not defense-related missions.

Commentor No. 1077: Larry Egly (Cont'd)

Some of this expanded production will probably be used by the military for space_based weapons. This could have egregious effects on the earth and all of humankind.

1077-4

Thank you for adding by remarks to the public record.

Respectfully,
Larry Egly
4400 N. 19th #254
Waco, TX 76708

IM4PEACE

Response to Commentor No. 1077

Commentor No. 1078: William E. Schenewerk

From: Edward_S_Ruff@rl.gov%internet
[SMTP:EDWARD_S_RUFF@RL.GOV]
Sent: Wednesday, September 06, 2000 11:55:46 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Dr. William Schenewerk _ Letter To LA Times On Nuclear
Energy
Auto forwarded by a Rule

FYI: Forwarding copy of letter by Dr. William Schenewerk, which
discusses nuclear power and future energy needs of society.

Thanks,

Ed S. Ruff, Sr. Design Engineer
Fluor Federal Services, Hanford Spent Nuclear Fuel Project
MCO and Fuel Basket Fabrication
PO Box 1050, Mail Stop L6_58
Richland, WA 99352

509_376_2140 Phone, 509_372_0638 FAX
edward_s_ruff@rl.gov

____ Original Message ____

From: William Schenewerk
[mailto:William.Schenewerk@parsons.com]
Sent: Wednesday, September 06, 2000 5:51 AM
To: cahodge@home.com; caryn.schenewerk@gte.net;
Edward_S_Ruff@rl.gov;
elkobe@yahoo.com; fred.schenewerk@redriver_ex.army.mil;
Hervitage@aol.com; jbrittin@apsc.com; JSBothwell@aol.com
Subject: Sent the following useless letter to the LA times

William E. Schenewerk william.schenewerk@parsons.com
5060 San Rafael Ave, Los Angeles CA 90042_3239
323_257_6672

Response to Commentor No. 1078

1078-1: DOE notes the commentor's concerns about future energy needs.

Commentor No. 1078: William E. Schenewerk (Cont'd)

Re LA TIMES, Sunday 09032000

Lloyd J. Dumas's editorial is the typical anti_technology editorial that seems to appear on a regular schedule. The words "arrogance" (false superiority) and "solar energy" seems to be part of these editorials. After a large number of complaints, there is offered the crumbs of solar and wind energy. Sometimes we get offered hemp.

Wind energy had its day 200 years ago. Sail_powered ships are as fast as early steam_powered ships, under optimal wind conditions.

Today there are no sail_powered merchant ships. The 1998 California renewable energy production is half the 1988 California renewable energy production. A random visit to the Livermore CA wind_energy windmills will show: 1/3 running, 1/3 not running, and 1/3 in pieces.

The economics of solar energy is very bad. Base_loaded solar_thermal power generation is best done using ammonia_water distillation and recombination for energy storage. Energy storage cost is roughly 1/4 total cost. All energy storage methods lose roughly half the collected energy. As a result, any energy storage doubles collector area. Power production is roughly 50 W/m² of mirror, assuming cooling_water is available. Annual energy production is roughly 50 kWh/m² of mirror, using 250 sunny days, 6 hr/day and 70% plant availability. Materials to build a house cost over \$200/m². Tracking mirrors will cost at least as much, \$200/m².

Energy storage cost, based on mirror area, is \$50/m².

Resulting total cost is \$250/m², based on collector area. At 15% investment and maintenance cost, power costs is a rock_bottom 0.75 \$/kWh. This is 8 to 10 times the present cost of electricity.

This ratio has not improved in the last 30 years. Photo_voltaic solar gives up any potential advantage over solar_thermal by requiring batteries for energy storage. Storage battery plates crumble after a year of deep_cycle use.

For the last 30 years natural gas was by far the cheapest source of energy. Energy policy since 1974 is based on cheap natural gas.

Response to Commentor No. 1078

Commentor No. 1078: William E. Schenewerk (Cont'd)

Existing coal and nuclear plants were built before cheap natural gas arrived by pipeline.

Coal and nuclear plants had to charge \$0.10/kWh, largely to pay off high_interest loans. Until 2000, a jet airplane motor burning natural gas could sell power at \$0.05/kWh and make money. Regulated utilities charged roughly \$0.07/kWh to pay the average generation cost.

Everybody got amnesia over what happened when the phone company was broken up. Same cost and worse service. Now we get utility deregulation. The poor (sniff sniff) utilities got stuck with theatomic power plants and a few fossil plants. The nukes will be nearly paid off when deregulation is complete. The utilities, except

Los Angeles DWP, were denied the responsibility of power generation.

California gas_fired plants were scattered among independent power producers. Cheap natural gas was supposed to make everyone's utility bill decrease.

Now the party may be over. Expensive oil and natural gas arrived on the heels of utility deregulation. Gas_fueled airplane motors will have to charge \$0.10/kWh for electricity. Half this charge will be spent on natural gas at \$5/1000 ft³. Rising gas costs and the threat of price controls may cause investors to cancel planned generating capacity.

It gets worse. Global warming may be arriving sooner than expected.

We are looking down the teeth of an extinction event. Mosquitoes are already moving north, carrying pestilence. There is war, every 20 years or so, over dwindling oil reserves.

Failure to deploy at least 1800 atomic power plants by 2020 will guarantee global warming exceeds +3 Centigrade by 2100, with no end in sight. 28,000 breeder reactors are needed by 2080 to shut down fossil fuel consumption by 2080. This will hopefully stop global warming at +2.5 Centigrade. A new light water reactor is competitive at \$0.10/kWh electricity cost. Correct energy policy requires understanding machines, thermodynamics, resource production, radiation health effects and population dynamics.

William E. Schenewerk, Ph.D., P.E.
See attached for details.

Response to Commentor No. 1078

Commentor No. 1145: Laurie Pavey



Laurie Pavey
30800 S. Arrow Ct.
Canby, OR 97013-2222



Collette E. Brown
NE-50
US Dept. of Energy
19901 Germantown Rd.
Germantown, MD 20874

20874X1207 76

h

Dear Collette,

7-8-00

Please do not recommend a start-up of The FFTF at Hanford. Reactor operation would create so much more radioactive waste and we already have so much waste to deal with already. Let's solve the waste problems we already have at Hanford before we add to the problem.

The fire that occurred at Hanford a month ago shows how fragile and close to disaster that area is.

Please decommission the FFTF!

Laurie Pavey
33785 SE Terra Circle
Corvallis, OR 97333

Sincerely,
Laurie Pavey

1145-1

1145-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

1145-2

1145-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

1145-3

1145-3: See response to comment 1145-1.

Response to Commentor No. 1145

Commentor No. 1146: Duane H. Freeborn

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

07441307 [Barcode]

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

I had to miss the public hearing.
Clean-up of nuclear waste should be of primary importance - and adding to that is reprehensible. There are plenty of plutonium sources, and I don't buy the medical isotope need. This is an old reactor and should be permanently shut down. I resent my tax dollars being spent on more nuclear waste. My worry is a radioactive Col. River.
Name Duane H. Freeborn
Address 6675 SW Whistling Ct.
City, state Beaverton OR zip 97008

Response to Commentor No. 1146

- 1146-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 1146-2:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

- 1146-3:** DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet

Commentor No. 1146: Duane H. Freeborn (Cont'd)

Response to Commentor No. 1146

programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

- 1146-4:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. The FFTF reactor was constructed and initiated operation in the mid 1980s, making it DOE's newest reactor. It has no structural flaws that would prevent safe operations. As stated in Volume 1, Section 2.3.1.1.2, several upgrades would be implemented if a decision to restart FFTF was made by DOE. These upgrades would improve efficiency and reliability, minimize waste, and conform to current industry standards. Throughout the life of FFTF, the FSAR has been maintained via approved change control and engineering change notices. All updates and revisions have had the required reviews and approvals. No deficiencies in the FFTF design, analysis, facility condition, or operations have been identified or recognized that would prevent FFTF from meeting the safety objectives and intent of commercial nuclear safety regulations for equivalent facilities. If the Record of Decision concludes that FFTF should be restarted, a Probabilistic Risk Assessment would be completed and a new FSAR would be prepared in accordance with applicable regulations. With planned plant upgrades, FFTF would be able to operate safely for the 35 year time period being considered in the NI PEIS.

Commentor No. 1147: Alberta Gerould

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

76 [Barcode]

Alberta Gerould 3438 N.E. Davis Rd. Portland, OR 97214
 3438 N.E. Davis Rd. Portland, OR 97214

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

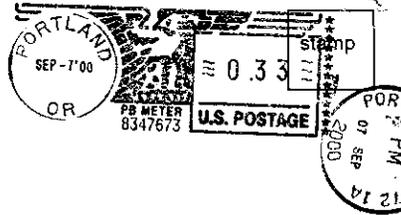
Not only is nuclear power a potential for
 stimulate the weapons of war, but the DOE
 would be going in the absolute opposite
 direction from the way they saved the
 at Hanford
 problem to solve is the disposal of spent fuel
 in 6 basins 450 yards from the Columbia River
 Name and the 178 tanks of waste. Perhaps
 54 million gallons of waste into the Columbia
 Address River with his cleanup in profit.
 City, state Alberta Gerould, 3438 N.E. Davis Rd. Portland, OR 97214
 OR 97232-3404

Response to Commentor No. 1147

- 1147-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
 - 1147-2: DOE notes the commentor's interest in reducing the arsenal of nuclear weapons, although issues of nuclear weapons production, dismantlement of weapons, and elimination of weapons systems are beyond the scope of this Nuclear Infrastructure PEIS.
 - 1147-3: Hanford tank waste and K Basin issues are not within the scope of this PEIS, as none of the alternatives considered would add to these waste volumes. Disposition of these wastes is the subject of the ongoing cleanup program at Hanford.
- 1147-3: Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Commentor No. 1148: Wendy Bourg

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

76

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

We have not solved the problem of disposing of highly toxic byproducts of nuclear reactors. I believe that other sources of energy are more safe for people and the environment until clean nuclear disposal is a reality.

Name Dr. Wendy Bourg
Address 3105 NE 35th Place
City, state Portland OR Zip 97212

Response to Commentor No. 1148

- 1148-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 1148-2:** DOE notes the commentor's concern regarding waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS assumes, for the purposes of analysis, that Yucca Mountain Nevada, would be the final disposal site for DOE's high-level radioactive waste and spent nuclear fuel. As directed by the U.S. Congress through the Nuclear Waste Policy Act, as amended, Yucca Mountain is the only candidate site currently being characterized as a potential geologic repository for high-level radioactive waste and spent nuclear fuel. DOE has prepared a separate EIS, "Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High Level Radioactive Waste at Yucca Mountain, Nye County, Nevada" DOE/EIS-0250D, July 1999), which analyzes the environmental impacts from construction, operation and monitoring, related transportation, and eventual closure of a potential geological repository.

- 1148-3:** DOE notes the commentor's interest in alternative energy sources, although issues of research and development of alternative energy sources are beyond the scope of this Nuclear Infrastructure PEIS. The DOE missions to be addressed in this EIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies.

Commentor No. 1149: Todd Ransford

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

3874+1207 [Barcode]

Public comment on Nuclear Infrastructure Draft Programmatic
Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

*We need renewable energy sources
I am opposed to the disastrous environmental
consequences of nuclear waste.*

Name Todd Ransford, Ph.D
Address 3105 NE 35th Place
City, state Portland OR Zip 97212

1149-1

1149-2

Response to Commentor No. 1149

1149-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1149-2: DOE notes the commentor's interest in alternative energy sources and concern over nuclear waste, although issues of research and development of alternative energy sources and the cleanup of existing nuclear waste sites are beyond the scope of this Nuclear Infrastructure PEIS. The DOE missions to be addressed in this EIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies.

As discussed in Chapter 4 of Volume 1 (e.g. sections 4.3.1.1.13, 4.3.2.1.13, 4.3.3.1.13), waste will be generated by all of the alternatives, including the No Action Alternative. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. DOE activities associated with this program would not impact the schedule or available funding for existing cleanup activities at candidate sites for implementation of nuclear infrastructure alternatives.

Commentor No. 1150: Christopher Ann

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

0874-1207 [Barcode]

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

ANY ACTIVITY OTHER THAN COMPLETE CLEANUP AT HANFORD IS A CRIME AGAINST HUMANITY LET ALONE TO OTHER SPECIES OTHER SOURCES MUST BE CONSIDERED FOR MEDICAL ISOTOPES. THE FFTF ENVIRONMENTAL IMPACT STATEMENT MUST ADDRESS THE ENTIRE HANFORD COMPLEX - ITS SAFETY - GROUND SEEPAGE FROM LEAKING CONTAINERS ETC. IT HAS BEEN PUBLICLY STATED THAT THE SILENT WILL NEVER BE CLEANABLE.

Name Christopher Ann (CHRISTOPHER ANN)
Address 748-A NE 76th Ave
City, state PORTLAND, OR Zip 97213

Response to Commentor No. 1150

- 1150-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
 - 1150-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford and the risk of contamination to the Columbia River. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
 - 1150-3: The United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements.
- Supplies of many research isotopes are not readily available from existing domestic or foreign sources, causing a number of medical research programs to be terminated, deferred, or seriously delayed. Under the NI PEIS proposed action and consistent with its mandates under the Atomic Energy Act, DOE would enhance its existing nuclear facility infrastructure to, among other things, more effectively support production of radioisotopes for medical applications and research. DOE's intent is to complement commercial sector capabilities to ensure that a reliable supply of isotopes is available in the United States to meet future demand, and to encourage the commercial sector to privatize the production of isotopes that have established applications to a level that would support commercial ventures. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.
- 1150-1
 - 1150-2
 - 1150-3
 - 1150-4

- 1150-4: The purpose of this NI PEIS is to evaluate the environmental impacts of reasonable alternatives to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238 for NASA space missions, and nuclear

Commentor No. 1150: Christopher Ann (Cont'd)

Response to Commentor No. 1150

research and development. It is beyond the scope of this NI PEIS to consider other site-wide issues of safety and environmental contamination, as mentioned by the commentor, which neither affect nor are affected by the alternatives under consideration. Section 3.4.9.4 of Volume 1 does provide a discussion of the accident history of the Hanford Site as it relates to existing human health risk. Ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The cumulative impacts of the alternatives evaluated at each of the candidate sites are presented in Section 4.8 of Volume 1.

Commentor No. 1152: Rayner Ward

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

1974+1307 [Barcode]

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because: *It's*

extremely dangerous (for thousands of years) there's no rational solutions for dealing with the nuclear waste already in existence, much less future waste, it's totally unnecessary, a corrupt rogue technology, incredibly expensive and sets a bad example to the world.

Name Rayner Ward
Address 2235 N. Alberta St.
City, state Portland, OR Zip 97217

Response to Commentor No. 1152

- 1152-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 1152-2:** DOE notes the commentor's concern regarding waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS assumes, for the purposes of analysis, that Yucca Mountain Nevada, would be the final disposal site for DOE's high-level radioactive waste and spent nuclear fuel. As directed by the U.S. Congress through the Nuclear Waste Policy Act, as amended, Yucca Mountain is the only candidate site currently being characterized as a potential geologic repository for high-level radioactive waste and spent nuclear fuel. DOE has prepared a separate EIS, "Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High Level Radioactive Waste at Yucca Mountain, Nye County, Nevada" DOE/EIS-0250D, July 1999), which analyzes the environmental impacts from construction, operation and monitoring, related transportation, and eventual closure of a potential geological repository.

- 1152-3:** DOE notes the commentor's opposition to restart of the FFTF. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action. The NI PEIS evaluates the environmental impacts of a range of

Response to Commentor No. 1152

reasonable alternatives for accomplishing DOE's mission. In addition to restarting the FFTF, the NI PEIS also evaluates alternatives that would either employ the use of existing facilities or rely on the construction of new facilities. Potential cost impacts associated with these alternatives are presented in an ancillary report.

Commentor No. 1152: Rayner Ward (Cont'd)

Commentor No. 1153: John F. Perfect

Response to Commentor No. 1153

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

Having been involved with Nuclear reactor since 1963 been both Navy Nuclear and Civilian operator (SRO) and DOE Certified. I am acutely aware of the impact of losing capabilities and competent staff on nuclear research and production. I feel our country must stay active and competent in nuclear technology for the present and future of our country. The FFTF is one of the last vestiges of engineering and technology at its best. Therefore it is worthy of being held active and available for entering our knowledge and experience (training and operation) besides the benefits that the medical research and technology provide.

We need FFTF, please restart it!

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): John F Perfect

Organization: Flora Daniel Stanford

Home/Organization Address (circle one): PO Box 4

City: Grand Coulee State: WA Zip Code: 99133

Telephone (optional): 509 633 2424

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

1153-1

1153-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

FINAL Programmatic Environmental Impact Statement
for Accomplishing Expanded Civilian Nuclear Energy
Research and Development and Isotope Production Missions in the
United States, Including the Role of the Fast Flux Test Facility

Volume 3 Book 2—Comment Response Document



Cover photograph and illustration identification, beginning at top center and going clockwise:

- Radioisotope tagged monoclonal antibodies, “smart bullets,” target malignant cells for diagnosis and treatment of diseases
- The Fast Flux Test Facility at the Hanford Site near Richland, Washington
- Illustration of a satellite that could use radioisotope power systems
- The High Flux Isotope Reactor at the Oak Ridge National Laboratory near Oak Ridge, Tennessee
- The Advanced Test Reactor at the Idaho National Engineering and Environmental Laboratory near Idaho Falls, Idaho
- Tip of a remote-handling arm, used for work in developing industrial and medical isotopes

AVAILABILITY OF THE FINAL NI PEIS

General questions regarding this PEIS or for a copy of this PEIS, please contact:

Colette E. Brown, Document Manager
Office of Space and Defense Power Systems (NE-50)
Office of Nuclear Energy, Science and Technology
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874
Attention: NI PEIS
Telephone: (877) 562-4593
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

This PEIS is accessible on the Office of Nuclear Energy, Science and Technology web site at www.nuclear.gov.



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Reader's Guide

Volume 3, the *Comment Response Document*, is organized into three chapters:

- Chapter 1 - Overview of the Public Comment Process and the Comment Response Document
- Chapter 2 - Written Comments and DOE Responses
- Chapter 3 - Oral Comments Presented at the Public Hearings and DOE Responses

These chapters are divided among the three books of Volume 3 as follows:

- Book 1 - Chapter 1 and Chapter 2 (pages 2-1 through 2-931)
- Book 2 - Chapter 2 (pages 2-932 through 2-1914)
- Book 3 - Chapter 2 (pages 2-1915 through 2-2344) and Chapter 3

Chapter 1, “Overview of the Public Comment Process and the Comment Response Document,” summarizes key issues raised during the comment period on the Draft NI PEIS. It also identifies major changes made to this NI PEIS after publication of the Draft in response to these comments and incorporates new information that was unavailable at the time of the issuance of the Draft NI PEIS.

Chapter 2, “Written Comments and DOE Responses,” provides a side-by-side display of the written comments received (full-text reproductions) and DOE’s responses. Individual comments are numbered in the margins of the comment document, and DOE responses to each numbered comment are provided on the right side of each page.

The comment document numbers in Chapter 2 are in ascending order but are not sequential. Each comment document was assigned a sequential log number as it was received. When the same comment document was submitted by many individuals, it was designated as a campaign. The campaigns were grouped together for the purpose of responding to comments, and do not appear in numerical order.

Chapter 3, “Oral Comments Presented at the Public Hearings and DOE Responses,” provides a side-by-side display of the oral comments presented at the public hearings and DOE’s responses. The speakers’ names appear alphabetically by hearing location. Commentors who submitted their oral presentations in writing will find their submittals and DOE’s responses in Chapter 2.

To Find a Specific Comment Document and DOE Response

Refer to the “List of Commentors” immediately following the Volume 3 Table of Contents. This list is organized alphabetically and contains the corresponding page number(s) to find the comment document. The public officials, organizations, and interest groups appear first, then individuals are listed. City and state government bodies are listed under “City of” or “State of.” Members of Congress are listed alphabetically under “Members of Congress.”

DOE has made a good faith effort to interpret the spelling of names that were either written on comments or were recorded on the telephone comment line.

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Zook, Barbara J.	2-2245	Zullo, John	2-2063
Zotter, Mary Susan	2-1487		

Chapter 1

Overview of the Public Comment Process and the Comment Response Document

Chapter 1

Overview of the Public Comment Process and the Comment Response Document

In July 2000, the U.S. Department of Energy (DOE) published the *Draft Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility (Nuclear Infrastructure Programmatic Environmental Impact Statement [NI PEIS])*. In accordance with the Council on Environmental Quality (CEQ) and DOE National Environmental Policy Act (NEPA) regulations, a Federal Register notice (65 FR 46443) announced the availability of the Draft NI PEIS and invited interested parties to provide comments. The Draft NI PEIS or Summary was distributed to approximately 6,000 individuals.

1.1 THE PUBLIC COMMENT PROCESS

NEPA regulations mandate a minimum 45-day comment period after the U.S. Environmental Protection Agency's (EPA) Notice of Availability of a draft EIS to provide an opportunity for the public to comment on the EIS analysis and results. The 45-day comment period on the Draft NI PEIS began on July 28, 2000, and to provide interested parties with additional time to comment, the deadline for transmittal of comments was changed from September 11, 2000 (as stated in the transmittal letter of the Draft NI PEIS and the Summary), to September 18, 2000. While the official comment period ended on September 18, 2000, DOE addressed late comments to the extent practicable and considered all comments received through October 31, 2000, in preparing the final NI PEIS. Comments that were received through September 25, 2000, along with corresponding responses, have been included in Chapter 2 of this volume. Direct responses are not included to comments that were received after September 25, 2000. However, all of these comments were considered and are characterized by other comments received during the comment period (for which a response has been provided).

1.2 PUBLIC HEARING FORMAT

During the 52-day comment period, DOE held seven hearings to discuss the proposed action and to receive oral and written comments on the Draft NI PEIS. The hearings were held near the locations that would be affected by the proposed alternatives, as well as some additional locations in Oregon and Washington in response to stakeholder requests. In addition, a hearing was held in the Washington, D.C. area. The hearing schedule and estimated attendance at each hearing are presented in **Table 1-1**. These attendance estimates are based on the number of registration forms completed and returned to DOE at each hearing, as well as a rough "head count" of the audience, and may not include all those present.

Table 1-1 Hearing Schedule and Attendance

Hearing Location	Date	Estimated Attendance
Oak Ridge, Tennessee	August 22, 2000	15
Idaho Falls, Idaho	August 25, 2000	20
Hood River, Oregon	August 28, 2000	265
Portland, Oregon	August 29, 2000	320
Seattle, Washington	August 30, 2000	250
Richland, Washington	August 31, 2000	330
Arlington, Virginia	September 6, 2000	15
Total		1,215

An independent facilitator was present at each hearing to direct and clarify discussions and comments. A comment recorder also was present at each hearing to record the proceedings. At the hearings in Oregon and Washington, a second comment recorder was available in a separate room to receive comments from attendees who were not able to attend the entire session, or who wanted to give their comments and leave. Transcripts of the hearings are available in DOE public reading rooms and libraries listed in Chapter 7 of Volume 1.

DOE representatives were available to meet with the public for informal discussions prior to and after the hearings. In an effort to encourage interaction between members of the public and DOE representatives, DOE used an interactive format for the hearings. The format included a presentation, question and answer session, and a comment session. Each hearing opened with a welcome from the facilitator, followed by a presentation on the proposed action by a DOE representative. Next, the facilitator opened the question and answer session to give the audience a chance to ask questions about the material presented. This was followed by the comment session, during which attendees were randomly selected to provide their comments. Attendees received a numbered ticket from the staff at the registration table and the facilitator picked the tickets from a container to determine the order of speakers. To ensure that all attendees were given an opportunity to provide comments, each speaker was limited to 5 minutes. Those commentators who needed additional time were invited to speak again after everyone had an initial opportunity to provide their comments. Modifications to the format were made at each of the public hearings to fulfill any special requests of attendees.

1.3 COMMENTS ON THE DRAFT NI PEIS

The public was encouraged to submit comments on the Draft NI PEIS to DOE via U.S. mail, e-mail, telephone, fax, and at the public hearings. DOE received approximately 3,400 submittals containing over 6,200 comments addressing a wide range of issues. A number of written comments submitted during the hearings were also presented orally; those comments were counted once. All comments submitted to DOE during the comment period were given equal consideration in preparation of the Final NI PEIS. Comments determined to be beyond the scope of the NI PEIS were forwarded to the appropriate DOE office for consideration. **Table 1–2** lists the number of comments received by method of submission.

Table 1–2 Comment Submission Method

Method	Number of Submittals
U.S. mail	2,493
E-mail	332
Telephone	107
Fax	92
Comments submitted at hearings	439
Total	3,463

Upon receipt, all written submittals were date-stamped and assigned a sequential log number used in tracking during the comment response process. Oral comments presented at the hearings were similarly identified and assigned a sequential log number. All comments were then processed through the comment analysis and response system for inclusion in this document. Each comment was assigned to a specific category to facilitate response and provide an overview of the type of comments that DOE received. Documents identical in content are presented only once (e.g., a written comment that was presented orally at a hearing). Campaigns (e.g., identical comments submitted by numerous individuals) likewise are presented and responded to only once. However, campaign documents with additional comments are responded to separately. The comment categories are shown in **Table 1–3**.

Table 1–3 Comment Categories

Accelerator Design	Miscellaneous Cost Issues
Air Quality	NEPA Process (extension of comment period, public participation, availability of information, completeness of overall analysis, additional hearings, etc.)
Alternative 1 - Restart FFTF	No Action Alternative
Alternative 2 - Use Only Existing Operational Facilities	Noise
Alternative 3 - Construct New Accelerator(s)	Nonproliferation
Alternative 4 - Construct New Research Reactor	Nuclear Energy Research and Development
Alternative 5 - Permanently Deactivate FFTF (with no new missions)	Oak Ridge Reservation Site Issues
Applicable Laws, Regulations, and Other Requirements	Policy
Cost of Alternatives	Preferred Alternative
Cultural and Paleontological Resources	Processing Facilities
Cumulative Impacts and General Environmental Impacts	Production of Medical and Industrial Isotopes
Ecological Resources	Production of Plutonium-238
Environmental Justice	Public and Occupational Health and Safety - Facility Accidents
Existing Human Health Risks	Public and Occupational Health and Safety - Normal Operations
FFTF Investment	Purpose, Need, and Timing of Missions
General Alternative Issues (alternatives considered but dismissed, new alternatives, etc.)	Reactor Design
General Irradiation Needs	Relationship to Other DOE Programs
General Antinuclear	Scoping
Generic Support Facility Design	Socioeconomics
Geology and Soils	Transportation (incident-free and accidents)
Hanford Site Issues	Visual Resources
Idaho National Engineering and Environmental Laboratory Site Issues	Waste Management (includes spent fuel issues)
Irradiation Facilities	Water Resources
Land Resources	

Chapter 2 contains the comments (submitted in writing and by telephone) and the DOE responses presented in a side-by-side format, with each delineated comment receiving a separate response. Not all responses appear directly next to their corresponding comment due to the varying lengths of each response. However, all comments and responses are numbered with a comment identification number to facilitate matching a comment with its response. Where commentors presented support for, or opposition to, a specific alternative, this was noted. Where commentors provided additional statements supporting their positions, DOE responded in detail to those that needed clarification or were in error.

Chapter 3 contains the comments that were submitted during oral presentations at the public hearings held in August and September 2000. The chapter is organized alphabetically by speaker's name according to the hearing location. The format and response procedures used in Chapter 2 were followed in Chapter 3.

Commentors who submitted their oral presentations in writing will find their submittals and responses in Chapter 2. The full transcripts from each hearing are available at DOE reading rooms and libraries listed in Chapter 7 of Volume 1.

An alphabetical List of Commentors with corresponding page numbers has been provided immediately following the Volume 3 Table of Contents to assist the reader in finding specific comment documents and

DOE responses. Public officials, organizations, and interest groups appear first, then individuals are listed. City and state government bodies are listed under “City of” or “State of.” Members of Congress are listed alphabetically under “Members of Congress.”

1.4 ENVIRONMENTAL PROTECTION AGENCY RATING OF THE NI PEIS

EPA reviewed and rated the Draft NI PEIS as Environmental Concerns - Insufficient Information (EC-2). To a large extent, a lack of information in the Draft NI PEIS was the basis for their environmental concerns. EPA was also concerned that the cost and nonproliferation reports were not made available to the public until well into the comment period on the Draft NI PEIS. A copy of the EPA rating is included among the written comments in Chapter 2 of this volume.

1.5 ISSUES RAISED DURING THE PUBLIC COMMENT PERIOD ON THE DRAFT NI PEIS

During the public comment period on the Draft NI PEIS, DOE received approximately 3,400 submittals containing over 6,200 comments addressing a wide range of issues. DOE considered comments received after the close of the public comment period to the extent practicable (see Section 1.5.6).

The following discusses the major issues raised, and DOE’s responses to these issues. Changes made in response to comments received on the Draft NI PEIS are described in Section 1.6.

Major issues raised addressed purpose and need for the proposed action; impact of FFTF on Hanford cleanup; waste management and spent nuclear fuel; cost of the various alternatives; nuclear nonproliferation policy; public involvement; and environmental impacts. Aside from comments on the proposed action and its environmental impacts, many commentors expressed support for or opposition to FFTF restart, the major point of public controversy associated with the NI PEIS.

1.5.1 Purpose and Need for the Proposed Action

Many commentors expressed the opinion that DOE failed to demonstrate a compelling argument for the projected need for medical isotopes, and that such medical isotopes could be produced or purchased elsewhere, particularly in Canada. In contrast, a large number of commentors expressed support for expanded isotope production by sharing personal stories of how medical isotopes had either saved a relative or friend, or could have saved them had isotopes been available. As presented in Section 1.2.1 of Volume 1, DOE sought independent analysis of trends in the use of medical isotopes, and established two advisory bodies, the Expert Panel and the Nuclear Energy Research Advisory Committee (NERAC). DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. While Canada currently provides a large amount of the medical radioisotopes used in the United States, it only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS.

A number of commentors also questioned the suitability of using FFTF for producing research isotopes in light of findings presented in the NERAC Subcommittee for Isotope Research and Production Planning Report. While it would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if FFTF were operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. In recognition of these

constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF for isotope production when coupled with these other missions.

Commentors also questioned the need for the United States to reestablish domestic production of plutonium-238. In particular, commentors pointed to the availability of plutonium-238 that could be purchased from Russia, and recent guidance from NASA stating that DOE no longer needed to support certain radioisotope power systems. As discussed in Section 1.2.2 of Volume 1, DOE could purchase plutonium-238 from Russia. However, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Current NASA guidance to DOE is also discussed in Section 1.2.2. The May 22, 2000, correspondence from NASA identifies that it no longer has a planned requirement for Small Radioisotope Thermoelectric Generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, SRTG development efforts were stopped in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling radioisotope power systems technology generator. This new radioisotope power system, referred to in the subject correspondence, requires one-third less plutonium as its fuel source. Because the Stirling radioisotope power systems technology is developmental, NASA has requested in a September 22, 2000, letter to DOE that the plutonium-238 needed for a large radioisotope thermoelectric generator be maintained as a backup.

1.5.2 Impact of FFTF Restart on Hanford Cleanup

A number of commentors expressed concern that DOE's primary mission at Hanford needs to be cleanup, including compliance with the Tri-Party Agreement. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford environmental restoration activities are conducted in accordance with the Tri-Party (i.e., DOE's Richland Operations Office, EPA, and the State of Washington Department of Ecology) Agreement. This agreement specifies milestones and schedules for restoration of all parts of Hanford. FFTF milestones in the Tri-Party Agreement were placed in abeyance (suspension) by agreement of the three parties until a decision is made on the future of FFTF. Public meetings were held on this formal milestone change. DOE is fully committed to honoring this agreement.

A number of commentors also expressed concern that funding for Hanford cleanup would be diverted for FFTF restart and hamper the progress of cleanup activities. The U.S. Congress funds Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM). Congress also funds FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded through NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2 of Volume 2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

1.5.3 Waste Management and Spent Nuclear Fuel

A number of commentors expressed concern over the generation and disposition of waste resulting from the proposed action. In particular, commentors pointed to past DOE waste management practices and questioned whether wastes resulting from proposed NI PEIS activities would be properly managed. The NI PEIS addresses wastes produced for each alternative, as well as cumulative impacts related to waste production. Waste minimization programs at each of the alternative sites are also addressed. These programs would be implemented for the alternative selected in the Record of Decision. The waste generated from any of the alternatives considered in the NI PEIS would be managed (i.e., treated, stored, and disposed of) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

A number of commentors expressed specific concern over the generation and disposition of waste resulting from FFTF restart and operation, and how this would impact Hanford's existing waste management infrastructure. Management of wastes that would be generated under implementation of Alternative 1 (Restart FFTF) is discussed in Section 4.3 of Volume 1 (e.g., Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that the Hanford waste management infrastructure is analyzed in this NI PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, *Radioactive Waste Management*, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical, or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Sections 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in the Fuels and Materials Examination Facility (FMEF) and how this waste would be managed at the site.

A number of commentors also raised concern that processing of irradiated targets for production of plutonium-238 would generate high-level radioactive waste. DOE Manual 435.1, *Radioactive Waste Management*, defines high-level radioactive waste as "the highly radioactive waste material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid material derived from such liquid waste that contains fission products in sufficient concentrations; and other highly radioactive material that is determined, consistent with existing law, to require permanent isolation." DOE has prepared an implementation guide to M 435.1 to assist in implementing the requirements contained in that manual. For this particular "requirement," the definition of high-level radioactive waste, the guide is intended to facilitate the classification of indefinite waste as to whether or not they are high-level radioactive waste. It is recognized that the definition of high-level radioactive waste is not precise and is essentially a source-based definition that also alludes to concentrations of a given waste stream. Page II-8 of the guide notes that "For the purpose of managing high-level waste under DOE M 435.1-1 [sic], spent nuclear fuel includes spent driver elements and/or irradiated target elements that contain transuranium elements." This statement was included in the guide because the concentrations of long-lived isotopes are likely to be somewhat high during reprocessing and it also meets the source-based definition. As a result of reviewing this guide and to address the comments raised, DOE is considering whether the waste from processing of irradiated neptunium-237 targets should be classified as high-level radioactive waste and not transuranic waste. As a result, the Waste Management sections (i.e., Sections 4.3.1.1.13, 4.3.2.1.13, 4.3.3.1.13, and 4.4.3.1.13) of this NI PEIS have been revised to reflect this different classification from what was assumed in the Draft NI PEIS. As discussed in these revised sections, irrespective of how the waste is classified (i.e., transuranic or high-level radioactive waste), the composition and characteristics are the same, and the waste management (i.e., treatment and onsite storage) for this NI PEIS would be the same. In addition, even if the waste were managed as high-level radioactive waste, it would have no impact on the existing high-level radioactive waste management infrastructure (e.g., high-level waste storage tanks) because the high-activity waste from processing the targets would be initially stored and vitrified within the processing facility (i.e., FMEF, the Radiochemical Engineering Development Center [REDC], or the Fluorinel Dissolution Process Facility [FDPF]).

Commentors also expressed concern over the potential impacts of spent nuclear fuel generation from FFTF restart and operation, particularly regarding human health risk. This NI PEIS estimates that about 16 metric tons of heavy metal spent nuclear fuel would be generated over 35 years of operation of FFTF. Hanford is currently managing about 2,000 metric tons of heavy metal spent nuclear fuel. As indicated in Table 4-173, the radiation risk to a maximally exposed individual from normal operational activities during management of the current stored nuclear fuel over 35 years is 1.4×10^{-8} latent cancer fatality. The risk to the maximally exposed individual that would be associated with the new nuclear infrastructure operations to restart FFTF and operate FMEF or the Radiochemical Processing Laboratory is 9.5×10^{-8} latent cancer fatality. Furthermore,

only a small fraction of this risk would be attributable to management of the additional spent nuclear fuel at FFTF. The annual dose to the maximally exposed individual from all current and reasonably foreseeable activities is less than 0.2 millirem. This dose is well within the DOE dose limits given in DOE Order 5400.5, *Radiation Protection of the Public and the Environment*. As discussed in that order, the dose limit from airborne emissions is 10 millirem per year, as required by EPA regulations under the Clean Air Act; the dose limit from drinking water is 4 millirem per year, consistent with the EPA drinking water criteria under the Safe Drinking Water Act; and the dose limit from all pathways combined is 100 millirem per year. The risk to the population from all activities at Hanford would be 0.21 latent cancer fatality over 35 years. DOE has committed to remove the spent nuclear fuel at Hanford for ultimate disposition in a geologic repository.

1.5.4 Cost of the Various Alternatives

Commentors expressed opinions about the costs related to the stated missions. Commentors stated that a cost-benefit analysis was necessary to show the value of production of medical isotopes balanced against facility costs, in particular, the restart of FFTF, and noted that perhaps facilities would be able to pay for themselves. There were concerns that FFTF restart would take funds away from the cleanup of Hanford. Commentors noted that the decommissioning costs were not included for the restart FFTF option in the *NI Cost Report*. Several commentors remarked that the expense of plutonium-238 production cannot be justified when DOE needs to clean up existing problems at its sites.

Although the costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS, DOE prepared a separate *NI Cost Report*. This report would provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in this Final NI PEIS. Pursuant to CEQ regulations (40 CFR Section 1505.1(e)), such a document comparing alternatives should be made available to the public prior to any decision being made. DOE mailed this document to more than 730 interested parties on August 24, 2000. This report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided the summary of the *NI Cost Report* in Volume 2, Appendix P, in this Final NI PEIS.

1.5.5 Nuclear Nonproliferation Policy

Commentors expressed opinions about the nuclear nonproliferation implications of the proposed action. Commentors were concerned about keeping plutonium-238 out of the hands of third parties, and it was suggested that the purchase of plutonium-238 from Russia would stop proliferation of the material and the United States would know the disposition of the quantity purchased. Several commentors raised concerns about specific facilities described in the NI PEIS, including FDPF and FFTF. The use of highly enriched uranium fuel in FFTF was questioned related to a possible violation of U.S. nuclear nonproliferation policy. Conversely, the shutdown of FFTF that occurred previously was characterized as being done to discourage proliferation of nuclear weapons worldwide, but had instead weakened the U.S. position as a world leader in nuclear technology. There were comments about the timeliness of release of the *NI Nonproliferation Impact Assessment*, that no nonproliferation information was included in the Draft NI PEIS, and that nuclear nonproliferation policy should be considered by DOE in selection of its preferred alternative.

The plutonium being considered for production in this NI PEIS is plutonium-238, which is not the same isotope of plutonium that is used in nuclear weapons. The production of plutonium-238 does not present a nonproliferation concern. DOE developed the separate *NI Nonproliferation Impact Assessment*, published in September 2000, that analyzed the nonproliferation impacts of the actions considered in this PEIS and found that there are no U.S. nonproliferation policies, laws, regulations, or international agreements that preclude the use of any of the facilities in the manner described in the Draft NI PEIS. Although this policy analysis is not required under NEPA, it is an essential element in the decision-making process for the DOE nuclear

infrastructure. A summary of the *NI Nonproliferation Impact Assessment* is included in Volume 2, Appendix Q, of this Final NI PEIS. It is also available on the DOE NE web site (<http://www.nuclear.gov>).

1.5.6 Public Involvement

Commentors expressed opinions about the length of the comment period on the Draft NI PEIS, and said they wanted additional time to obtain and review relevant documents, including the *NI Cost Report* and *NI Nonproliferation Impact Assessment*. As identified in Section 1.1, the deadline for transmittal of comments was changed from September 11, 2000, to September 18, 2000 (as stated in the transmittal letters of the Draft PEIS and the Summary). While the official comment period ended on September 18, 2000, DOE addressed late comments to the extent practicable and considered all comments received through October 31, 2000, in preparing this Final NI PEIS. Comments that were received through September 30, 2000, along with corresponding responses, have been included in Chapter 2 of this volume. Direct responses are not included to comments that were received after September 30, 2000. However, all these comments were considered and are characterized by other comments received during the comment period (for which a response has been provided).

Many commentors expressed the opinion that public input is intended for “show only,” and that DOE has already made its decisions. Commentors also stated that they had given the same comments over and over again and that DOE representatives were not listening. DOE policy encourages effective public participation in its decision-making process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered all comments received from the public.

Some commentors expressed opinions about the conduct of the hearings, both positive and negative. The public hearing format was designed to be fair. The public hearing format used was based on stakeholder input and was presented in the Notice of Availability (65 FR 46443 et seq.) for the Draft NI PEIS. This format was intended to encourage public participation, regardless of the motivation for attending the hearing. It provided an opportunity for the participants to meet one another, exchange information, and share concerns, with DOE personnel available throughout the course of each hearing to answer questions. The meetings were facilitated by an independent moderator to ensure that all persons wishing to speak had an opportunity to do so. Persons wishing to comment were selected at random from the audience rather than according to the order in which they registered. This was accomplished by a random number drawing. In addition to the comment recorder stationed at the main hearing, a second recorder was available in an adjacent room to receive comments without the need to await selection at the main proceeding. The hearing format promoted open and equal representation by all individuals and groups.

1.5.7 Environmental Impacts

A number of commentors questioned the results of the environmental impact analysis and cumulative impacts, specifically at Hanford. Many of these comments focused on concerns that the proposed action would result in negative impacts to the health of individuals residing in the Hanford region. The NI PEIS analyzes the impacts of the various alternatives, and the environmental impacts associated with all proposed nuclear infrastructure activities are addressed in detail in Chapter 4 of Volume 1. Specifically, the environmental impacts associated with operation of the Hanford facilities during normal operations and from postulated accidents are presented in Section 4.3. These assessments were made using well-established and accepted analytical methods, as described in Appendixes G through L in Volume 2. The analytical methodology is conservative by nature; the actual impacts to the environment would be expected to be less than calculated. All impacts have been shown to be small. No fatalities among workers or the general public would be

expected over the 35-year operational period. The impacts to the biosphere (air, water, and land) were also evaluated and determined to be small.

Some commentors raised specific concern over potential contamination of the Columbia River resulting from the restart of FFTF. However, FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

A number of commentors also expressed concern that DOE would expose individuals in the Pacific Northwest to risks associated with importing of weapons-grade plutonium. None of the proposed alternatives involve the shipment of any weapons-grade plutonium to any port in the United States. Alternative 1 does postulate that DOE might decide at some point to import mixed oxide fuel from Europe to fuel FFTF. At this time, however, DOE has not proposed to import this fuel through any specific port. If DOE ultimately decides to import fuel from Europe, it would perform a separate NEPA analysis to select a port. This review would address all relevant potential impacts of overseas and inland water transportation, shipboard fires, package handling, land transportation, as well as safeguards and security associated with the import of SNR-300 mixed oxide fuel through a variety of specific candidate ports on the west and east coasts. It would take into account all public comments, including local resolutions, concerning the desirability of bringing mixed oxide fuel into the proposed alternative ports.

In the event that DOE decides to enhance its nuclear infrastructure, it would not expose any population to high, unacceptable risks under any alternative. Any transportation activities that would be conducted by DOE would comply with U.S. Nuclear Regulatory Commission (NRC) and U.S. Department of Transportation regulations. Associated transatlantic shipments would comply with International Atomic Energy Agency requirements. In Section J.6.2 of Volume 2, DOE reviewed the potential maximum impacts from the marine transportation of mixed oxide fuel from Europe to a representative military port (Charleston, South Carolina), and overland transportation to Hanford. Also in that section, the results of a bounding analysis show that the maximum potential radiological risks to the surrounding public from mixed oxide fuel shipments would be extremely small (e.g., less than 1 chance in a trillion for a latent cancer fatality per shipment from severe accidents at docks and in channels and less than 1 chance in 50 billion for a latent cancer fatality per shipment from overland highway accidents).

1.6 CHANGES FROM THE DRAFT NI PEIS

In response to comments on the Draft NI PEIS and as a result of information that was unavailable at the time of its issuance, this Final NI PEIS contains revisions and new information. These revisions and new information are indicated by sidebars. A brief discussion of the most important changes included in this Final NI PEIS is provided in the following paragraphs.

Chapter 1

Purpose and Need for Agency Action

As a result of public comments, additional discussion was incorporated to address DOE's production of medical, research, and industrial isotopes relative to global isotope production and availability. In addition, the discussion of the need for plutonium-238 production for space missions was expanded and updated to reflect the most recent planning guidance provided by NASA to DOE.

Issues Raised During the Public Comment Period on the Draft NI PEIS

Section 1.5, Issues Raised During the Public Comment Period on the Draft NI PEIS, was added to this Final NI PEIS.

Related NEPA Reviews

The Final NI PEIS was revised to add descriptions of the *Final Environmental Impact Statement, Management of Spent Nuclear Fuel from the K Basins at the Hanford Site, Richland, Washington* (DOE/EIS-0245F), and the *Environmental Assessment, Management of Hanford Site Non-Defense Production Reactor Spent Nuclear Fuel* (DOE/EA-1185). The impacts of these NEPA actions were factored into the assessment of potential cumulative impacts resulting from the NI PEIS proposed action.

This Final NI PEIS was also revised to reflect recent Records of Decision that have been issued for the *Final Environmental Impact Statement on a Proposed Nuclear Weapons Nonproliferation Policy Concerning Foreign Research Reactor Spent Nuclear Fuel* (DOE/EIS-0218F), the *Final Environmental Impact Statement for Treating Transuranic (TRU)/Alpha Low-Level Waste at the Oak Ridge National Laboratory, Oak Ridge, Tennessee* (DOE/EIS-0305), and the *Final Environmental Impact Statement for the Treatment and Management of Sodium-Bonded Spent Nuclear Fuel* (DOE/EIS-0306).

Changes from the Draft NI PEIS

Section 1.8, Changes from the Draft NI PEIS, was added to this Final NI PEIS.

Chapter 2

Transportation Requirements

Additional U.S. ports were named as candidates for receiving mixed oxide fuel from Europe.

Alternatives Considered and Dismissed

Information was provided to explain why the Isotope Production Facility at LANL, the Brookhaven LINAC (Linear Accelerator) Isotope Producer and the Alternating Gradient Synchrotron accelerator complex at Brookhaven National Laboratory, and CLWRs were not considered reasonable alternatives for the production of medical isotopes.

Information was also provided to explain why increasing the power levels at ATR and/or HFIR or installing rapid radioisotope retrieval systems would be insufficient to meet the long-term growth projection needs and therefore were dismissed as reasonable alternatives.

Preferred Alternative

The discussion of DOE's preferred alternative for accomplishing the proposed action, that is, Alternative 2, Use Only Existing Operational Facilities, Option 7, is included in this Final NI PEIS.

Summary of Environmental Impacts

Section 2.7 was revised in response to comments that it was difficult to compare environmental impacts among alternatives. Although estimates of the environmental impacts that would result from implementation of the

alternatives are the same as those in the Draft NI PEIS, the tables and accompanying text were reformatted for ease in comparing environmental impacts among alternatives and among options within alternatives. Section 2.7 was also revised to focus on incremental impacts that would result from implementation of the alternatives. Baseline environmental impacts were removed from the comparisons among alternatives and options. This information is now presented in Chapter 3.

Chapter 3

Affected Environment

Additional information was provided on the environmental baseline at each site, including graphics to more clearly illustrate existing surface water and groundwater conditions. Estimates of existing impacts for current HFIR/REDC operations were added to Sections 3.2.3.2 (Air Quality), 3.2.9.1.2 (Radiation Exposure and Risk), and 3.2.11.1 (Waste Inventories and Activities). Similarly, estimates for current ATR operations were added to Sections 3.3.3.2 (Air Quality), 3.3.9.1.2 (Radiation Exposure and Risk), and 3.3.11.1 (Waste Inventories and Activities). Estimates of existing impacts of maintaining FFTF in standby were added to Section 3.4.3.1 (Air Quality). Information was also provided on the impacts of the range fires affecting Hanford and INEEL during the summer of 2000. In addition, site data were updated to reflect recent measurements and analyses.

In response to public comments on the Draft NI PEIS, additional information on health studies conducted in the Hanford area was also incorporated.

Chapter 4

Air Quality

Stack parameters used for the air quality modeling were added. In response to public comment, estimates of the ambient air quality concentrations from FFTF sources were added to the deactivation section.

Water Resources

New water use and sanitary wastewater generation increments for REDC and FDPF were added to reflect the revised additional workforce required at these facilities and to be consistent with FMEF. Water use and wastewater generation rates for the new accelerator(s) and new research reactor alternatives were also revised. These changes were also incorporated into the waste management analyses.

Ecological and Cultural and Paleontological Resources

These sections were updated to reflect that consultations concerning threatened and endangered species and cultural resources were conducted with appropriate Federal and state agencies. Consultations were also conducted with interested Native American tribes. No major issues were raised as a result of these consultations.

Socioeconomics

Section 4.3.1.1.8 was revised to reflect changes in the number of workers associated with FFTF operations and deactivation. The associated impacts on community services were also incorporated. In addition, the number of workers at the Oak Ridge Reservation was revised to reflect the entire site workforce rather than just the number of workers at the Oak Ridge National Laboratory.

Normal Operations

Based on more recent site data on occupational radiation exposure for workers at REDC, all worker health impacts for target processing at REDC, FMEF, and FDPF and for neptunium target storage at REDC, Chemical Processing Plant–651, and FMEF were updated. Also, low-energy accelerator source terms were modified to properly reflect normal operational emissions resulting in modifications to the population health impacts for all options of Alternative 3.

Facility Accidents

The high-energy accelerator analysis was redone to incorporate a more accurate revised source term, and the incremental risks for currently operating reactors were added to the tables. An additional analysis addressing industrial accidents was also performed and incorporated into Chapter 4.

Transportation

The neptunium inventory was revised to use the recently declassified actual inventory. The number of actual shipments from SRS to the processing facilities and the transportation risk estimates were modified accordingly.

Waste Management

The analysis for the Draft NI PEIS assumed that the waste generated from the processing of irradiated neptunium-237 targets is transuranic waste. However, as a result of comments received during the public comment period, DOE is considering whether the waste from processing of irradiated neptunium-237 targets should be classified as high-level radioactive waste and not transuranic waste. The Waste Management sections (i.e., Sections 4.3.1.1.13, 4.3.2.1.13, 4.3.3.1.13, and 4.4.3.1.13) were revised to reflect this different classification from what was assumed in the Draft NI PEIS.

Spent Nuclear Fuel Management

These sections were revised to quantify the generation of spent fuel from 35 years of operation and to state that dry spent nuclear fuel storage at the FFTF site is similar to NRC-approved methods currently being used for interim storage of commercial spent nuclear fuel. In addition, based on public comments, a reference was added about the K Basins spent fuel storage.

Cumulative Impacts

Cumulative impact tables in Section 4.8 were revised to present the contributions from each of the various site actions anticipated during the course of the operational period evaluated in this NI PEIS.

The air quality tables were also revised to incorporate the revised baseline from Chapter 3. In addition, waste management tables were revised to include the sites' treatment, storage, and disposal capacities for easier comparison of the waste generations by waste type to the waste management capacities at the sites.

Chapter 5

In response to public comments, a list of organizations that DOE contacted during the consultation process was added.

Volume 2

Summaries of the *NI Cost Report* and *NI Nonproliferation Impact Assessment* were added as Appendixes P and Q, respectively. NASA mission guidance correspondence was added as Appendix R.

Volume 3

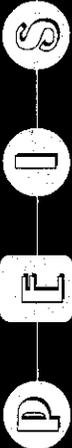
Volume 3 of the NI PEIS was added to present the comments received during the public review period for the Draft NI PEIS and DOE's responses to these comments.

Chapter 2

Written Comments and DOE Responses

Commentor No. 1154: R. T. Hirano

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

We need the FFTF, please restart it. As a taxpayer, we don't need political arguments, it might be slightly different design but in another state at billions of dollars to us. Let's get on with it!!

1154-1

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
returning this comment form to the registration desk at the meeting or to the address below
calling toll-free and leaving your comments: 1-877-562-4593
faxing your comments toll-free to: 1-877-562-4592
commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): R. T. Hirano

Organization:

Home/Organization Address (circle one):

1842 Hankstone

City: Richland State: WV Zip Code: 25352

Telephone (optional):

E-mail (optional):

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For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



Response to Commentor No. 1154

1154-1: DOE notes the commentor's support for Alternative 1, Restart FFTF, and opposition to Alternative 4, Construct New Research Reactor. It should be noted that if Alternative 4 were selected in the Record of Decision, it could be built at any DOE site.

Commentor No. 1155: Duane H. Freeborn

Cellette E. Brown
NE 50 Dept. of Energy
19901 Germantown Rd.
Germantown, MD 20874

6675 SW Whistling Ct.
Benton, OR 97008
September 8, 2000

Dear Ms. Brown,

I'm writing to express my utter dismay that the question of starting FFTF is still being debated. We had papers have been posted the enormous bill to keep this aging reactor on standby status for too long already. It should be shut down permanently. What we really don't need in this area (Portland) is more nuclear waste when the job is done with existing, even more dangerous & waste-riches toward the Columbia River. (It may well already be a "hot" mine....)

I don't feel like the DOE has handled with the people about this issue. Medical isotopes can be secured from other areas; plutonium can be secured, and is already contracted for, from Russia.

Cleaning up Hanford's present waste is of the utmost importance. Living in the Portland area, this is a crucial health concern. Don't create more waste and waste-shut down FFTF.

Sincerely yours,
Duane H Freeborn

1155-1

1155-2

1155-3

1155-2

1155-1

Response to Commentor No. 1155

1155-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

1155-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1. No food or water restrictions are current in place outside the Hanford site as a result of Hanford activities.

1155-3: The United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily Molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Commentor No. 1156: Martin Wester

Draft PEIS Comment Form

I would like to see our local communities better themselves through FFE medically & business would thrive from this.

Also as a taxpayer, I understand the trade imbargo for medical cancer would improve health & economy.

The U.S.A. & Tri-city area of WA would both excel with FFE.

Thank-you for your time & sorry for my writing.

Martin Wester

1156-1

Response to Commentor No. 1156

1156-1: DOE notes the commentor's support for Alternative 1, Restart FFE.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT
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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Martin Wester

Organization: Concerned Citizen

Home/Organization Address (circle one): 510 Gaethals Dr

City: Richland State: WA Zip Code: 99352

Telephone (optional): (509) 544-7714

E-mail (optional): mar2204@attglobal.net

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Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

For Alt 1 - Restart FFTF
This multifaceted reactor is well suited for this host of missions.
It now to restart FFTF before further reductions in FFTF specific knowledge is lost due to personnel moving on to new jobs or retiring due to the extended Standby period.

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faxing your comments toll-free to: 1-877-562-4592
commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Darrell Severance
Organization:
Home/Organization Address (circle one): 1507 S Quillen St
City: Kennewick State: WA Zip Code: 99338
Telephone (optional):
E-mail (optional):

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Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

1157-1

1157-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1158: Susanna Kraft

NI PEIS Toll_Free Telephone

9/11/00

Susanna Kraft
6105 79th Ave SE
Mercer Island, WA 98040

I just wanted to make it clear that I prefer Option #5 to permanently deactivate FFTF with no new missions.

1158-1

Response to Commentor No. 1158

1158-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 1159: Anonymous (Cont'd)

Response to Commentor No. 1159

living near nuclear facilities, including the Hanford Site. Cancers are believed to be caused by a combination of hereditary and environmental factors, including radiological and chemical agents. In ongoing clinical testing, therapeutic radioisotopes have proven effective in treating cancers and other illnesses while minimizing adverse side effects, making their use an attractive alternative to traditional chemotherapy and radiation treatments.

1159-4: See response to comment 1159-1.

1159-5: DOE notes the commentor's interest in alternative energy sources, although issues of research and development of alternative energy sources are beyond the scope of this Nuclear Infrastructure PEIS.

1159-6: The commentor appears to express the concern that DOE would expose people in the Puget Sound area to risks associated with the transport of neptunium and plutonium. None of the proposed alternatives involve the shipment of any neptunium to the Puget Sound area. Alternative 1 does postulate that DOE might decide at some point to import mixed oxide fuel from Europe to fuel FFTF. At this time, however, DOE has not proposed to import this fuel through any specific port. If DOE ultimately decides to import fuel from Europe, it would perform a separate NEPA analysis to select a port. This review would address all relevant potential impacts of overseas and inland water transportation, shipboard fires, package handling, land transportation, as well as safeguards and security associated with the import of SNR-300 mixed oxide fuel through a variety of specific candidate ports on the east and west coasts. It would consider all public comments, including local resolutions, concerning the desirability of bringing mixed oxide fuel into the proposed alternative ports. In the event that DOE decides to enhance its nuclear infrastructure, it would not expose any population to high, unacceptable risks under any alternative. Any transportation activities that would be conducted by DOE would comply with U.S. Nuclear Regulatory Commission and U.S. Department of Transportation regulations. Associated transatlantic shipment would comply with International Atomic Energy Agency requirements. In Section J.6.2, DOE reviewed the potential maximum impacts from the marine transportation of mixed oxide fuel from Europe to a representative military port, Charleston, South Carolina, and overland transportation to Hanford. Also

Commentor No. 1159: Anonymous (Cont'd)

Response to Commentor No. 1159

in that section, a bounding analysis demonstrates that the maximum potential radiological risks to the surrounding public from mixed oxide fuel shipments would be extremely small (e.g., less than 1 chance in a trillion for a latent cancer fatality per shipment from severe accidents at docks and in channels and less than 1 chance in 50 billion for a latent cancer fatality per shipment from overland highway accidents).

Commentor No. 1160: Martha A. Plonk

Draft PEIS Comment Form

We need FFTE. Please restart it. The facility can produce isotopes for medical research and therapy. At present 2 universities are 90% dependent on foreign sources for these isotopes.

I repeat please help and use East Flux Test Facility we need our facility.

1160-1

Response to Commentor No. 1160

1160-1: DOE notes the commentor's support for Alternative 1, Restart FFTE. The commentor is correct in noting that the United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, supplies of many research isotopes are not readily available from existing domestic or foreign sources, causing a number of medical research programs to be terminated, deferred, or seriously delayed. Under the NI PEIS proposed action and consistent with its mandates under the Atomic Energy Act, DOE would enhance its existing nuclear facility infrastructure to, among other things, more effectively support production of radioisotopes for medical applications and research. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Martha A. Plonk

Organization: Private citizen

Home Organization Address (circle one): 1001 Phelps Road
Kings Mountain, N.C. 2

City: Kings Mountain State: NC Zip Code: 28056

Telephone (optional): (704) 739-6540

E-mail (optional): none

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 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 Email: Nuclear.Infrastructure-PEIS@hq.doe.gov



Commentor No. 1161: Pat Dunn

Response to Commentor No. 1161

Sheet 101m

we need FFTE
Please restart it.

1161-1

1161-1: DOE notes the commentor's support for Alternative 1, Restart FFTE.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-FEIS@hq.doe.gov

Name (optional): Pat Dunn

Organization: _____

Home/Organization Address (circle one): 106 Kori Ln

City: Brown wood, State: TX Zip Code: 76801

Telephone (optional): _____

E-mail (optional): _____

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E-mail: NuclearInfrastructure-FEIS@hq.doe.gov



7/12/00

Commentor No. 1162: Lourdes Fernandez

Draft PEIS Comment Form

I believe FFTF provides significant benefit to the advance of medical research. Please support this project.

Thank you.

1162-1

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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calling toll-free and leaving your comments: 1-877-562-4593
faxing your comments toll-free to: 1-877-562-4592
commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Lourdes Fernandez

Organization:

Home/Organization Address (circle one): 408 Scot St

City: Richland State: WA Zip Code: 99352

Telephone (optional):

E-mail (optional): the 97 @ concentric .net

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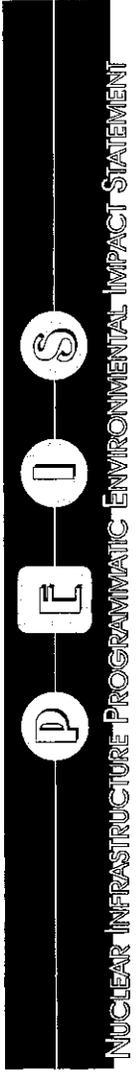
For more information contact: Collette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PBS@hq.doe.gov



7/12/00

Response to Commentor No. 1162

1162-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.



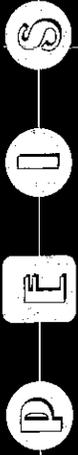
Commentor No. 1164: Edward A. and D. S. Maddox

Draft PEIS Comment Form

YES FOR: NFFTE

1164-1

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure.PEIS@hq.doe.gov

Name (optional): EDWARD A. & D. S. MADDOX

Organization: LANDSCAPE DESIGNER

Home/Organization Address (circle one): ENVIRONMENT 21

City: BEND State: OR Zip Code: 97701

Telephone (optional): 388-2830

E-mail (optional):

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7/12/00

Response to Commentor No. 1164

1164-1: DOE notes the commentor's support for Alternative 1, Restart FFTE.

Commentor No. 1165: Susan and Dean Johnson

Response to Commentor No. 1165

Draft PEIS Comment Form

We support the restart of FFTF.
It will provide a crucial benefit
to medical treatments

To not re-start it would be a
giant step backwards & a major
blow to medical therapy throughout
the world.

this would be unacceptable to us.
we need FFTF - please restart it.

1165-1

1165-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure.PEIS@hq.doe.gov

Name (optional): Susan & Dean Johnson

Organization: _____

Home/Organization Address (circle one): 2316 Lutz Road SE
Richland, WA

City: _____ State: _____ Zip Code: 99352

Telephone (optional): 375-3205

E-mail (optional): deansw@3-ctis.com

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E-mail: NuclearInfrastructure-PBS@hq.doe.gov



7/12/00

Commentor No. 1166: Darryl Bullington

Draft PEIS Comment Form

SEPT 7 2000

PERSONAL COMMUNICATION WITH A RESEARCHER AT ARGONNE NATIONAL LABORATORY REVEALED THAT METALLIC URANIUM FUEL IS DIMENSIONALLY UNSTABLE UNDER IRRADIATION.

IT APPEARS LITTLE HAS BEEN LEARNED FROM 50+ YEARS OF IRRADIATION STUDIES AS YOU ARE NOW BASING RESTART OF THE FFTF UPON USING HIGHLY ENRICHED URANIUM FUEL FOR FOURTEEN TO TWENTY-NINE YEARS (PAGE 9-13).

I URGE YOU TO PERMANENTLY DEACTIVATE THE FFTF (WITH NO NEW MISSIONS) AND TO PRODUCE NO MORE IRRADIATED FUELS AT THE SITE.

1166-1

1166-1: Metallic uranium nuclear fuel has been successfully used in power and research nuclear reactors worldwide for over 40 years. The nuclear fuel which would be used at FFTF is mixed oxide fuel until the available supply has been exhausted. Then, the fuel would be switched to highly enriched uranium (HEU) for years 22 to 35 (a period of 13 years). DOE has been safely using HEU in its research reactors for years; however, HEU would be used only if it is determined that low enriched uranium (LEU) is not technically feasible.

1166-2

1166-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. The generation and disposition of spent nuclear fuel is analyzed in Section 4.3.1.1.14 of Volume 1 of the NI PEIS.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): DARRYL BULLINGTON

Organization: _____

Home/Organization Address (circle one): 610 SOUTH MILROY ST

City: OLYMPIA State: WA Zip Code: 98502-5126

Telephone (optional): (360) 352 0625

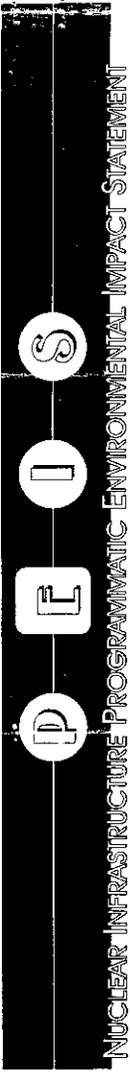
E-mail (optional): _____

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7/12/00



Response to Commentor No. 1166

Commentor No. 1167: Debra Pennington Davis

Response to Commentor No. 1167

Draft PEIS Comment Form

Please do not restart the Fast Flux Test Facility at Hanford. Hanford cleanup must remain a priority. The site is too contaminated to make further production a responsible possibility!

1167-1

1167-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1167-2

1167-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): Debra Pennington Davis

Organization: _____

Home/Organization Address (circle one): PO Box 593

Bingen, WA 98605

City: _____ State: _____ Zip Code: _____

Telephone (optional): _____

E-mail (optional): _____

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7/12/00

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Chapter 2—Written Comments and DOE Responses

Commentor No. 1168: George Taylor

Draft PEIS Comment Form

I support the selection of the FFTF as the preferred alternative to meet the pressing needs of the United States for research and medical isotopes

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): George Taylor

Organization: _____

Home/Organization Address (circle one): 159 N. Bishop Ave.

City: Clifton Heights State: PA Zip Code: 19018

Telephone (optional): 610-623-7383

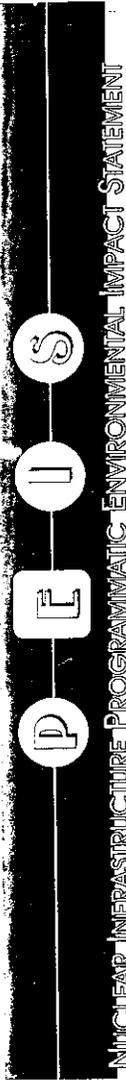
E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00



Response to Commentor No. 1168

1168-1

1168-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1169: Del Greenfield

495 N.W. Greenleaf Rd.
Portland OR 97109
September 6, 2000

Dear Colette Brown:

We urge the USDOE to stop the restart of FFTF and to close down the plant that is costing us citizens millions of dollars annually just to keep it open.

We don't need it. We don't want it. And it adds more nuclear waste that we can't get rid of.

Isn't it time your department started working for the people and not for the corporations that just want to make money? We don't consider these corporations to be patriotic!

Please respond.

Sincerely, Del Greenfield
Love Greenfield

Response to Commentor No. 1169

1169-1

1169-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

1169-2

1169-2: DOE notes the commentor's concern regarding waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

1169-3

1169-3: DOE notes the commentor's viewpoint.

Commentor No. 1170: Tanja Ziegler
Nuclear Information Service

Nuclear Information Service

30 Westwood Road Southampton SO17 1DN Britain
 e-mail: nls@gn.apc.org tel. / fax: +44 (0)12380 554434

Colette E. Brown
 U.S. Department of Energy
 NE-50,
 19901 Germantown Road,
 Germantown,
 MD 20874-1290

Dear Colette E. Brown

7th September 2000

Re: DoE Plan for expanded production of Plu-238 for future space missions

I am writing to you to ask you to reconsider your plans for the establishment of new irradiation and processing facilities for Plu-238.

The plutonium production/fabrication process for space nuclear power missions has recently led to several worker contamination accidents. An expansion of production will only worsen the problem.

We are also concerned that increasing the number of launches of nuclear powered space devices from Cape Canaveral on rockets with a 10 % failure rate will only increase the possibility of a deadly mishap.

We believe NASA is not doing enough to develop alternative power sources. The European Space Agency (ESA) has now developed high-efficiency solar cells for deep space missions.

I am looking forward to your reply
 Yours sincerely

Tanja Ziegler

Response to Commentor No. 1170

1170-1

1170-1: DOE notes the commentor's opposition to the production of plutonium-238 concern for NASA's use of nuclear materials for space missions, and interest in the development of alternative energy sources for space missions, although issues such as NASA research priorities are beyond the scope of this PEIS. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch.

1170-2

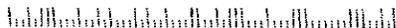
1170-2: Plutonium-238 processing facilities can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Sections 4.2-4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from plutonium-238 processing, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that the radiological and nonradiological risks associated with plutonium-238 processing would be small.

1170-1

Commentor No. 1174: David H. Read



TO:
 Colette Brown
 office of Space & Defense Power Systems
 (AE-50)
 USDOE
 19901 Germantown Rd
 Germantown MD 20874



Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

Responsible scientists tell me there is no need for the isotopes it would generate. Also, beyond the Clean-up: why is vitrification not being implemented?

Sincerely,

Name David H. Read, Ph.D. Address 911-11th E.
 City Seattle State WA ZIP 98102

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

fold here

1174-1
 1174-2
 1174-3
 1174-4

Response to Commentor No. 1174

- 1174-1: With respect to waste management and cleanup issues, the Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e. Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 1174-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 1174-3: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.
- 1174-4: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The schedule for vitrification of the high-level radioactive wastes currently stored in the high-level waste tanks is included in this agreement. Vitrification of these wastes is not within the scope of this NI PEIS.

Commentor No. 1175: Robert Reinhart



W.B. S.V. 67th
Cokette Brown
USDOE
19901 Germantown Rd
Germantown MD
20874



Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

We do not need it. Doctors & Scientists say so. You must show independence from for profit operators.
Also, you must prove fidelity to the Hanford Clean-up agreements.
I am a supporter of you & the President.

Sincerely,

Thank you
Name: Robert Reinhart Address: #62 Salmon Beach
City: TACOMA State: WA ZIP: 98407

mpact

Response to Commentor No. 1175

- 1175-1: With respect to waste management and cleanup issues, the Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 1175-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 1175-3: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.
- 1175-4: DOE notes the commentor's viewpoint.

Commentor No. 1176: Mark Darienzo

Response to Commentor No. 1176



↑ ESO GM
Cecille Brown
USDOE
14901 Germantown Rd.
Germantown MD
20874

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

I'm against restart of the FFTF. Hanford
needs to be cleaned up and shut down.

Sincerely,

Name Mark Darienzo Address 1634 N. Alberta St
City Portland State OR ZIP 97217

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

- 1176-1
- 1176-2
- 1176-3
- 1176-1

- 1176-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 1176-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.
- 1176-3: See response to comment 1176-2.

Commentor No. 1177: Christopher Wilson



NE 50

Collette Brown
 USDOE
 19401 Germantown Rd
 Germantown MD
 20874

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*The value of the FFTF for
 production of medical isotopes and
 other purposes is unclear and
 its risk is quite clear.*

Sincerely,

Chris Wilson

Name *Christopher Wilson MD* Address *3832 43rd NE*

City *Seattle* State *WA* ZIP *98105*

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 1177

1177-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

1177-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

1177-3: DOE notes the commentor's views on restarting FFTF for expanding its existing nuclear facility infrastructure. Consistent with its mandates under the Atomic Energy Act, DOE is proposing this expansion for the purposes of addressing three primary needs:

1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;

2) to support future NASA space exploration missions by re establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long term, assured supply; and

3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Section 1.2. of Volume was revised to clarify the purpose and need of the proposed action.

DOE acknowledges that the FFTF's large size and configuration is not particularly well suited for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of the FFTF for the production of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who

Commentor No. 1177: Christopher Wilson (Cont'd)

Response to Commentor No. 1177

might consider its use for isotope production”. In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates use of the FFTF when coupled with the other proposed missions.

- 1177-4:** FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Commentor No. 1178: Will Vanatto

NI PEIS Toll_Free Telephone

9/11/00

Will Vanatto
Reality News Network
Palm Beach County, FL
561_833_7815

I am calling to voice my disgust with the notion that DOE is considering further production of plutonium_238, one of the most deadly substances known to man. There has been several accidents during the course of the last few decades with space exploration using 238; 10 percent of the launches meet with accidents.

1178-1

There has been many worker contamination incidents.

1178-2

NASA is doing next to nothing about solar exploration even though the European Space Agency has now developed high efficiency solar cells for deep space missions. NASA lied about the Galaxy probe not being able to use solar. It is unbelievable that you people can rationalize using nuclear power when we know it is going to poison the babies and future generation. It is completely disgusting, nothing is worth that. Please take off your scientist hat and put on your humanitarian hat and get with it. You people are mad scientists. You are destroying what little is left of this planet. There are more and more people finding out about it; we are educating them daily. Let's go, let's get with it, your careers are not worth the world. Thank you.

1178-1

Response to Commentor No. 1178

1178-1: DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternative energy sources for space missions, although issues such as NASA research priorities are beyond the scope of this PEIS. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch.

1178-2: The commentor's concern about worker contamination is noted. Eight workers were exposed to plutonium-238 the Los Alamos National Laboratory on March 17, 2000. Their exposure to plutonium-238 was caused by a leaking pipe connection in a support system serving a glovebox. As a result of this accident, the Secretary of Energy ordered a series of actions to increase worker safety and health and to avoid further accidental exposures.

Plutonium-238 processing facilities can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Sections 4.2-4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from plutonium-238 processing, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that the radiological and nonradiological risks associated with plutonium-238 processing would be small.

Commentor No. 1179: Steve Legault

NI PEIS Toll_Free Telephone

9/11/00

Steve Legault
206_782_5639

Completely opposed to the restart of Fast Flux Test Facility in Tri_Cities, Hanford.

1179-1

Curious to know why you are having a public hearing in Arlington, Virginia, but not that curious.

1179-2

Really want to stop that thing.

I work with a number of oncologists, all of them say there is no shortage of nuclear isotopes.

1179-3

I see no need for upgrading nuclear bombs to keep them at an ever_ready hair trigger to fire against the toothless bear called Russia. My wife completely concurs with me, but I think I will have her leave her own message.

1179-4

Response to Commentor No. 1179

1179-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1179-2: It is DOE policy to hold at least one public hearing in the vicinity of the nation's capital on EISs for which contingent decisions have national implications.

1179-3: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

For nearly 50 years, DOE has actively promoted the use of radioisotopes to improve the health and well-being of U.S. citizens. DOE's use of its unique technologies and capabilities to develop isotopes for civilian purposes has enabled the widespread application of medical isotopes seen today. While its market share is a small fraction of total world isotope production, DOE remains the key provider for a large number of isotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially experimental, these isotopes are not generally purchased in large-enough quantities to make their production financially attractive to private industry. DOE's intent is to complement commercial sector capabilities to ensure that a reliable supply of isotopes is available in the U.S. to meet future demand, and to encourage the commercial sector to privatize the production of isotopes that have established applications to a level that would support commercial ventures. Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the

Commentor No. 1179: Steve Legault (Cont'd)

Response to Commentor No. 1179

DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions basic energy sciences or defense. DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term (less than 5 years).

- 1179-4:** DOE notes the commentor's opposition to the continuing upgrading of the nuclear arsenal, although issues related to nuclear weapons are beyond the scope of this Nuclear Infrastructure PEIS. The DOE missions to be addressed in this EIS include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development. The three missions are civilian nuclear energy missions and are not defense-related.

Commentor No. 1180: Kathy Dattle

NI PEIS Toll_Free Telephone

9/11/00

Kathy Dattle

I would like to ask you to shut down FFTF reactor and start focusing on the cleanup of Hanford. Thank you.

|| 1180-1
|| 1180-2

Response to Commentor No. 1180

- 1180-1:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 1180-2:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

***Commentor No. 1181: Steve Hopkins
Snake River Alliance***

NI PEIS Toll_Free Telephone

9/11/00

Steve Hopkins
Snake River Alliance
208_344_9161

I wonder if there has been a formal request for an extension of the comment deadline on the PEIS. Basically, we feel that we are not given enough time to comment on this document.

I realize that the comment deadline is next week, the 18th. We would like to formally request that DOE grant a 30_day extension of the comment period, and if this has not already been done, I would be interested to know if it is likely.

1181-1

Response to Commentor No. 1181

1181-1: DOE notes the commentor's request for extension of the public comment period. DOE received a number of requests for extension of the public comment period. The Council on Environmental Quality's (CEQ) "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act" (40 CFR 1506.10(c)) require that a minimum of 45 days be allowed for public comment on the Draft NI PEIS. As stated in the Notice of Availability (65 FR 46443 et seq.), the public comment period began on July 28, 2000 and continued to September 18, 2000. In preparing the Final PEIS, DOE has assessed and considered both oral and written comments received on the Draft PEIS during the public comment period and has responded to these comments in the Final PEIS. Volume 3 of the NI PEIS contains public comments received on the NI PEIS and DOE responses to those comments. Moreover, late comments were considered to the extent practicable.

Commentor No. 1182: Bob Kingsbrook

NI PEIS Toll-Free Telephone

9/11/00

Bob Kingsbrook
6777 Moore Drive
Oakland, CA 94611

It is critically important to my family, friends, every American, and world citizen that you honor the 1989 Tri-Party Agreement between the U.S., DOE, EPA, and WA Ecology a pact to keep a clear focus on cleaning up the FFTF and cease the impossibly wasteful and dangerous pursuit of so-called nuclear production. Please. Please be prudent. I want you to select Option 5 to permanently deactivate FFTF with no new missions. Please, we must shut down the Hanford FFTF immediately. Please choose Option 5 to permanently deactivate FFTF with no new missions. Thank you.

1182-1

1182-2

Response to Commentor No. 1182

1182-1: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to “ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use.” The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

DOE notes the commentor’s opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

A Tri-Party Agreement change was made to place the milestones for FFTF’s permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Public meetings were held on this formal milestone change.

1182-2: DOE notes the commentor’s support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 1183: Bill Smirnow

NI PEIS Toll_Free Telephone

9/11/00

Bill Smirnow
 169 Maple Hill Road
 Huntington, NY 11743
 631_421_0836

I express opposition to this. The use of nuclear power is both unnecessary and dangerous. And in those rare cases where it might be necessary, it is not worth the risk. The public is not being informed of this in a democratic manner. It should not be undertaken.

1183-1

1183-2

Response to Commentor No. 1183

-
- 1183-1:** The commentor's opposition to nuclear power is noted. The radiological and nonradiological risk of each alternative in the PEIS is analyzed in detail and presented in PEIS Summary Section S.6 and EIS Volume 1, Section 2.7.1. The missions to be addressed in this PEIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and nuclear research and development can currently only be met using nuclear reactor or accelerator technologies.
- 1183-2:** DOE policy encourages effective public participation in its decision making process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

Commentor No. 1184: Hanna Washerman

NI PEIS Toll-Free Telephone

9/11/00

Hanna Washerman
212_689_0048

I am totally against any increase in space nuclear power.

I think we better cleanup. I hear it costs \$300 billion, the pollution at DOE facilities now from what's been done in space already. Thank you.

1184-1

Response to Commentor No. 1184

1184-1: DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and concern over nuclear waste. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch.

As discussed in Chapter 4 of Volume 1 (e.g. sections 4.3.1.1.13, 4.3.2.1.13, 4.3.3.1.13), waste will be generated by all of the alternatives, including the No Action Alternative. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. DOE activities associated with this program would not impact the schedule or available funding for existing cleanup activities at candidate sites for implementation of the nuclear infrastructure alternatives.

Commentor No. 1185: Annie Wildwood

NI PEIS Toll_Free Telephone

9/11/00

Annie Wildwood
PO Box 133
Cotati, CA 94931

I think it is essential that certain things be considered by the Department of Energy. NASA is not doing enough to develop alternative power sources for space missions. European Space Agency has now developed high efficacy solar cells for deep space missions.

1185-1

Plutonium production fabrication process for space nuclear power missions has recently led to several worker contamination accidents. Expansion of the production will only worsen the problem.

1185-2

Point 3, the expanded nuclear, the number of launches of nuclear power space devices from Cape Canaveral on rockets with 10 percent failure rate will only increase the possibility of a deadly mishap.

1185-1

Point 4, the massive cost of expanded production of plutonium_238 cannot be justified at a time when the DOE admits it needs over \$300 billion to clean up existing problems at DOE facilities.

1185-3

Point 5, the military is promoting the use of nuclear power in space for space_based weapons technology. Using nuclear power for space war, we will have severe environmental implications for life on earth.

1185-1

It is essential that DOE considers these points and reassess the current PEIS. Please take our comments to heart and reassess the current PEIS. Please. Thank you. Thank you for allowing this number here to make my comments. I hope you deeply consider these serious matters that I have mentioned.

1185-4

Response to Commentor No. 1185

- 1185-1:** DOE notes the commentor's concern for NASA's use of nuclear materials for space missions, interest in the development of alternative energy sources for space missions, and concern for the use of nuclear power in space-based weapons. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. None of the missions stated in the NI PEIS are defense- or weapons-related.
- 1185-2:** Plutonium-238 processing facilities can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Sections 4.2-4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from plutonium-238 processing, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that the radiological and nonradiological risks associated with plutonium-238 processing would be small.
- 1185-3:** DOE notes the commentor's opinion and concern about funding available for cleanup at DOE facilities.
- 1185-4:** DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and to providing ample opportunity for public comment on those actions. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

Commentor No. 1186: Rosa Zubizarreta

08/03/2000 02:17 510-536-0266

RUSA ZUBIZARRETA

PAGE 02

To: Colette E. Brown
U.S. Department of Energy

Dear Ms. Brown,

I would like to offer my comments on the draft Programmatic Environmental Impact Statement re: plans to expand production of PLU-238 for future space missions.

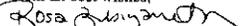
As an individual citizen of this country, the level of risk from the production of plutonium and from the use of plutonium to power space exploration is unacceptable to me, especially given that there are safe solar alternatives for this purpose.

As you may know, scientists around the world have endorsed the program of "The Natural Step", which calls upon our industrial society to produce only substances which can be safely returned and reintegrated to the natural cycles of matter. Producing plutonium is not in alignment with the need to create a safe and sustainable world for future generation. It only makes sense as a means to increase our potential for destruction.

While I appreciate the Environmental Impact process as a potentially helpful step towards making a wise decision, I do not see enough evidence of informed public dialog on this issue, in order for there to be sufficient public education and participation in a matter of such grave import.

I thank you for your careful consideration of these issues.

With all best wishes,


Rosa Zubizarreta
707-578-6650

1186-1

1186-2

Response to Commentor No. 1186

- 1186-1:** DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternative energy sources for space missions, although issues such as NASA research priorities are beyond the scope of this PEIS. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch.
- 1186-2:** DOE notes the commentor's views including the need for public dialog and education as a prerequisite for informed public participation. It is DOE policy to encourage public input on matters of regional, national and international importance. In doing so, DOE has established reading rooms near DOE sites to provide easy access to information about DOE programs and encourages the use of this source of information. Further, DOE has numerous web sites, including one for NE (<http://www.nuclear.gov>), that provide up-to-date-information complete with fact sheets, news releases, and other materials. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments.

Commentor No. 1187: Aaron A. Semer

From: Aaron Semer[SMTP:AARON@AIDSHOUSING.ORG]
 Sent: Friday, September 08, 2000 6:26:24 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: DO NOT RESTART THE FFTF!!
 Auto forwarded by a Rule

I absolutely believe that option 5 _ "permanently deactivate FFTF with no new missions," is the only rational and responsible choice to make. The negative effects of restarting the FFTF far outweigh the positive. It's too expensive, too contaminating, and goes directly against the current legal mission of Hanford, which is clean_up, not production. You have a responsibility to the people of Washington, and the rest of the country(even the world), to keep us free of contamination and use our tax dollars wisely. Hanford has proven to do neither of these. It is a money wasting, polluting cesspool. The sooner it is cleaned up and shut down, the better.

Sincerely,

Aaron A. Semer
 417 13th Ave. E #105
 Seattle, WA 98102

1187-1

1187-2

1187-3

1187-4

Response to Commentor No. 1187

- 1187-1:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 1187-2:** DOE notes the commentor's opinion.
- 1187-3:** Restart and operation of the FFTF would result in minimal contamination of the biosphere (air, water, land). All air emissions and wastewater discharges to the environment would be in accordance with applicable permit and regulatory requirements. The releases of air pollutants and contaminated liquids associated with FFTF operations are addressed in detail in Section 4.3 of the NI PEIS. The release of criteria air pollutants would result in concentrations well below Federal and state air standards Table 4-13); the releases of radioactivity and hazardous chemicals into the atmosphere would have a negligible effect on human health (Tables 4.17 and 4-19). No discernible impacts to groundwater or surface water quality would result from water discharges (Section 4.3.1.1.4).
- 1187-4:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Public meetings were held on this formal milestone change. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

Commentor No. 1188: Gerald Woodcock

From: Gerald Woodcock[SMTP:PILOTMBA@OWT.COM]
Sent: Friday, September 08, 2000 11:10:04 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Restart FFTF
Auto forwarded by a Rule

It is an absolute imperative that FFTF be restarted if emerging treatments for cancer using medical isotopes are to achieve their full potential. This is not an abstract intellectual exercise. The restart of FFTF has the potential to treat thousands of cancer patients, alleviate tremendous amounts of pain and suffering, prolong useful lives of patients and improve their quality of life. The potential goes far beyond the borders of our own country. While the program cannot initially be self_sustaining financially, objective analysis shows that FFTF can be financially "in the black" in as little as seven years after returning to service.

Gerald Woodcock

1188-1

1188-2

Response to Commentor No. 1188

1188-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

1188-2: DOE notes the commentor's opinion. The estimated costs of the range of reasonable alternatives are presented in the Cost Report, summarized in Appendix P of the Final NI PEIS. However, the Cost Report is not a cost-benefit analysis. While it is reasonable to believe that the benefits of medical isotopes are substantial, the purpose of this NI PEIS is to describe the nuclear infrastructure missions (Section 1.2 of Volume 1), a range of reasonable alternatives for satisfying the mission requirements (Section 2.5 of Volume 1), and the environmental impacts that would result from implementation of the alternatives. According to 40 CFR Section 1502.23, if a cost-benefit analysis exists, it must be reported and summarized in the NI PEIS.

Commentor No. 1189: Jim and Susan Wells

From: Jim and Susan Wells
 [SMTP:JNSWELLS@EARTHLINK.NET]
 Sent: Saturday, September 09, 2000 12:36:28 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Cc: Ruth Yarrow
 Subject: Shut down the Hanford FFTF now!
 Auto forwarded by a Rule

Dear Committee Members:

It's critically important to my family, friends, and every American and world citizen that you immediately honor the 1989 Tri_Party agreement between USDOE, EPA and WA Ecology, a pact to keep clear focus on cleaning up the FFTF and cease the impossibly wasteful and dangerous pursuit of so-called nuclear production.

1189-1

Those living now as well as voiceless future generations are depending on your prudent selection of Option 5: to permanently deactivate FFTF, with no new missions.

1189 -2

Please do this now.

Yours truly,

Jim and Susan Wells
 2815 10th Place West
 Seattle, WA 98119

Response to Commentor No. 1189

1189-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Public meetings were held on this formal milestone change. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "... ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

1189-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 1190: Tammy Johnson

From: Tammysmail@cs.com%internet
[SMTP:TAMMYSMAIL@CS.COM]
Sent: Friday, September 08, 2000 8:50:37 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: (no subject)
Auto forwarded by a Rule

I just wanted to let you know that I believe the medical isotopes should be used to help in any way that they can to reduce cancer. This is a disease that effects many people and their families and should be allowed to be utilized.

Tammy Johnson

1190-1

Response to Commentor No. 1190

1190-1: DOE notes the commentor's support for greater availability of medical isotopes for the treatment of cancer. For nearly 50 years, DOE has actively promoted the use of radioisotopes to improve the health and well being of U.S. citizens. DOE's use of its unique technologies and capabilities to develop isotopes for civilian purposes has enabled the widespread application of medical isotopes seen today. While its market share is a small fraction of total world isotope production, DOE remains the key provider for a large number of isotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially experimental, these isotopes are not generally purchased in large-enough quantities to make their production financially attractive to private industry. DOE's intent is to complement commercial sector capabilities to ensure that a reliable supply of isotopes is available in the U.S. to meet future demand, and to encourage the commercial sector to privatize the production of isotopes that have established applications to a level that would support commercial ventures.

Commentor No. 1191: Russell D. Hoffman

To: Colette E. Brown at al,
U.S. Department of Energy, NE_50,
19901 Germantown Road, Germantown, MD 20874_1290;
by fax (toll_free) at 1_877/562_4592; by phone (toll_free) at
1_877/562_4593; or by electronic mail to:
Nuclear.Infrastructure_PEIS@hq.doe.gov

Re: DoE PLANS FOR EXPANDED PRODUCTION OF PLU_238
FOR FUTURE SPACE MISSIONS, specifically, solicited comments
based on the DRAFT Programmatic Environmental Impact
Statement for Accomplishing Expanded Civilian Nuclear Energy
Research and Development and Isotope Production Missions in the
United States, Including the Role of the Fast Flux Test Facility,
DOE/EIS_0310D, July, 2000

From: Russell Hoffman
Concerned Citizen, P.O. Box 1936, Carlsbad, California 92018
(760) 720_7261, rhoffman@animatedsoftware.com
SENT VIA EMAIL
September 9th, 2000

Dear Ms Brown et al,

One hardly has to read the approximately 1200 pages of fiction to
recognize a great lie is being perpetrated by DOE.

DOE wants radioactive material for its nuclear weapons and
nuclear_powered weapons systems. The American military is the
most powerful political organization in the world, yet its
organizational methods are utterly unobservable. It is also the
least_regulated pseudo_corporation in the galaxy, and the single
most polluting entity of all times in the universe. It gets much of its
nuclear material from DOE.

1191-1

Response to Commentor No. 1191

1191-1: DOE notes the commentor's views. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

None of the alternatives in the NI PEIS include defense missions and would not contribute to future weapons production. Also, the proposed action would not have an impact on the cleanup missions at any of the candidate sites.

1191-2: DOE notes the commentor's opposition to enhancing its existing nuclear facility infrastructure to support production of plutonium-238 for use in future NASA space exploration missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Although research to identify other potential fuel sources to support these space exploration missions has been conducted, no viable alternative to using plutonium-238 has been established. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions. NASA uses plutonium-238 sources only when they enable the mission or enhance mission capabilities. Potential environmental impacts associated with launches of spacecraft using plutonium-238 are addressed in NEPA documentation prepared by NASA

Commentor No. 1191: Russell D. Hoffman (Cont'd)

Now, in this Draft PEIS, the DOE wants to be given millions of dollars in order to procure and process millions of Curies of plutonium and other radioactive substances, supposedly for civilian purposes, but in reality, for new war toys including military satellites powered by Plutonium 238 __ satellites which could just as easily be powered by solar technologies or which should not be placed in orbit at all until or unless appropriate alternative energy technologies exist.

DOE wants to do much of the work at already_existing nuclear waste Superfund impossible_to_clean_up sites, namely, Hanford, Washington, Oak Ridge, Tennessee, Los Alamos, New Mexico, and so forth.

The DOE creates this apparent civilian "need" for plutonium RTGs (Radioactive Thermoelectric Generators), and other tools of the trade, by endorsing and arranging the funding of NASA projects which are civilian in appearance, and perhaps leading_edge in some of their other technologies, but which are positively 20th_Century (i.e. old) in their use of nuclear energy solutions, relying on dangerous and closed_market technologies of no use to the average citizen, which furthermore, are utterly wasteful of the very resource they use, since the plutonium is not recoverable after the mission, and which are old technology when compared to what is available even now on the open market __ clean solar energy systems would work perfectly well for most of the proposed missions, and in other cases, smaller missions could fulfill all the science data requirements of all the proposed civilian space missions. There is no need for the nuclear components at all. Not one watt of energy or degree of heat needs to be generated by the use of nuclear components for any vital interest, civilian or military, of any country, including the United States.

And yet NASA/DOE continues to demand more nuclear components. Why?

**1191-1
(Cont'd)**

1191-2

1191-3

Response to Commentor No. 1191

in support of each mission. Radioisotope power systems have been used for over 30 years, and have repeatedly demonstrated their performance, safety, and reliability in NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005.

NASA, not DOE, is responsible for spacecraft design and for determining what electric power source best suits the mission-specific needs. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost. Plutonium-238 produced domestically or procured from Russia as a result of the NI PEIS Record of Decision, is to be used to support NASA deep space missions and can not be used for any defense-related mission.

1191-3: DOE notes the commentor's concern for NASA's use of nuclear materials for space missions. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. None of the missions stated in the NI PEIS are defense- or weapons-related.

The use of depleted uranium, and the use of nuclear-powered ships and submarines are not within the scope of this PEIS.

Commentor No. 1191: Russell D. Hoffman (Cont'd)

Because DOE loves plutonium. So does the military. They cannot conceive of the millions of scattered deaths their poisons create, literally in their wake.

A few months before Cassini was launched, in 1997, DOE announced that future missions would use a five_times better thermoelectric generator, known as an RPS, instead of the RTGs used on Cassini. Five times better isn't nearly good enough, but nonetheless, had DOE merely implemented this new unit for Cassini's launch, that would have given them about 50 pounds of "free" plutonium __ several year's worth at the proposed rates of use by NASA!

So clearly, DOE is not properly respectful of plutonium even simply as a precious resource, one which is deadly if improperly handled at any step. This policy fact is clearly demonstrated in the physical form of the RTGs themselves. NSAA's flimsy containment system isn't even designed to be 100% secure, and NASA's expected release rates from accidents, as published for example in the Cassini space probe's EIS, prove that the RTGs are carefully designed to release their contents in a reentry accident of some sort, as a fine powder at a high altitude.

The perfect spectrum of sizes for lodging in a person's lungs, to be exact.

And the perfect spectrum of sizes to be widely dispersed by the winds before reaching the ground, so that whoever dies does not die in a herd, but by themselves, from one little speck that found its way into that person's lungs.

Cancer, leukemia, and birth defects. These are the things DOE wishes a permit to create. And the reason is for military power supplies for "Cold War" spy satellites. As far as this writer can tell, NASA's recent Cassini probe was part of a cover operation for the military.

**1191-3
(Cont'd)**

Response to Commentor No. 1191

Commentor No. 1191: Russell D. Hoffman (Cont'd)

Cassini is right now on its way towards Jupiter and Saturn. But just because the flyby of Earth and the launch have both occurred doesn't mean we are safe from that awful bird ___ far from it. And does DOE recall NASA's failure to calculate an orbital insertion ___ a very similar maneuver to a flyby ___ just one month after Cassini flew by Earth?

Right now, Cassini should be re_aimed, so that if anything goes wrong, it would be more likely to impact Jupiter rather than fly by it. And Cassini should be left in that orbital pattern.

Cassini could become a lost probe, going dead any time between now, September 9th, 2000, and when it is supposed to fall into Saturn or one of its moons about a decade from now, after all its illustrious science data is returned and it is nothing more than a flying chunk of radioactive waste (Pu 238's half life is about 87 years, Pu 239, 24,400 years). No trajectory is exact, and unmeasurable (with current technologies) gravitational combinations of forces, plus the forces from micrometeor impacts, all together mean that soon we would have no idea where Cassini might actually be. Cassini could possibly loop around one of the outer planets and be driven back towards Earth, having by the time it gets to us (unseen), possibly have experienced a decade or even a hundred years in space, during which time the containment system will probably have become brittle and useless. Cassini could be thrown back at us by the outer planets, just as Earth and Venus were used as sling_shots to get Cassini out towards Saturn in the first place.

All this risk, for what? Not to please the public! The public expressed widespread disgust with NASA for launching Cassini in the face of reason, and NASA had to put on a major publicity campaign to counteract the bad publicity it rightfully received. (Using what official or unofficial budget to counteract the actions of this and other activists, I do not know.)

1191-3
(Cont'd)

Response to Commentor No. 1191

Commentor No. 1191: Russell D. Hoffman (Cont'd)

All this mess, and trouble, for what? To cover_up what are probably dozens of military nuclear launches.

All the "civilian" missions are part of a military regime; they are cover_ups. The military thinks they need nuclear powered electrical energy generators (RTGs), and undoubtedly they think they need nuclear heaters as well (RHUs, Radioactive Heater Units, which each contain tens of millions of fatal doses worth of plutonium 238 and 239 (2.7 grams) and which each absolutely will incinerate in virtually any reentry accident (there are about 130 RHUs on board Cassini).

All of the civilian nuclear_powered and equipped probes which are right now being designed and built, could either just as easily be solar_probes or could be switched for missions which do not go quite so far out as to study Pluto, for example, this decade instead of next, or which carry a few less instruments so that the energy drain is reduced somewhat. However, NASA/DOE's goal in choosing specific missions is in fact, to reach just beyond the practical limit, not as a show of can_do or bravado (for what bravery is required to risk other people's lives?), but simply to force the use of nuclear, so that the system is in place for the military uses to go on unnoticed.

Putting one too many experiments on board the probe so that solar becomes difficult is one of DOE's goals when deciding which missions to fund!

Replacing missions with solar variants has been studied conclusively, even years ago, for Galileo __ and by JPL's own scientists. Specifically in the D. E. Rockey et al report of 1980, extracted from NASA by Karl Grossman, using the Freedom of Information Act (FOIA). There has been more than 20 years of solar development since then __ surely we could get to the next planet out past Jupiter by now (little of the solar development that has occurred in the last 20 years has been thanks to our DOE, who, having banked on nuclear power, are now making the nation morally and financially bankrupt for having let them do so).

**1191-3
(Cont'd)**

Response to Commentor No. 1191

Commentor No. 1191: Russell D. Hoffman (Cont'd)

Our DOE leaders continue choosing shortsighted nuclear "solutions". Why? There's nothing civil about it. NASA space probes are improperly insured, too ___ by the Price_Anderson act, as corrupt an act as any Americans have ever revolted against or been revolted by. And note that P_A was designed to "insure" Stationary Objects ___ nuclear power plants ___ NOT space probes! NASA is protected by use of the Price_Anderson act from financial loss caused by Cassini or by NASA's other uses of plutonium and other radioactive substances ___ protected, that is, from legal justice by the victims of NASA policy. Protected by an illegal act which NASA has no right to operate under the shield of, even if the act were legal for those stationary nuclear power plants it was originally designed to hold harmless from the financial consequences of their own actions.

I say the entire Draft PEIS is a lie. It's basic premises are lies. NASA doesn't need nuclear power for civilian probes, and the military needs to be reigned in ___ they don't need nuclear power either, for probes, subs, ships, or on the tips of missiles. Humanity demands that the U.S. Military, and all militaries all around the world, be subservient to an even higher goal than winning wars against people. Humanity demands that these wars be planned for, and even be executed if need be, while conforming to the same environmental laws the rest of society lives (and dies) under.

Otherwise, we might win all the battles, but we will lose the planet, and along with it our health, our homelands, and everything else we cherish as citizens of a growing nation and as individual souls on a planet of billions of each_precious souls.

In Kosovo, Depleted Uranium bullets fired at, among other things, chemical industrial sites have turned the Blue Danube black with death. In Iraq, children die at the rate of 10,000 a month, because sewage systems and water irrigation systems were bombed, and because millions of shells of Depleted Uranium were used to win the Gulf War so quickly and "efficiently".

**1191-3
(Cont'd)**

Response to Commentor No. 1191

Commentor No. 1191: Russell D. Hoffman (Cont'd)

The use of Depleted Uranium should be banned, and the use of plutonium_powered listening devices for the military, whether undersea or in orbit in outer space (both uses are common today) should likewise be forbidden.

Further, the use of nuclear_powered ships and submarines must be stopped. Failures such as the Thresher and the Scorpion, two American nuclear subs which were lost for uncertain reasons, and more recently Russia's flagship nuclear sub, the Kursk (the Thresher was a flagship sub, in its time) remind us all too well that accidents can and will continue to happen. Each nuclear reactor which has already been lost or dumped at sea (the U.S. Navy dumped the research reactor Sea Wolf into the ocean some years back) needs to be pulled out and recovered, for a more proper nuclear waste disposal. But getting them out of the ocean is only one of the steps in what will be a long and nightmarish waste_guarding operation.

Who will do it? Who will pay for it? DOE must do it, AND DOE must pay for it. They should not be given yet more money for creating more nuclear waste and spreading it around the environment, using false pretenses and fictitious needs. They can't even clean up for their past mistakes. DOE is bankrupt.

And DOE must, as well, shut down all civilian nuclear power plants, each of which has a spent fuel pool next to it which is more deadly and dangerous than the plant itself. The clean energy solutions are Wind, Wave, Tide, Solar, Geothermal, Biomass, Hydroelectric, Ocean Thermal Gradient, and so on. They are NOT nuclear, coal, or oil solution's to America's constant and never_ending energy shortage. The solutions only come from a wide mix of available sources, not from the closed_minded, ingrown thinking which ignores the facts about nuclear waste disposal problems and dispersal problems, and all the other problems that have attended the use of nuclear energy and weapons since Day 1.

**1191-3
(Cont'd)**

Response to Commentor No. 1191

Commentor No. 1191: Russell D. Hoffman (Cont'd)

Please acknowledge receipt of these comments, and I request to know the name of any government official who actually reads even so much as this one document in opposition to the DOE nightmare proposed in the Draft PEIS, let alone, familiarizes themselves with the full details of what crimes are going on in the lofty name of science and space exploration, giving both a bad name, and polluting the planet, and the Near Earth Orbit area terribly. For I believe there is not one properly credentialed or elected official anywhere in the whole U.S. Government who can answer the charges I have brought forth here.

**1191-3
(Cont'd)**

Sincerely,

Russell Hoffman
Concerned Citizen / Activist, Carlsbad, California
rhoffman@animatedsoftware.com

Attachments (2)

Attachment 1):

Note to all readers: Please send your own comments to DOE by September 11th, 2000. Request a confirmation of receipt. If you want to send DOE a copy of this letter, it is okay to add your name to this document if you like, but an additional comment by you would be most helpful to the cause. Please "cc" me a copy as well. Thank you in advance!

The official organization which opposes nuclear power in space censors this writer's opinions, but if you wish to contact them, their address is: GlobeNet <globalnet@mindspring.com> Bruce Gagnon is their director. In this writer's opinion, Gagnon is an agent/infiltrator whose goal is to destroy the movement against nuclear power in space. He is, in effect, a black hole of information. Thanks to Jonathan Haber for reminding us of the upcoming deadline for comments on the Draft PEIS.

Commentor No. 1191: Russell D. Hoffman (Cont'd)

Attachment 2): Related Internet URLs:

Peace Activist, Environmentalist, High Tech Guru:
<http://www.animatedsoftware.com/whoisrdh.htm>

Founder and Editor of the Stop Cassini newsletter:
<http://www.animatedsoftware.com/cassini/nltrs/index.htm>

Learn the madness of NASA's ongoing nuclear policies! Visit the Stop Cassini web site:
<http://www.animatedsoftware.com/cassini/cassini.htm>

Learn about The Effects of Nuclear War here:
http://www.animatedsoftware.com/envirom/no_nukes/tenw/nuke_war.htm

What is a half_life? (Compares Plutonium 238 to Plutonium 239)
<http://www.animatedsoftware.com/cassini/nltrs/nltr0146.htm>

What is the Electromagnetic Pulse (EMP)? Is nuclear war winnable?
<http://www.animatedsoftware.com/cassini/nltrs/nltr0128.htm>

Hug a tree! Read why it should matter to you what happens to the great Redwoods in California:
<http://www.animatedsoftware.com/misc/stories/redwoods/redwoods.htm>

Why you need encryption: An interview with Phil Zimmerman:
<http://www.animatedsoftware.com/hightech/philspgp.htm>
(also available in Spanish)

###

Response to Commentor No. 1191

Commentor No. 1192: Tobiah Israel

From: Tobiah Israel[SMTP:TOBIAH@GORGE.NET]
Sent: Wednesday, September 13, 2000 9:22:09 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Hanford
Auto forwarded by a Rule

To Whom it May Concern,

Hanford is the most highly contaminated nuclear site in the western world. * Restarting FFTF would produce new high level radioactive waste streams, which affect worker health and safety, public and environmental health.

*Permanently shutting down the FFTF is part of the 1989 Tri_Party Agreement between USDOE, EPA and WA Ecology.

* Keeping FFTF on hot standby for four years has cost over \$40 million per year.

* The Washington State Medical Association, WA Academy of Family Physicians and Physicians for Social Responsibility/National have all passed resolutions opposing the restart of the FFTF.

* The legal mission of Hanford is clean_up, not production.

Tobiah Israel, A concerned citizen from Washington State

1192-1

1192-2

1192-3

1192-4

1192-2

Response to Commentor No. 1192

1192-1: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. This waste would not be stored in the high-level radioactive waste tanks. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

1192-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Public meetings were held on this formal milestone change. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities. DOE is fully committed to honoring this agreement.

DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "... ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE

Commentor No. 1192: Tobiah Israel (Cont'd)

Response to Commentor No. 1192

resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

- 1192-3:** The commentor's observation is correct, as noted in the Cost Report. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.
- 1192-4:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1193: Charlie Warren

From: Charlie Warren[SMTP:CWARREN@NEWNW.COM]
Sent: Wednesday, September 13, 2000 9:26:11 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF
Auto forwarded by a Rule

Please help to restart the FFTF. The medical world needs it as do many people who would be helped by the isotopes it would produce.

Thanks,

Charlie Warren
Kennewick, Wa

1193-1

Response to Commentor No. 1193

1193-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1194: Richard W. Lindsay

From: Richard Lindsay[SMTP:RLIND@SRV.NET]
 Sent: Wednesday, September 13, 2000 9:39:41 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Ms. Colette Brown
 Auto forwarded by a Rule

Hi, I would like to register my support for alternative 1 for restart of FFTF, etc. for the PEIS DOE/NE_0119. I believe it is high time the U.S. got back into the business of providing for itself, and, in addition, I believe that the U.S. has lost much of it's credibility among other nations for nuclear matters. I have been told as much by people from other nations (before my retirement).

Thank you.

Richard W. Lindsay
 77 N. 50 E.
 Blackfoot, Idaho
 83221

208 785 3209

1194-1

Response to Commentor No. 1194

1194-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1195: Mike Conlan

From: DistFund@aol.com%internet
[SMTP:DISTFUND@AOL.COM]
Sent: Wednesday, September 13, 2000 9:46:54 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Shut down FTFF, alternative #5
Auto forwarded by a Rule

The Environmental Impact Statement released by the DOE does not include important information:

- 1. Future demands for medical isotopes can be met using other facilities. **1195-1**
- 2. Future needs for plutonium to power NASA space missions can be met using existing supplies, supplemented by foreign sources if necessary. **1195-2**
- 3. The cost analysis, non_proliferation study and waste management study, all extremely important to measuring the impact of FTFF restart, are separated from the environmental impact study. **1195-3**
1195-4
1195-5

Mike Conlan,
Redmond, WA

Response to Commentor No. 1195

1195-1: Currently, approximately 50 percent of DOE’s isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities’ primary missions basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE’s market share increases, there will be a need for expanded isotope production capacity in the short-term. The commentor is referred to Chapter 2 of Volume 1 for information about facilities considered but dismissed.

1195-2: There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Although research to identify other potential fuel sources to support these space exploration missions has been conducted, no viable alternative to using plutonium-238 has been established. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE’s preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

1195-3: The costs and nuclear nonproliferation impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such ancillary documents need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed these documents to more than 730 interested parties on August 24 and September 8, 2000, respectively. Both reports

Commentor No. 1195: Mike Conlan (Cont'd)

Response to Commentor No. 1195

were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided summaries of the Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment in Appendixes P and Q, respectively in the Final NI PEIS.

1195-4: The draft “Waste Minimization and Management Plan for the Fast Flux Test Facility” (May 2000) was referenced in the NI PEIS and was available prior to the public hearings.

Commentor No. 1196: Dennis L. Cresswell

From: DennisCresswell@aol.com%internet
[SMTP:DENNISCRESSWELL@AOL.COM]
Sent: Wednesday, September 13, 2000 10:17:52 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Restart FFTF
Auto forwarded by a Rule

Ladies and Gentlemen _

I want to go on record in support of restarting the Fast Flux Test Facility. The United States needs a reliable supply of medical isotopes, and needs to have a facility to support experiments with new, promising cancer_fighting isotopes that are not presently available. The United States should be leading the world in developing new cancer treatments, rather than depending on foreign sources for many of the isotopes we presently use in medicine.

I believe that if DOE shuts down the FFTF permanently, it would deny the Tri_Cities an entire cancer_treatment industry that would surely develop here. I would also like to see FFTF used for the types of nuclear research that were conducted there before the facility was placed on standby. A world_class research reactor operating here would be a perfect complement to our present research community that has been led and fostered by DOE.

I was disappointed when DOE passed up the opportunity to privatize the reactor a few years ago, and I will be deeply disappointed if it is permanently closed. It is a unique and valuable asset that should be put to good use, and the decision about its future should be based on sound science rather than emotion.

Dennis L. Cresswell
560 Spengler Rd., Unit I
Richland, Washington 99352

Response to Commentor No. 1196

1196-1

1196-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

1196-2: DOE notes the commentor's support for the use of FFTF for nuclear research and for privatization of the FFTF.

1196-3: DOE notes the commentor's views. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

1196-2

1196-3

Commentor No. 1197: Mary Jean Brady

From: Brady_Power[SMTP:BRADYMJ@CNW.COM]
 Sent: Wednesday, September 13, 2000 10:33:25 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: hanford ffff
 Auto forwarded by a Rule

Dear Collette Brown/Secretary Richardson,

Please accept the following as public comments on the Draft Environmental Impact Statement on the Nuclear Infrastructure EIS.

As a citizen of the Pacific Northwest, I am deeply concerned about the United States Department of Energy's proposal to restart Hanford's Fast Flux Test Facility Nuclear Reactor. I wish to have my values incorporated into the formal administrative record and taken into consideration when adopting the final record of decision. I also want you to respond to my concerns before you make your record of decision.

Considering Hanford's overwhelming problems, including the crisis with tank waste treatment, as well as the damage caused by and radiation released from the Hanford wildfire, restarting FFTF is absolutely unacceptable. We must deal with the waste already at Hanford and focus on the clean_up mission. FFTF maintenance has already gobbled up \$100 million in clean_up money and distracted from desperately needed clean_up. Tank wastes are already seeping towards the Columbia River. More wastes must not be added to those tanks. Clean_up must be the only priority. We must save the Columbia River and returning salmon runs, the health vein of the Northwest.

Also, I object to the fact that you are asking citizens to comment on an incomplete study. You have not told us how you will deal with non_proliferation issues or additional waste from FFTF. Should FFTF be restarted, that decision will be illegal under Federal law and will be overturned! Do the right thing, shut down FFTF now and save the future of the Columbia River!

1197-1

1197-2

1197-3

1197-2

1197-1

1197-4

1197-1

1197-5

Response to Commentor No. 1197

1197-1: DOE notes the commentor's concerns. This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. DOE prepared a separate Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such an ancillary document need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed this document to about 730 interested parties on September 8, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Nuclear Infrastructure Nonproliferation Impact Assessment in Appendix Q in the Final NI PEIS. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives. DOE's decision will be made in compliance with applicable laws and regulations, including CEQ Implementation Regulations (40 CFR 1505.1).

1197-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford and the potential risk of contamination to the Columbia River. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The

Commentor No. 1197: Mary Jean Brady (Cont'd)

I know you attempt to allow for public comment but this issue affects all of us in Washington state and not just neighboring counties and metro areas. I fear for the health of the nearby counties already and potentially all of us here in the Northwest.

Sincerely,

Mary Jean Brady

bradymj@cnw.com

1197-1

Response to Commentor No. 1197

nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

In regards to the Hanford wildfire of 2000, the DOE Richland Operations Office, the State of Washington Department of Health, and U.S. Environmental Protection Agency performed environmental monitoring on and around the Site to assess potential radiological impacts. The wildfire did not cause a release of radioactive materials from any Hanford facilities but did result in resuspension of radioactive materials which were already in the environment. The very low levels of radioactive materials that were resuspended were slightly above natural background levels and required several days of analysis to quantify. Information on this event has been made available to the public and can be accessed at <http://www.Hanford.gov/envmon/indes.html>. This site also provides a link to information on the independent offsite air monitoring that was conducted by the U.S. Environmental Protection Agency.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

None of the alternatives considered by this PEIS will add to the tank waste volume.

1197-3: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

1197-4: Management of wastes that would be generated under implementation of Alternative 1 (Restart FFTF) is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and

Commentor No. 1197: Mary Jean Brady (Cont'd)

Response to Commentor No. 1197

operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

1197-5: See the response to comment 1197-3.

Commentor No. 1198: Judith A. Guse

From: GOOSIE1515@aol.com%internet
[SMTP:GOOSIE1515@AOL.COM]
Sent: Wednesday, September 13, 2000 10:36:21 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Support Restart of FFTF
Auto forwarded by a Rule

I support the restart of FFTF to make isotopes for medical and industrial research. Thanks.

Sincerely Yours,

Judith A. Guse
1515 S. Garfield PL
Kennewick, WA 99337

1198-1

Response to Commentor No. 1198

1198-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1199: Alexander R. Stevens

From: A. Stevens[SMTP:ASTEVEN@U.WASHINGTON.EDU]
 Sent: Wednesday, September 13, 2000 10:45:34 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: FFTF
 Auto forwarded by a Rule

Colette Brown, U.S. DOE:

Having thought about this problem for years, and attending a public meeting in Seattle two years ago, I am very much against restarting the FFTF. The resumption of plutonium production, which has been proven unnecessary for our defense needs, will necessarily lead to more nuclear wastes in the Hanford area, and delay the already much delayed cleanup.

The argument for production of medical isotopes is obviously spurious, and only included to make the restart palatable to the public. At the public meeting at the Seattle Center, the head of the University of Washington Medical Isotope division stated clearly that this facility was not needed, that there were adequate sites for isotope production elsewhere.

I urge support for alternative #5

DO NOT RESTART THE FFTF

Alexander R. Stevens MD
 5711 N.E. 77th St.
 Seattle WA 98115
 206_525_8895

1199-1

1199-2

1199-3

1199-4

1199-5

Response to Commentor No. 1199

1199-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

1199-2: The purpose of the NI PEIS is to evaluate the environmental impacts of reasonable alternatives to enhancing DOE's existing nuclear facility infrastructure to support production of isotopes for medical, research, and industrial uses, production of plutonium-238 for use in future NASA space exploration missions, and U.S. nuclear research and development needs for civilian application. No component of the proposed action is for the purpose of supporting defense or weapons-related missions.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

1199-3: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The alternatives delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

1199-4: Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions (basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has

Commentor No. 1199: Alexander R. Stevens (Cont'd)

Response to Commentor No. 1199

recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term.

1199-5: See response to comment 1199-1.

Commentor No. 1200: Nancy Stiefel

From: Nancy Stiefel[SMTP:NAS5580@IRCC.NET]
 Sent: Wednesday, September 13, 2000 10:53:38 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Cc: globalnet@mindspring.com%internet
 Subject: PLU_238
 Auto forwarded by a Rule

NASA is not doing enough to develop the use of solar power for its space missions. The idea of using nuclear power in space is completely objectionable. Plu_238, one of the most deadly materials known to human kind, should be completely banned from any space mission. Its use is dangerous, costly, and ludicrous in light of the advancements in alternative power sources (particularly by the European Space Agency). No expansion of production facilities for plu_238 should even be contemplated. Do not re_establish a domestic capability for producing and processing plu_238.

Your serious consideration of this viewpoint is expected and appreciated.

1200-1**1200-2*****Response to Commentor No. 1200***

- 1200-1:** DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternative energy sources for space missions, although issues such as NASA research priorities are beyond the scope of this PEIS. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch.
- 1200-2:** DOE notes the commentor's opposition to establishing a domestic capability for producing plutonium-238. DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Commentor No. 1201: Joanna Kirkpatrick

From: jkirk@micron.net%internet[SMTP:JKIRK@MICRON.NET]
Sent: Wednesday, September 13, 2000 12:18:10 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Cc: mike.simpson@mail.house.gov%internet;
ask.helen@mail.house.gov%internet; larry_craig@craig.senate.gov%internet
Subject: Public Comment on pursuing Pu_238 production in Idaho at INEEL Auto forwarded by a Rule

Ms. Colette Brown
DOE, Office of Space and Defense Power Systems

Dear Ms Brown:

I write as a citizen of the state of Idaho to object emphatically to DOE's plan to reprocess plutonium, possibly in Idaho. I object to it being done at Hanford, too, but I can only speak as a citizen of Idaho at this time.

Reprocessing is not acceptable and should not be considered at INEEL or any other facility

The place where you would like to pursue this effort at INEEL, Building 666, is a decrepit and highly contaminated building and should be decommissioned in a manner that is protective of human health and the environment. Decommissioned I repeat, NOT USED AGAIN.

Americans from all walks of life and locations have consistently opposed further and continued Plutonium_238 production. It is unnecessary and, worse, its use is too risky.

Using ATR at INEEL would interfere with its current mission of producing medical and industrial isotopes.

Please extend the comment deadline by 30 days. You have not allowed enough time for citizens to become informed and to form their views and communicate them to your department.

Joanna Kirkpatrick, 2005 N 17th St, Boise Id 83702

Response to Commentor No. 1201

- 1201-1:** The commentor's position concerning production of plutonium-238 at Idaho National Engineering and Environmental Laboratory and the Hanford Site is noted. The purpose of this NI PEIS is to evaluate the environmental impacts of a range of reasonable alternatives to fulfill the requirements of the missions described in Section 1.2 of Volume 1. The Record of Decision for the PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.
- 1201-2:** DOE would not conduct any reprocessing to produce weapons-grade plutonium under any of the alternatives considered under this programmatic environmental impact statement. The alternatives do include processing of target materials used to produce isotopes for medical and industrial uses, plutonium-238 for space missions, and nuclear materials research and development. Sections 4.3.1.1.13; 4.3.2.1.13; 4.3.3.1.13; and 4.4.3.1.13 were revised to clarify the waste management approach for waste resulting from processing of target materials for plutonium-238 production.
- 1201-3:** DOE notes the commentor's opposition to enhancing its existing nuclear facility infrastructure to support production of plutonium-238 for use in future NASA space exploration missions. Section 1.2.2 of Volume 1 was revised to clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.
- Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed production of plutonium-238 are relatively low and are discussed in detail in Chapter 4 of Volume 1 and appendixes H, I, and J of Volume 2 in the Final NI PEIS. For over 30 years, radioisotope power systems have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. However, potential health and safety impacts associated with future launches of spacecraft utilizing plutonium-238 are not within the scope of the NI PEIS analysis, but would be addressed in the specific NEPA documentation prepared by NASA in support of such missions.
- 1201-4:** As stated in EIS Volume 1, Section 2.3.1.2, ATR would continue to meet its medical and industrial radioisotope production mission for the no

Commentor No. 1201: Joanna Kirkpatrick (Cont'd)

Response to Commentor No. 1201

action and most other alternatives considered where ATR is not used for the production of plutonium-238. If ATR were to be used as a production facility for plutonium-238 (options 1, 2, 3, 7, 8, and 9 under Alternative 2), it would support medical and industrial radioisotope production to the extent possible. DOE would try to minimize the impact of the new mission on current medical and industrial radioisotope production.

- 1201-5:** DOE notes the commentor's request for extension of the public comment period. The Council on Environmental Quality's (CEQ) "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act" (40 CFR 1506.10(c)) require that a minimum of 45 days be allowed for public comment on the Draft NI PEIS. As stated in the Notice of Availability (65 FR 46443 et seq.), the public comment period began on July 28, 2000 and continued to September 18, 2000. In preparing the Final PEIS, DOE has assessed and considered both oral and written comments received on the Draft PEIS during the public comment period and has responded to these comments in the Final PEIS. Volume 3 of the NI PEIS contains public comments received on the NI PEIS and DOE responses to those comments. Moreover, late comments were considered to the extent practicable.

Commentor No. 1202: Keith Hoeft

From: keith hoeft[SMTP:KSHOEFT@MSN.COM]
Sent: Wednesday, September 13, 2000 12:25:00 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF Radio Isotopes
Auto forwarded by a Rule

I urge you to restart the FFTF reactor for the purpose of producing radio isotopes for medical purposes. I am a cancer opatient who has undergone chemotherapy, radidation, stem cell transplant and now raio isotpe teatment. The most succesful todate has been the radioi isotope. It may be the only hope for many of us. To have such a capability available and being used for the good of those in need only makes sense.

1202-1

Response to Commentor No. 1202

1202-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1203: Karolynn Flynn

From: Roger Katz[SMTP:RKATZ@HALCYON.COM]
Sent: Wednesday, September 13, 2000 12:32:25 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: No More!
Auto forwarded by a Rule

SUPPORT FOR ALTERNATIVE #5: SHUT DOWN FFTF!!
SUPPORT FOR ALTERNATIVE #5:
SHUT DOWN FFTF!!

Listen to reason. No more, No more.

Sincerely,

Karolynn Flynn
Roger Katz

1203-1**Response to Commentor No. 1203**

1203-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 1204: Judith Starbuck

From: Peter Greenfield/Judith Starbuck
[SMTP:PGJS@HALCYON.COM]
Sent: Wednesday, September 13, 2000 1:00:33 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Hanford reactor
Auto forwarded by a Rule

Colette E. Brown, U.S. Department of Energy:

I want to register my belief that the FFTF at Hanford should not be restarted. I urge you to adopt Alternative #5. We shouldn't do anything to deter Hanford from cleaning up the waste already present at the site rather than creating more. Future demands for medical isotopes can be met using other facilities.

Thank you,

Judith Starbuck
1126 Grand Avenue
Seattle, WA 98122

1204-1

1204-2

1204-3

Response to Commentor No. 1204

- 1204-1:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 1204-2:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The alternatives delineated in the NI PEIS would not have an impact on Hanford cleanup activities.
- 1204-3:** Currently, about 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions (basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term.

**Commentor No. 1205: Ken Dobbin, Councilman,
City of West Richland, WA**

From: KDDNEP@aol.com%internet
[SMTP:KDDNEP@AOL.COM]
Sent: Wednesday, September 13, 2000 1:57:15 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF Thanks
Auto forwarded by a Rule

Dear Ms Brown:

Thanks for a very professional public hearing in Richland on August 31. Everyone I have talked to since that meeting has commented on how well it was run and that they believe all the technical information needed to justify an FFTF restart now has been presented in public forum.

I am looking forward to the final PEIS choosing to restart the FFTF as the preferred alternative. I am also confident that the Secretary has ample justification now to make the ROD to restart the FFTF before the end of the year.

I am gaining confidence that the DOE is looking at the total nuclear infrastructure needs of our nation and will assign several of the missions to the FFTF. In the past, the FFTF was only considered for one mission at a time will all the operating costs allocated to that mission. Multi_missions is a way of distributing that cost.

I also pray that the DOE includes cost savings for our health care system, especially medicare, from the isotopes that the FFTF can generate. Even the elected officials in the Seattle area can agree with that mission that could save us Americans billions of dollars.

Thanks for your careful consideration.

Ken Dobbin, Councilman
City of West Richland, WA
email: kddnep@aol.com

1205-1

1205-1: DOE notes the commentor's remarks concerning the Richland, Washington public hearing.

1205-2: DOE notes the commentor's support for Alternative 1, Restart FFTF.

The commentor is correct in stating that FFTF would be assigned more than one mission. As stated in Section 2.5.2 of Volume 1, FFTF would be used for the three stated missions.

1205-2

1205-3: DOE notes the commentor's views on the costs and benefits of the proposed production of medical radioisotopes. The estimated costs of the range of reasonable alternatives are presented in the Cost Report, summarized in Appendix P of the Final NI PEIS. However, the Cost Report is not a cost-benefit analysis. While it is reasonable to believe that the benefits of medical isotopes are substantial, the purpose of this NI PEIS is to describe the nuclear infrastructure missions (Section 1.2 of Volume 1), a range of reasonable alternatives for satisfying the mission requirements (Section 2.5 of Volume 1), and the environmental impacts that would result from implementation of the alternatives. According to 40 CFR Section 1502.23, if a cost-benefit analysis exists, it must be reported and summarized in the NI PEIS.

1205-3

Response to Commentor No. 1205

Commentor No. 1206: Jeanne Koster

From: SD Peace and Justice[SMTP:SDPJC@DAILYPOST.COM]
 Sent: Monday, September 11, 2000 5:33:02 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Cc: globalnet@mindspring.com%internet
 Subject: Draft PEIS on PU_238 for space missions
 Auto forwarded by a Rule

TO: Collette E. Brown, US Department of Energy, NE_50

Dear Ms. Brown:

It is proposed to possibly re_start the Fast Flux Test Facility at Hanford, WA, to supply Plutonium_238 fuel for deep space exploration. INEL and ORNL are also under consideration for this function. Previously, NASA had announced it would rely on purchase of plutonium from from Russia pursuant to a decommissioning and disposal agreement between Russia and the United States. Now, there is evidently worry that the plutonium_containing materials from Russia might not be forthcoming.

Question: Why worry that the Russians won't deliver the plutonium? The worry seems speculative indeed. When have the Russians signaled reluctance, except to complain about the great cost of safe transport, which is more reasonably interpreted as a broad hint that the US should fork over more monetary aid than as a refusal to reward our expectations of loads of Russian plutonium arriving on US shores. The last I heard on the subject was positive. According to an Associated Press story, on September 1 Vice President Gore and Russian Prime Minister Kasyanov signed an agreement that will "gain" the United States 34 tons of the stuff, and Congress has approved \$200 million to help the Russians get it to us.

Second question: But, supposing there is Russian reluctance, what would be the motivation of it? Given that plutonium is a dire environmental liability wherever it exists, why on earth would the Russians pass up a golden opportunity to dump their liability

1206-1

1206-2

Response to Commentor No. 1206

1206-1: The 34 tons of plutonium referred to by the commentor is weapons-grade plutonium that the Russians have declared surplus and plan to disposition. The \$200 million that Congress approved will be used to assist the Russians in building a pit disassembly and conversion facility in Russia to disassemble pits (a weapons component) and convert the recovered plutonium into plutonium dioxide suitable for disposition. The purpose of the NI PEIS is to evaluate the environmental impacts of a range of reasonable alternatives to fulfill the DOE missions, one of which is the domestic production of plutonium-238. Plutonium-238, used to support NASA space missions, is not weapons-grade plutonium (i.e., plutonium-239).

1206-2: As discussed in Section 1.2 of Volume 1, plutonium-238 would be produced to support NASA's deep space missions. Plutonium-238 is not used to produce nuclear weapons. All missions considered in the NI PEIS are for civilian purposes. The Russians have not displayed any reluctance to sell plutonium-238 to the U.S. One of DOE's objectives is to develop

Commentor No. 1206: Jeanne Koster (Cont'd)

on the United States and get paid for doing so? Could our government be speculating that the Russians may become reluctant to cooperate by plutonium delivery because the Russians believe we have an ultimate goal beyond the extremely modest power needs of a handful of deep space exploration vehicles? What if the Russians should perceive our purpose in using the plutonium to be against their national interest?

Third question: How so? Well, they can log on to the US Space Command's very own website [www.peterson.af.mil/usspace] and take a gander at plans to enforce US interest against Russian or any other interest. There they will find "Vision for 2020" and other documents describing the Pentagon's ambition to absolutely control space with space_based weaponry and associated supports that can be most readily powered by plutonium. They can read plain as day that space jockeys in the Pentagon are intent on positioning the US as Master of the Universe, capable of enforcing US will. Period. They can read in these documents an upfront and unabashed imperialist and mercantilist motivation, a resolve to protect US interest quite broadly interpreted, including economic as well as strictly strategic military interest.

So, maybe its not unreasonable to speculate that a near_future nationalist government in Russia would interpret development of plutonium power for deep space exploration as merely a "Trojan horse" that will enable DOE to accomplish military aims. Contextual considerations, such as overlap in NASA and DOE aims, need to be explicitly treated in the draft PEIS. Surely, you understand how the absence of explicit treatment could skew the public comment.

On the subject of displeasing the Russians, it must be mentioned that a Hanford FFTF restart will produce isotopes usable in tactical nuclear weapons. It's no secret that the United States contemplates use of tactical nuclear weapons. Many in the community of nations, including, presumably, most of our allies, would find pursuit of such a US ambition objectionable. The PEIS

**1206-2
(Cont'd)**

1206-3

Response to Commentor No. 1206

U.S. capabilities to support NASA's future space missions - a capability that would not be subject to reliance on the goodwill of other nations. Plutonium-238, like any other resource with monetary value, is limited in supply, and the Russian's continued willingness to sell their resources is necessarily uncertain. The terms of any sales beyond the existing contract would be subject to new contractual negotiations.

1206-3: DOE notes the commentor's views. Consistent with its mandates under the Atomic Energy Act, DOE is proposing this enhancement for the purposes of addressing three primary needs:

1) to support the increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;

2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and for which the U.S. has no long-term assured supply; and

3) to support civilian nuclear energy research and development in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. No component of the proposed action is for the purpose of producing tritium, nor is it for the purpose of supporting any other defense or weapons-related mission.

Commentor No. 1206: Jeanne Koster (Cont'd)

needs to discuss the FFTF for isotope production that could eventuate in that class of weapons.

Many objections remain against use of plutonium-powered generators for space exploration. I am sure that others' comments will treat those objections well. I am confining this comment chiefly to plea for your agency to lay all the cards on the table in your PEIS, including cards about the military potential of decisions that NASA takes. Even if NASA itself disavows any intention to enable military advances, the potential for such advances inherent in a decision to develop plutonium generators for space vehicles or to re_start the Hanford FFTF must be examined. Otherwise NASA will not fully comply with the mandate of the National Environmental Policy Act.

Sincerely,
Jeanne Koster
Director
South Dakota Peace & Justice Center
PO Box 405
Watertown, SD 57201
(605)882_2822; same for fax
sdjpc@dailypost.com

**1206-3
(Cont'd)**

Response to Commentor No. 1206

Commentor No. 1207: Bob Schenter

From: RESchenter@aol.com%internet
[SMTP:RESCHENTER@AOL.COM]
Sent: Tuesday, September 12, 2000 4:18:01 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Cc: cmi@owt.com%internet; RESchenter@aol.com%internet
Subject: FFTF RESTART!
Auto forwarded by a Rule

Dear Ms. Brownd:

Please restart FFTF. Save lives.

Bob Schenter
Richland Wa 99352

1207-1**Response to Commentor No. 1207**

1207-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1208: Sunny Miller

From: Traprock Peace Center
[SMTP:TRAPROCK@CROCKER.COM]
Sent: Tuesday, September 12, 2000 5:13:11 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Expanded Plutonium Production
Auto forwarded by a Rule

I am very sorry to read about further military involvement in NASA space missions. The use of space for military purposes violates international treaties. Our arming of the heavens is an unworthy direction, but of course there are profits to be made. I

1208-1

I object to expanded production of plutonium for any purposes. Monies should be redirected toward environmental and health concerns as we move from the nuclear age to the information age. Don't you agree?

1208-2

Best regards,

Sunny Miller

Response to Commentor No. 1208

1208-1: DOE notes the commentor's objection to the use of space for defense purposes. None of the DOE missions described in this PEIS is weapons- or defense-related.

1208-2: DOE notes the commentor's opposition to the production of plutonium 238 for any purpose. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Commentor No. 1209: W. H. Barley

From: William H Barley[SMTP:WHBARLEY@GTE.NET]
Sent: Tuesday, September 12, 2000 5:49:51 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF restart
Auto forwarded by a Rule

I totally support the restart of FFTF. The need for medical and research isotopes will only grow as our population ages. We should not let this valuable resource slip away. This country has been allowing other countries to surpass it in nuclear technology. Closure of FFTF would be just another example of poor future planning on our part.

W. H. Barley
9658 E Mark Ln
Scottsdale, AZ 85262

1209-1***Response to Commentor No. 1209***

1209-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1210: Dale McNally

From: Dale_W_McNally@rl.gov%internet
 [SMTP:DALE_W_MCNALLY@RL.GOV]
 Sent: Tuesday, September 12, 2000 6:11:39 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Cc: James_N_Jim_Pagliari@rl.gov%internet
 Subject: FFTF Restart _Vital to Medical Isotopes and a wise economic move.
 Auto forwarded by a Rule

What I don't understand is why we are having to explain why FFTF should be restarted. Isn't there enough scientific information in the community of Nuclear Power, etc to understand the value of FFTF. The medical isotopes is vital, necessary and definitely non_proliferation. I would hope that alone is enough to get the decision makers "off the dime" and onto ways we can help our communities and country, rather than hinder them.

Another problem I see is the bold exaggeration and outright false and misleading information given out by the HEAL Organization and Mr. Pollet. Someone other than his "opponents" here at Hanford should soon be educated enough to sift through the jargon and explain the facts to the average "Joe Q. Public". I thought getting the facts, evaluating the information that comes in, and reaching a valid decision for the best interest of the people was the purpose of the EIS process. Why doesn't that happen? It seems to me, we have let the process deteriorate into a mail in response type of bureaucratic nightmare, hodgepodge of half_truths and innuendos (sometimes from both sides), from the "non_nukes" who seem to be anti anything nuclear.

1210-1***Response to Commentor No. 1210***

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- 1210-1:** DOE notes the commentor's views and concerns. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.
- 1210-2:** DOE notes the commentor's support for Alternative 1, Restart FFTF.
- 1210-3:** DOE notes the commentor's support for nuclear education and materials research programs. The commentor's support for nuclear power is also noted. It is the current policy of the United States that clean, safe, reliable nuclear power continue as a viable component of the country's energy portfolio. In recognition of this need, the government has initiated nuclear energy research and development programs to address potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) and to ensure that current nuclear power plants can continue to deliver adequate and affordable energy supplies. An enhanced DOE nuclear facility infrastructure is required to support such nuclear energy research and development for civilian applications.

Commentor No. 1210: Dale McNally (Cont'd)

Please register my vote to help the people, by restarting FFTF, the very valuable piece of expensive equipment. Then register my suggestion to start evaluating the information and bring back the educational and testing programs which have provided tremendous safety information for metal brittleness, etc. from the effects of radiation. It seems to me the safety and clean air folks would eventually realize the value of the electricity produced also, from nuclear power, as compared to coal fired power plants. Enough for now,

Sincerely,
Dale McNally

1210-2**1210-3**

Response to Commentor No. 1210

Commentor No. 1211: Mary Beth Sullivan

From: Mary Beth Sullivan[SMTP:MBSULL@MINDSPRING.COM]
 Sent: Tuesday, September 12, 2000 8:14:06 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: PLU_238 Production for Space Missions
 Auto forwarded by a Rule

I write in response to your Draft Programmatic Environmental Impact Statement on DoE Plans for Expanded Production of PLU_238 for Future Space Missions.

I cannot understand the proposal to increase production of plutonium when DoE is faced with the very real ___ as yet unsolved! ___ problem of nuclear waste. While the nuclear waste created by plutonium used in weapons production needs hundreds of billions of dollars more to be cleaned up ___ and while DoE has yet to uncover a plan or process that can contain nuclear waste for the thousands of years it remains active, it seems there is a moral issue that goes unaddressed in the plans to produce plutonium for space exploration.

Your PEIS does not address the fact that the European Space Agency has developed high_efficiency solar cells for deep space missions. Neither NASA nor the DoE demonstrate that enough attention has been given to develop solar power sources for deep space missions.

As a resident of Florida, I am deeply disturbed by the idea that there will be an increase in the number of launches from Cape Canaveral carrying nuclear powered batteries. It is only a matter of time before a launch accident carrying plutonium will occur, with the consequences threatening the air we breathe in Florida.

I am adamantly opposed to increasing production of Plutonium for use in space missions. It is only a matter of time before NASA's and the US Space Command's agendas meet, and this plutonium is used to support weapons in space.

1211-1

Response to Commentor No. 1211

1211-1: DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and concern over nuclear waste. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch.

As discussed in Chapter 4 of Volume 1 (e.g., 4.3.1.1.13, 4.3.2.1.13, 4.3.3.1.13), waste will be generated by all of the alternatives, including the No Action Alternative. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. DOE activities associated with this program would not impact the schedule or available funding for existing cleanup activities at candidate sites for implementation of the nuclear infrastructure alternatives.

Commentor No. 1211: Mary Beth Sullivan (Cont'd)

Halt all plutonium production. Spend the resources in solving the existing problem of nuclear waste.

Sincerely,

Mary Beth Sullivan
Gainesville, Florida.

|| 1211-2
|| 1211-1

Response to Commentor No. 1211

1211-2: DOE notes the commentor's opposition to the DOE production of plutonium-238 for use in future NASA space exploration missions. Section 1.2.2 of Volume 1 was revised to clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Commentor No. 1212: Bob Roseth

From: Robert M Roseth[SMTP:ROSETH1@JUNO.COM]
Sent: Tuesday, September 12, 2000 8:54:06 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF restart
Auto forwarded by a Rule

Ms. Brown:

Please add my comments to the ever growing list of those opposing the restart of the Fast Flux Test Facility. We all know that cleaning up Hanford is a losing proposition__I've long grown weary of the futile efforts by mismanaged firms to try and attempt the impossible. I'm not sure we'll ever see the area free from severe environmental contamination.

But to add to the amount of waste __why? I have attended hearings and am not impressed that this facility is needed. I agree with our Governor and other elected officials who feel the time for using Washington as a nuclear dumping ground has long since passed.

Please renew the commitment to clean up Hanford and stop trying to add to its nuclear burden.

Sincerely,

Bob Roseth
roseth1@juno.com

Response to Commentor No. 1212

1212-1

1212-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1212-2

1212-2: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Commentor No. 1213: Robert L. Owren

From: BOB10@aol.com%internet[SMTP:BOB10@AOL.COM]
 Sent: Tuesday, September 12, 2000 10:56:32 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: No Subject
 Auto forwarded by a Rule

I strongly oppose the restarting of the Hanford Nuclear Site for any reason. The government has already spent (wasted) billions of dollars on projects and ideas that have not dealt with the real problems posed by this site, leaking tanks and the immanent contamination of the Columbia River.

It is time to clean it up.

Robert L. Owren
 23404 26th Ave S.
 Des Moines, WA 98198

1213-1

1213-2

Response to Commentor No. 1213

-
- 1213-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 1213-2:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Commentor No. 1214: Stan and Sun Noble

From: snoble2[SMTP:SNOBLE2@NETZERO.NET]
Sent: Wednesday, September 13, 2000 1:23:39 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Hanford Reactor Activation
Auto forwarded by a Rule

We are very much opposed to the recent consideration of restarting a nuclear reactor on the Hanford Nuclear Reservation. We feel that there is already too much of a risk to future generations of seepage via aquifers to the Columbia River of the nuclear waste currently stored on the site. The creation of even more risk from having an active reactor on the site is something we do not find acceptable as we live downstream from Hanford.

We ask that you abandon any consideration of such a proposal.

Sincerely;

Stan & Sun Noble

1214-1

1214-2

1214-3

1214-1

Response to Commentor No. 1214

1214-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1214-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford and the risk of contamination to the Columbia River. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

1214-3: The environmental impacts associated with operation of the FFTF are addressed in detail in Section 4.3 of the NI PEIS. The impacts are shown to be small. These impacts specifically include the risks to human health during normal operations and associated with postulated accidents. Over the 35-year operational period no fatalities would be expected among workers or in the general public in the vicinity of Hanford or at distant locations.

Commentor No. 1215: Bruce Bailey

From: Bruce W Bailey
 [SMTP:BRUCEWBAILEY@JUNO.COM]
 Sent: Wednesday, September 13, 2000 2:29:48 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: FFTF
 Auto forwarded by a Rule

Dear Sirs:

I ABSOLUTELY OPPOSE restarting any of the Hanford reactors, particularly the FFTF, for any reason. The Hanford area has been devastated by the nuclear industry. It needs to be cleaned up, then left alone to recover. It DOES NOT need the unnecessary restarting of the FFTF. Clean up Hanford, don't dirty it further.

Bruce Bailey

1215-1

1215-2

Response to Commentor No. 1215

1215-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

It should be noted that FFTF is the only reactor at Hanford under consideration for restart and is, in fact, the only reactor that could be restarted.

1215-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

The NI PEIS addresses the environmental impacts due to the treatment, storage, and disposal of the waste generated for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and appropriate DOE orders.

Commentor No. 1394: Linda Johns

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

20874-1290 [Barcode]

**Public comment on Nuclear Infrastructure Draft Programmatic
Environmental Impact Statement (NI PEIS)**

I am opposed to restart of the Fast Flux Test Facility reactor because:

*Clean-up is the goal and no new
hazardous waste should be added to
the problem. Nor should attention
be diverted from that goal.*

Name Linda Johns
Address 11940 SW. Carman
City, state Tigard OR zip 97223

Response to Commentor No. 1394

1394-1

1394-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1394-2

1394-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Commentor No. 1395: Augusta Gordon

Hanford Watch
2265 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

20874-1290 [barcode]

Public comment on Nuclear Infrastructure Draft Programmatic
Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

Nuclear chemicals cause cancer
and I do not want cancer.
Also the waste is tough to get
rid of and when released into
our environment destroy it.

Name Augusta Gordon
Address 2305 SE 37th Ave
City, state Portland OR Zip 97214

1395-1

1395-2

1395-3

Response to Commentor No. 1395

1395-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1395-2: The commentor's position on nuclear chemicals is noted. Sections 4.3 through 4.6 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of a range of reasonable alternatives, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with Hanford operations in support of the nuclear infrastructure would be small.

1395-3: DOE notes the commentor's concern regarding waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 1396: Bruce H. Noordhoff

September 7, 2000

Ms. Colette E. Brown
NE-50, Office of Nuclear Science
Energy and Technology
19901 Germantown Road
Germantown, MD 20874

Dear Ms. Brown:

Subject: Comments on Nuclear Infrastructure PEIS-03100

I offer the following comments on NI PEIS-03100 in support of Alternative 1, FFTF Restart.

- I strongly support the enhancement of this EIS by the inclusion of the Nuclear Energy Research and Development for Civilian Applications mission. I share NERAC's conclusion that the capabilities of currently operating DOE facilities will not support a nuclear energy option, if this option becomes necessary. Further, I believe reinvigoration of materials testing capability in support of advanced reactor development could be critical to our country, if "rate rage" from increasing electrical power shortages and price increases occurs.
- From my study of the NI PEIS, I find the FFTF Restart option to be the best of the options in every area of comparison:
 - It is the preeminent option for supporting the nuclear energy research and development mission, especially for materials and nuclear fuels research.
 - It is capable of producing a greater variety and greater volumes of medical isotopes for diagnostic and therapeutic uses.
 - It can supply the specified quantities of Pu-238.
 - The cost comparison shows FFTF Restart can be achieved most economically.
 - The non-proliferation requirements can be satisfied readily.

Therefore, I believe the selection of FFTF Restart as the Preferred Option should be a "slam-dunk" based on the EIS findings.

- It is critical that the Record of Decision on the final NI EIS be based on DOE's vision of the future energy needs of this country. This is the time for statesman-like leadership which reaches decisions through study and conviction. For this decision, it is essential that our leadership stand against the political "winds that blow" to avoid pitfalls having great programmatic and financial risks and consequences of national importance.

1396-1

1396-2

Response to Commentor No. 1396

- 1396-1:** DOE notes the commentor's support for Alternative 1, Restart FFTF. DOE also notes the commentor's statements related to NERAC's findings and agrees with those findings. Chapter 1 of the PEIS presents material related to the NERAC report.
- 1396-2:** DOE notes the commentor's views. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

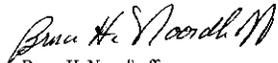
Commentor No. 1396: Bruce H. Noordhoff (Cont'd)

I am reminded how unrelenting anti-nuclear activist pressures influenced the decision to prematurely shutdown the PUREX facility at Hanford in 1990, before the spent fuel in the "pipeline" to PUREX was processed. This decision is still reflected in today's storage of corroding high-level waste in the K Basins close to the Columbia River and the diversion of \$1.5 billion dollars from cleanup programs to move and store this material more safely. Additional funding will be needed in subsequent years to maintain this fuel in storage, as there is no plan to dispose of it.

I encourage the NI EIS-03100 decision-makers to not let pressures from vocal activist groups warp their decision on how best to meet projected U.S. needs for radioisotopes and nuclear research and development over the next 20 years.

FFTF IS TRULY A NATIONAL ASSET
FFTF CAN SERVICE ALL THREE NI EIS PROGRAMS.
RESTART FFTF.
JUST DO IT!

Respectfully submitted,



Bruce H. Noordhoff
Retired

239 Brookwood Loop
Richland, WA 99352

**1396-2
(Cont'd)**

1396-1

Response to Commentor No. 1396

Commentor No. 1397: Gary T. Dilweg

Response to Commentor No. 1397

Draft PEIS Comment Form

Spt 9, 00

Please restart FFTF for medical isotopes. The medical profession, as in any profession, needs as many weapons as possible to fight cancer. Demographics show us that cancer Americans will be a larger percentage of the American population. We need to give cancer fighters more tools to do their job. There are few, if any, legitimate reasons for not restarting FFTF. Thank you so so.

Thank you
Gary T. Dilweg

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Gary T. Dilweg

Organization: Citizen

Home/Organization Address (circle one):

City: Green Bay State: WI Zip Code: 54311

Telephone (optional): 920-336-5915

E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-SO
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-542-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

1397-1

1397-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Commentor No. 1398: Laurel Piippo

FFTF

September 9, 2000

Dear Collette Brown,

The clock is ticking, time is passing, and we're still talking, talking, talking. On the front page of the TRI-CITY HERALD is a story about vitrification for the disposal of nuclear waste costing so many billions of dollars. How long has this discussion gone on? Ten years? Twenty years? Seven years after FFTF was put on standby, we're still talking while cancer patients suffer and die -- just like those nuts in Hood River and Portland want them to do. Please ask, beg, plead, tell, order, demand Secy Richardson in my behalf to GET ON WITH IT -- restart FFTF.

Yesterday the daughter of one of my Senior Peer Counseling clients (a volunteer effort too long to explain) asked me to help her write about her father's death. He died of cancer and asked his daughter to write his thoughts, particularly in regard to treatment by medical isotopes. He worked here and apparently knew about their medical possibilities and told his daughter he was convinced they could have extended his life.

Attached is my evaluation sheet concerning three hearings I attended this month. The method of selecting speakers was excellent, much better than advance registration or signing up. The lottery system was very fair but tough on those who came up last, of course, and must have been tough on you, having to stay till the very end. I do not think that listening to emotional people exchange ignorances -- and that includes me -- is a good way to settle an issue requiring scientific facts and expertise. Taking a poll or majority rules when people are driven by the latest fad or hysteria is not the way to determine restarting FFTF. On the other hand the government did a rotten job of creating nuclear waste, is apparently being very slow to clean it up, and deserves to be screamed at.

The moderator did a good job of controlling the audience, insisting on courtesy, but could have been more firm about limiting us to five minutes. Except for me, of course. Why were THEIR five minutes so much longer than my five minutes?

Again, I want to apologize for whatever sweeping gestures or impassioned words I said that led you to believe I had any negative feelings toward you. You do such an impressive job and are a terrific role model as a woman in charge (even though Charles Kilbury did say, "Thank you, GENTLEMEN, for the opportunity to speak). As I watched you in action, I wished my granddaughters could have seen what you do and how well you do it. It is a pleasure to see you again.

Sincerely,



LAUREL PIIPPO
Vocal Cancer Survivor

Response to Commentor No. 1398

1398-1

1398-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

1398-2: DOE notes the commentor's remarks concerning the facilitation and format of the NI PEIS public hearings.

1398-2

Commentor No. 1399: Barbara Kinnear-Williams

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214

stamp

Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

ISOTOPES NO ANSWER TO CANCER
**Public comment on Nuclear Infrastructure Draft Programmatic
Environmental Impact Statement (NI PEIS)**

I am opposed to restart of the Fast Flux Test Facility reactor because:

IT IS TOO RISKY TO THE WILDLIFE
AND TO THE HUMAN LIVES IN THE
PACIFIC NORTHWEST. THERE IS NO JUST-
IFICATION FOR EXPANDING THE D.O.E.'S
NUCLEAR FACILITY INFRASTRUCTURE.

Name B. KINNEAR-WILLIAMS
Address 1105 NW 79TH CIRCLE
City, state VANCOUVER WA Zip 98665

Response to Commentor No. 1399

- 1399-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 1399-2:** The concerns expressed on the potential health and environmental effects of NI PEIS Alternative 1 are noted. The environmental impacts associated with operation of the FFTF and support facilities at Hanford during normal operations and from postulated accidents are presented and discussed in Section 4.3 of the NI PEIS. All impacts to human health and to ecological resources would be small in the immediate area of the Hanford site and negligible at all distant locations.
- 1399-3:** DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.
- Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted

1399-1

1399-2

1399-3

Commentor No. 1399: Barbara Kinnear-Williams (Cont'd)

Response to Commentor No. 1399

by approximately 2005. Under the No Action Alternative, DOE would continue to purchase plutonium-238 to meet the space mission needs for the 35-year evaluation period considered in the NI PEIS. However, DOE recognizes that any purchase beyond what is currently available to the United States through the existing contract would likely require negotiation of a new contract and may require additional NEPA review. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Clean, safe, reliable nuclear power has a role today and in the future for our national energy security. In recognition of this need, nuclear energy research and development programs have been initiated to address potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) and to ensure that current nuclear power plants can continue to deliver adequate and affordable energy supplies. An expanded DOE nuclear facility infrastructure is required to support such nuclear energy research and development for civilian applications.

Commentor No. 1400: Fred T. Matica

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214

stamp

Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

I WILL NOT SUPPORT TECHNOLOGICAL FIXES
OF PROBLEMS THAT TECHNOLOGY OR ITS MIS-
APPLICATIONS HAS CAUSED. SIMPLER PREVEN-
TIVE HEALTH CARE; SOLAR ENERGY; LESS FRE-
TRAVEL ARE IN ORDER. FIX OUR EARTH GENTLY
FIRST, THEN GO TO MARS.

Name FRED T. MATICA
Address 1105 NW 79TH CIRCLE
City, state VANCOUVER, WA Zip 98665

1400-1

1400-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1400-2: DOE notes the commentor's views.

1400-2

Commentor No. 1401: Jack J. Fix

September 8, 2000

Ms. Colette Brown
DOE Office of Space & Defense Power Systems, NE-50
19901 Germantown Road
Germantown, MD 20874-1290

Re: FFTF for Medical Isotopes

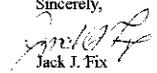
Dear Ms. Brown:

The decision should be made to maintain the Fast Flux Test Facility (FFTF) at Hanford. The FFTF represents one of the most versatile nuclear reactor facilities within DOE. It offers the capability for medical isotope production and even the potential for electrical power generation. The FFTF should be maintained based on considerations of demonstrated scientific contributions, comparative value to DOE programs, and the benefit to US citizens to have assured access to FFTF produced isotopes for medical diagnosis and treatment. Maintaining the FFTF for medical isotope production is widely supported by scientific and medical organizations.

The primary drawback appears to be the outcry of anti-nuclear organizations and politicians that demand no DOE nuclear facility be operated or even maintained at Hanford. The stated reasons are often based on unsound scientific reasons, such as the potential to vaporize Portland, Oregon during an accident or the inability of DOE to handle more than environmental cleanup at Hanford. At best the anti-nuclear organizations support the use of medical isotopes in medical diagnosis and treatment but for the US to import whatever medical isotopes are needed.

I ask that a decision be made to maintain the FFTF to produce medical isotopes based on comparative benefits that will become increasingly evident in the future. The personal testimony of oncologists and cancer patients for the advantages of this technology will continue to grow. The capability to target cancer cells while minimizing damage to healthy tissue cannot be ignored. The aging baby boomer generation will significantly increase the cancer incidence in the years to come and will greatly benefit from this treatment option.

Sincerely,


Jack J. Fix
107 Jackson Ct.
Richland, WA 99352
E-mail: jcfix@3-cities.com

Response to Commentor No. 1401

1401-1

1401-1: DOE notes the commentor's support for Alternative 1, Restart FFTF. It should be pointed out that power production is not one of the missions for which FFTF would be restarted.

1401-2

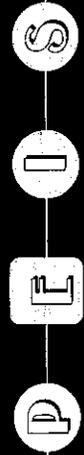
1401-2: DOE notes the commentor's views. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

1401-1

Commentor No. 1402: J. E. LaGrange

Response to Commentor No. 1402

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

NE NEED FTFE, please
RE START IT!

1402-1

1402-1: DOE notes the commentor's support for Alternative 1, Restart FTFE.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): JE LAGRANGE

Organization: _____

Home/Organization Address (circle one): PO BOX 4556

2111 TURNER ST #28

City: RICHLAND State: WA Zip Code: 99352

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19601 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PBS@hq.doe.gov



**Commentor No. 1403: Michael L. Garrison, Mayor,
City of Pasco, WA**



MAYOR (509)545-3404 / **Scan 726-3404** / **Fax (509)545-3403**
P.O. Box 293, 525 North 3rd Avenue, Pasco, Washington 99301

September 8, 2000

Ms. Collette Brown
US Department of Energy NE50
19901 Germantown Road
Germantown, MD 30874-1290

RE: Fast Flux Test Facility Draft Environmental Impact Statement

Dear Ms. Brown:

The City of Pasco supports the use of the Fast Flux Test Facility at Hanford (FFTF) for the production of isotopes for medicine, space missions and other forms of research and development. The FFTF has the economic capability of producing the quantity, variety and the quality of medical isotopes required by the medical industry to treat cancer. In addition, the FFTF has the capability of safely producing industrial grade isotopes, space batteries and can be a world leader in nuclear research.

The final environmental impact statement should designate the FFTF as the preferred alternative for the efficient production of medical isotopes because it is the only facility that can accommodate all the demands of the medical isotope program as well as industry, space and research. The FFTF is the most cost effective means for meeting the entire range of missions proposed.

Sincerely,


Michael L. Garrison
Mayor

MG/TA/tlz
Cc: Congressional Delegation
Keith Klein, DOE – RL

Response to Commentor No. 1403

1403-1

1403-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1404: George T. Taylor

2357 Carriage Street
Richland WA, 99352

September 9, 2000

Colette E. Brown, NE-50
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

Dear Madam

I support the selection of Alternate 1, Restart of FFTF as the preferred alternative for DOE's Infrastructure Programmatic Environment Impact Statement.

Since FFTF is the most modern reactor facility in the DOE complex, it does not make sense to scrap the FFTF, when it can be operated economically to produce the needed medical and industrial isotopes and material to support NASA's missions.

Contrary to the FFTF's opponents' campaign of mis-information and fear, restart of FFTF would NOT threaten the health of the people or environments of Washington , Oregon and the United States. As evidence by the past operation of the FFTF, which set several world records including safe and efficient reactor operation.

Sincerely,

George T. Taylor

1404-1

Response to Commentor No. 1404

1404-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1405: Ethel Noble

NI PEIS Toll_Free Telephone

9/12/00

Ethel Noble
Portland, OR

I am calling to protest the start_up again of the FFTF at Hanford. I am very much concerned about further nuclear waste and I don't think that the start_up is necessary.

|| 1405-1

|| 1405-2

Response to Commentor No. 1405

1405-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1405-2: DOE notes the commentor's concern regarding waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. As discussed in Section 4.3.1.1.13 of the PEIS, the waste generated as a result of FFTF operations is very small compared to wastes generated by other Hanford activities. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 1406: Mary Siebertsen

NI PEIS Toll_Free Telephone

9/12/00

Mary Siebertsen
7705 SW Miner Way
Portland, OR 97225
503_292_1638

I would like to leave my opinion as for the opening up of the reactor in Hanford for the FFTF which you are referring to as PEIS. I am totally and completely opposed to starting up the reactor. I know you are saying you are going to develop isotopes as well but you are also producing tritium which will certainly overwhelm the cancer situation that you claim to be using the isotopes for. I want the cleanup to be done and completed. I do not want the reactor started again. My husband feels the exact same way, so please put both of us down with our opinion. Thank you very much. I do think you should extend the deadline. I think it is to short to get public input.

1406-1

1406-2

1406-3

1406-1

1406-4

Response to Commentor No. 1406

- 1406-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 1406-2:** The purpose of the NI PEIS is to evaluate the environmental impacts of a range of reasonable alternatives to expanding DOE's existing nuclear facility infrastructure to support production of isotopes for medical, research, and industrial uses; production of plutonium-238 for use in future NASA space exploration missions; and U.S. nuclear research and development needs for civilian application. No component of the proposed action is for the purpose of producing tritium, nor is it for the purpose of supporting any defense-related mission.
- 1406-3:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.
- 1406-4:** DOE notes the commentor's request for extension of the public comment period. The Council on Environmental Quality's (CEQ) "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act" (40 CFR 1506.10(c)) require that a minimum of 45 days be allowed for public comment on the Draft NI PEIS. As stated in the Notice of Availability (65 FR 46443 et seq.), the public comment period began on July 28, 2000 and continued to September 18, 2000. In preparing the Final PEIS, DOE has assessed and considered both oral and written comments received on the Draft PEIS during the public comment period and has responded to these comments in the Final PEIS. Volume 3 of the NI PEIS contains public comments received on the NI PEIS and DOE responses to those comments. Moreover, late comments were considered to the extent practicable.

Commentor No. 1407: Sandy Mitchell

NI PEIS Toll-Free Telephone

9/11/00

Mr. Sandy Mitchell
10715 1/2 Phinney Ave, North
Seattle, WA 98133
206_440_0148

I am calling to say that I am outraged that the Department of Energy is again trying to start/restart Fast Flux, whatever. I am thoroughly sick of the games that DOE and the Defense Department have been playing with the health of the public, with myself included. I am pretty well informed about the already existing health hazards and fall out. Literally and figuratively. Already above materials already produced at Hanford and fully aware of how difficult the cleanup effort at Hanford has been. I absolutely urge the DOE and government generally to stop this bullshit. Stop lying to us, stop trying to add more contamination to an already incredibly contaminated area.

1407-1

1407-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF. It should be pointed out that the Department of Defense is not involved in any of the missions or alternatives described in the NI PEIS, nor was it involved in the preparation of the document itself.

1407-2

1407-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

Each alternative of the NI PEIS considered and evaluated potential health effects, both in terms of consequences and risks, associated with normal operations and accidental releases from a complete spectrum of accidents including severe accidents. All of the alternatives, including the restart of FFTF, are shown to pose very little risk to the health and safety of the public.

Commentor No. 1408: Lewis D. Burke

NI PEIS Toll_Free Telephone

9/13/00

Lewis D. Burke
 Box 847
 Republic, WA
 (509) 775_2322

This is September 13th, I received this information about these supposed meetings. I don't really realize how they're in the public's interests. I think they're in the special interests. This is government serving the worst interests in the United States.

1408-1

Response to Commentor No. 1408

1408-1: The purpose of this NI PEIS is to evaluate the environmental impacts of reasonable alternatives to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238 for NASA space missions, and nuclear research and development. Other interests are beyond the scope of this NI PEIS. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the environmental impact analysis of DOE's proposed alternatives for meeting mission requirements. In preparing the Final NI PEIS, DOE carefully considered comments received from the public. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

Commentor No. 1409: John Severson

NI PEIS Toll-Free Telephone

9/13/00

John Severson
(503) 297_8572

My name is John Severson. I've been a small businessman and a resident of Oregon _ Portland, Oregon for a number of years and I do not want to see Hanford start producing Tritium, due to the fact that I don't really see the use for it, I'm not convinced of anybody's argument that it's needed and I prefer to see Hanford decommissioned as was originally scheduled years ago. Just wanted to let you know what my opinion was and if anyone needs to call me my number is (503) 297_8572.

1409-1

1409-2

Response to Commentor No. 1409

1409-1: The purpose of the NI PEIS is to evaluate the environmental impacts of a range of reasonable alternatives to expanding DOE's existing nuclear facility infrastructure to support production of isotopes for medical, research, and industrial uses; production of plutonium-238 for use in future NASA space exploration missions; and U.S. nuclear research and development needs for civilian application. No component of the proposed action is for the purpose of producing tritium, nor is it for the purpose of supporting any defense-related mission.

1409-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "...ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

Commentor No. 1410: Andy Phillipson

NI PEIS Toll_Free Telephone

9/13/00

Andy Phillipson
18923 East Second
Green Acres, WA 99016
(509) 922_0819

Just calling to express support for the FFTF medical isotopes program. I think it's good for the community and good for science and good for America. So put me down in the win column for that one. Thank you so much, bye.

1410-1

Response to Commentor No. 1410

1410-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1411: Jan W. Anderson

Sep-13-00 11:04A LOOKS MI

206 236 8055

P.01

JAN WRIGHT ANDERSON
FAX # 206-236-8055

FACSIMILE TRANSMITTAL SHEET

TO:	FROM:
COLETTE E BROWN US DEPARTMENT OF ENERGY	Jan W. Anderson
COMPANY:	DATE:
U.S. Department of Energy NE-50 19901 Germantown Rd Germantown MD 20874-1290	09/13/2000
FAX NUMBER:	TOTAL NO. OF PAGES INCLUDING COVER:
1-877-562-4592	One
PHONE NUMBER:	SENDER'S REFERENCE NUMBER:
1-877-562-4593	
RE:	YOUR REFERENCE NUMBER:

URGENT FOR REVIEW PLEASE COMMENT PLEASE REPLY PLEASE RECYCLE

NOTES/COMMENTS:

Please DO NOT restart the Dangerous FFTF Nuclear Reactor at Hanford WA for any reason. I was a down winder and have many worries about Hanford and the part they played in jeopardizing my health and welfare. Please listen to my plea.



2242 78TH AVE SE MERCER ISLAND WA 98040

Response to Commentor No. 1411

1411-1

1411-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1412: Connie Estep

9-12-2000 9:20PM FROM CRE-ST MUSEUM 509 943 1770

P. 1

Fax to 877/562-4592

Connie Estep
 850 Aaron Dr. #100
 Richland WA 99352

13 Sept 2000

Collette Brown
 Office of Nuclear Energy
 Science & Technology
 US-DOE
 Germantown MD 20874-1290

RE: Restart of FFTF

I am strongly in favor of restarting the Fast Flux Test Facility for production of isotopes for medical and industrial research. As one of a large percentage of Americans who has had a bone scan I realize how useful isotopes are in diagnosing ailments. I've been appalled to read of research that has been abandoned due to problems in obtaining lab quality isotopes.

Sincerely,



Connie Estep

1412-1**Response to Commentor No. 1412****1412-1:** DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1413: Keith G. Douka

03/16/00 THU 09:51 FAX 5093737606

OCM

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September 13, 2000

Department of Energy
Comments regarding restart of the FFTF

Keith C. Douka
2119 Shasta Ave.
Richland, WA 99352

I am in favor of re-starting the Fast Flux Test Facility.

It becomes tiring to continue to read article after article by concerned citizens regarding this issue, with little or no direct experience related to FFTF or the nuclear power industry as a whole.

My background includes the initial startup activities of the FFTF from 1976 to 1979. From there I supported nuclear startups and/or refueling outages for the following plants:

Tennessee Valley Authority	Sequoyah Unit 1 and 2 Watts Bar Unit 1 and 2
South Carolina Electric & Gas	V.C. Summer
Toledo Electric Co.	Davis-Besse
Florida Power Corp.	Crystal River III
Mississippi Power & Light	Grand Gulf
Georgia Power	Vogtle Unit 1 and 2
Commonwealth Edison	Braidwood Unit 1 and 2
Energy Northwest	Unit 2

The names for many of these utilities have changed over the years, in this case the listing reflects what was. It is important to spend some time qualifying an opinion.

FFTF in comparison to water-cooled power reactors for production of medical isotopes stands head and shoulders above in many areas. An important area to consider is "operating importance". Commercial power reactors in today's deregulated power market are focused on the bottom line, that is making power. Everything centers around the plant generating as much electricity as possible through the operating cycle. Medical isotopes should not take a back seat. The focus should be directly on the mission of creating the isotopes to save lives.

FFTF has a physical plant configuration that favors isotope production. It was designed for testing fuels and materials, whereas the typical power reactor was not. FFTF sits ready to handle the mission with sub-systems already in place to handle irradiated components. It's design includes the ability to load and unload test assemblies without core unloading. A power reactor has to de-couple the reactor head and remove it from the reactor vessel. Anytime you lift a 400,000 pound lid off of something it has to be considered at best "inconvenient".

FFTF has a high neutron environment. The liquid sodium coolant allows this where water is not as efficient. This again shows a broader spectrum of possibilities for isotope production.

1413-1

Response to Commentor No. 1413

1413-1: DOE notes the commentor's support for Alternative 1, Restart FFTF, and opposition to Options 4, 5, and 6 of Alternative 2, Use Only Existing Operational Facilities. However, it should be noted that a CLWR would only be used in the production of plutonium-238 and not medical isotopes.

Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

Commentor No. 1413: Keith G. Douka (Cont'd)

03/16/00 THU 09:51 FAX 5093737606

OCM

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FFTF operates at nearly atmospheric pressure. Power reactors operate at a typical 2,000 psi. The energies contained with the systems and piping are handled with a great amount of respect. You learn this when a steam line atmospheric relief valve lifts off.

The liquid sodium coolant is contained within piping systems that are located in cells with inert atmospheres. With welded pipe joints and low line pressure there is little chance of pipe rupture or unplanned leakage.

FFTF is a simpler operation with respect to a water-cooled nuclear power reactor. It's control room is very basic in comparison. It should though be upgraded with modern controls if for no other reason than spare parts availability.

FFTF is located on a government reservation in a solitary setting removed from all other site activities. Operation of this test facility would have no impact on cleanup activities at the rest of the site.

Hanford continues to accept contaminated waste. What little waste that is generated by FFTF would be placed right along side of the rest of the inbound contamination waste.

In summary: The United States of America is the world leader in many areas. It should also be the world leader in isotope production, not for the glory but to save American lives such as yours and mine. How ironic that we argue over the most inane things while each of us know someone battling cancer or that has died from cancer. It is also likely that I will face cancer in my future. If I am affected by cancer I certainly do not want opponents to FFTF to sit there and hold my hand telling me how sorry they are that I am dying, but my life as an American citizen was not worth the effort to operate the FFTF.



Keith G. Douka

1413-1
(Cont'd)

Response to Commentor No. 1413

Commentor No. 1442: Janelle Koester

From: Janelle Koester[SMTP:JANELLE@GORGE.NET]
Sent: Thursday, September 14, 2000 3:22:34 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: against startup at hanford
Auto forwarded by a Rule

I am writing to say that I am against the The U.S. Department of Energy's plan to restart the dangerous FFTF Nuclear Reactor at Hanford to produce research medical isotopes and plutonium_238.

I believe it is dangerous and unacceptable for many reasons, some of which I list here.

1. Future demands for medical isotopes can be met using other facilities.
2. Future needs for plutonium to power NASA space missions can be met using existing supplies, supplemented by foreign sources if necessary.
3. The cost analysis, non_proliferation study and waste management study, all extremely important to measuring the impact of FFTF restart, are separated from the environmental impact study.

Finally, more wastes and contamination are not acceptable at Hanford. Restart of FFTF will add more high_level waste to Hanford. Adding new wastes would interfere with the primary mission of Hanford: to clean it up.

Please note for your records that I am STRONGLY OPPOSED TO THIS PLAN AND STARTUP AT HANFORD, as both a citizen and multi_business owner in my community.

thanks,

Janelle Koester, Koester Consulting
PO Box 1175, Hood River,OR 97031
541.387.2844

Response to Commentor No. 1442

1442-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1442-2: Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions (basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term. The commentor is referred to the Chapter 2, Volume 1 discussion about facilities that were considered but dismissed.

1442-3: There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

1442-4: The costs and nuclear nonproliferation impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such ancillary documents need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed these documents to more than 730 interested parties on August 24 and September 8, 2000, respectively. Both reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided summaries of the Cost Report and Nuclear Infrastructure

Commentor No. 1442: Janelle Koester (Cont'd)

Response to Commentor No. 1442

Nonproliferation Impact Assessment in Appendixes P and Q, respectively in the Final NI PEIS.

The draft Waste Minimization and Management Plan for the Fast Flux Test Facility (May 2000) was referenced in the NI PEIS and made available prior to the public hearings.

1442-5: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

The draft "Waste Minimization and Management Plan for the Fast Flux Test Facility" (May 2000) was referenced in this NI PEIS and was available prior to the public hearings. The report is available on the FFTF website (www.fftf.org/reports).

Commentor No. 1442: Janelle Koester (Cont'd)

Response to Commentor No. 1442

1442-6: See response to Comment 1442-5.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Commentor No. 1443: Arlene Young

From: jyoung[SMTP:JYOUNG@EONI.COM]
 Sent: Thursday, September 14, 2000 3:39:10 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Hanford
 Auto forwarded by a Rule

I would like to reinforce former Senator Mark Hatfield's position that the Hanford facility should not be reactivated. Radioactive waste is a serious concern to everyone caring about our future. Those of us who live near this facility have watched carefully how slowly clean up of this site has progressed and the errors that have been made in handling this facility. There is no support for any other course of action than shutting the facility down completely and cleaning up the contamination on this site.

Arlene Young
 96 Penn Avenue
 La Grande, OR 97850
 541_963_3879

1443-1

1443-2

1443-1

Response to Commentor No. 1443

-
- 1443-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.
- 1443-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 1444: Ariel Simmons

From: Ariel Savannah Simmons[SMTP:SARIEL@USWEST.NET]
Sent: Thursday, September 14, 2000 11:05:06 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Nuclear infrastructure_PEIS c/o Colette Brow also mailed to Kempthorne, Craig, Crapo, Chenoweth, and Simpson
Auto forwarded by a Rule

Ms. Colette Brown
DOE, Office of Space and Defense Power Systems
Dear Ms. Colette Brown,

I've recently learned that the Department of Energy is considering producing Plutonium 238 (PU_238) at INEEL for use in NASA space missions or involving INEEL in the production the process, which will occur on the Hanford Reservation. To produce PU_238, the DOE will use a version of reprocessing technology, which will produce somewhere in the ballpark of 288,000 gallons of liquid waste. This is an exorbitant amount of nuclear waste and is neither acceptable nor justifiable.

As concerned citizen's, the members of the Snake River Alliance have asked you to extend the deadline for comments on the Draft Programmatic Environmental Impact Statement for Accomplishing Expanded Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility (FFTF). It takes time for people to grasp the ideas and implications in a complicated and multitudinous document, such as this Draft EIS. If possible, at this time, please extend the comment period another 30 days.

Please hear my concerns and prevent the production of PU_238 through "reprocessing" at INEEL and all other DOE sights like the Hanford Reservation.

Response to Commentor No. 1444

1444-1: The use of proposed alternative facilities associated with processing of neptunium-237 targets would have no impact on schedules or available funding for high-level radioactive waste programs at either Hanford or INEEL. At INEEL, the tanks would not be used although certain facilities at the Idaho Nuclear Technology Engineering Center (INTEC) would be used to treat the wastes resulting from processing the irradiated targets. These are reliable systems that would process a maximum of 1,050 cubic meters of low-level radioactive waste over the 35-year nuclear infrastructure operational period. The higher activity waste would be treated as a solid form via a stand-alone vitrification system, separate from any tank waste treatment system. At Hanford, the existing high level radioactive waste facilities would not be used, and as analyzed in the PEIS, no existing or planned high-level radioactive waste facilities would be used to treat the wastes resulting from processing the irradiated targets.

1444-2: DOE notes the commentor's request for extension of the public comment period. The Council on Environmental Quality's (CEQ) "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act" (40 CFR 1506.10(c)) require that a minimum of 45 days be allowed for public comment on the Draft NI PEIS. As stated in the Notice of Availability (65 FR 46443 et seq.), the public comment period began on July 28, 2000 and continued to September 18, 2000. In preparing the Final PEIS, DOE has assessed and considered both oral and written comments received on the Draft PEIS during the public comment period and has responded to these comments in the Final PEIS. Volume 3 of the NI PEIS contains public comments received on the NI PEIS and DOE responses to those comments. Moreover, late comments were considered to the extent practicable.

1444-3: The use of any of the proposed facilities would not impact the schedule, available funding, or progress of the cleanup missions at Hanford, INEEL, or ORR. This NI PEIS addressed wastes produced for each alternative, as well as cumulative impacts related to waste production. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

1444-1

1444-2

Commentor No. 1444: Ariel Simmons (Cont'd)

a.. Plutonium_238 production is entirely too risky of an endeavor. The reprocessing technology has led to the most expensive and complicated cleanup projects in the history of the United States ___ at INEEL, the Hanford Reservation in southeastern Washington, and Savannah River, South Carolina. The result of the extraction process is liquid waste that is both radioactive and hazardous. Difficult to manage and problematic to put into solid form, liquid waste poses an undue environmental risk.

1444-1

b.. As environmental groups continue to educate people with sound evidence about the waste types that DOE is generating with it's projects, people are becoming less tolerant of projects which serve no valid function, cost tremendous amounts of tax money in cleanup, and are designed solely to keep nuclear scientists in employment. I am an educated Idaho resident, and I have grave concerns about the production of plutonium_238 in my State.

1444-3

c.. "The Department's recent estimate on cleaning up our site is \$22 billion and is expected to take 50 years___longer than any other DOE facility. In addition, we have over 360 individual superfund sites within the 890 sq. mile area that comprises INEEL. With this known, the last thing we need is a plan to generate more nuclear waste at a site that needs more waste like the DOE needs security scandals. Out of concern for Idaho's environment, I strongly urge you not to pursue the plutonium_238 production mission outlined in your PEIS."_Snake River Alliance concerns, which I share.

1444-4

d.. Though this form of plutonium is not usable in nuclear bombs; the technology used to create it is nearly identical to the technology used to extract plutonium_239, the weapons_usable isotope. In 1992, the Bush Administration officially halted reprocessing. This was done to demonstrate US willingness to staunch the flow of plutonium and to persuade other countries not to engage in this threatening technology. Why, then, would the DOE attempt to reopen this threat? Using this reprocessing technology to produce PU_238 will create a real proliferation threat.

1444-5

Response to Commentor No. 1444

1444-4: The commentor's position regarding plutonium-238 production at INEEL is noted. Production of plutonium-238 at one or more of the candidate sites would be conducted in support of NASA's deep space missions Volume 1, Section 1.2.2 of the NI PEIS). As discussed in Sections 4.3.2.1.13 and 4.4.2.1.13 of the EIS, selection of the Fluorinel Dissolution Processing Facility and/or the Advanced Test Reactor to support production of plutonium-238 would have no significant impact on the waste management system at INEEL. Use of any of the facilities proposed in this PEIS for the stated missions would not impact cleanup missions at DOE sites.

1444-5: The commentor is correct in stating that the technology that would be used to separate plutonium consisting of over 80 percent plutonium-238 and neptunium from the irradiated target is similar to the technology that was used to extract plutonium-239. However, the use of this technology is not in itself inconsistent with nonproliferation policy. Unlike plutonium-239, plutonium-238 is not used in nuclear weapons, but rather it would be used as a power source for NASA space missions. The technology that is discussed in EIS Sections S.3, 2.2.3 and A.1.4 would be used to chemically separate plutonium-238 and neptunium from irradiated targets and not from irradiated or spent nuclear fuel whereas the reprocessing we wish to discourage separates weapons grade plutonium-239 from irradiated nuclear fuel. As discussed in the separate nonproliferation impacts assessment report, use of this technology to produce plutonium-238 from irradiated targets will not create a nonproliferation threat, nor will it present any significant concerns related to meeting U.S. nonproliferation goals. This assessment does provide information on proliferation concerns which might be raised related to uncertainty regarding "reduction in attractiveness of material forms," one of the evaluation criteria used in the report. The potential for concerns to be raised are not violations of nonproliferation policy, but are useful to the overall process to reach a decision on the nuclear infrastructure. Further, this potential issue is unavoidable (unless the U.S. elects to neither produce nor purchase plutonium-238), since it impacts all PEIS alternatives and options, including the No Action Alternative and Alternative 5: permanently deactivate FFTF with no new missions at U.S. facilities. The supply of plutonium-238 is needed, and, in the event that its production is resumed in the U.S., the total separated stock of weapons useable neptunium currently in existence will be reduced over

Commentor No. 1444: Ariel Simmons (Cont'd)

e.. The PU_238 isotope is 280 times more radioactive than the stuff in nuclear warheads. Its use is too risky in NASA space missions. In the case of an accident upon liftoff or an "inadvertent re_entry", the possible risk to human life is too great.

f.. Plutonium isn't even necessary. It's not part of the propulsion system; the Pu_238 is used to power instrumentation on the spacecraft. The European Space Agency has developed solar power cells advanced enough that even a California Institute of Technology study by scientists under contract to NASA itself admit that solar power could get the job done. It is true that the deeper the space exploration, the less effective are the solar cells. But it is also true that the DOE refuses to invest in solar technologies because of it's love affair (and extreme lobbying pressure) from the nuclear industry.

g.. "The (INEEL Building 666, which is a "reprocessing" facility) is currently under consideration for new missions." This building is one of the most contaminated in America. Scrap it. The problems that will arise out of trying to reuse this building for new missions pose huge financial risks. Why put a lot of money into a sinking ship? The building should be decommissioned in a manner that protects, workers, the environment, and all of human health. Sacrifice the building, not human lives and the environment. As a member of the Snake River Alliance, please hear my concerns and requests below, "Considering all these factors that could adversely affect our environment and commitment to nonproliferation, I strongly urge you to select alternative 5 in the current PEIS. This alternative would allow the Advanced Test Reactor at INEEL to continue producing medical and industrial isotopes for the commercial sector and would not lead to the production of anymore highly radioactive liquid waste at Hanford or INEEL. The main mission at these two facilities has been and should continue to be cleanup of the mess left over from previous nuclear weapons work. Additional waste production would interfere with this already difficult and expensive work. Alternative 5 also calls for the decommissioning of the FFTF reactor at Hanford. FFTF is an aging breeder reactor whose use

1444-6

1444-7

1444-8

Response to Commentor No. 1444

time in an irreversible manner since there is a moratorium on U.S. spent fuel reprocessing. This reduction, which enhances nonproliferation efforts, is also an important factor for DOE to consider in reaching a decision on managing its nuclear facility infrastructure.

1444-6: DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternative energy sources for space missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch.

1444-7: DOE would not conduct any reprocessing to produce weapons-grade plutonium under any of the alternatives considered under this programmatic environmental impact statement. The alternatives do include processing of target materials used to produce isotopes for medical and industrial uses, plutonium-238 for space missions, and nuclear materials research and development. Sections 4.3.1.1.13; 4.3.2.1.13; 4.3.3.1.13; and 4.4.3.1.13 were revised to clarify the waste management approach for waste resulting from processing of target materials for plutonium-238 production.

Building CPP-666 is divided into two parts, the Fuel Storage Facility and the Fluorine Dissolution Process Facility (FDPF). The FDPF is under consideration in this PEIS for storage of neptunium-237 oxide, preparation of neptunium-237 targets, and separation of plutonium-238 from irradiated targets. DOE believes that this facility will meet, with further analysis and/or minor modifications, the criteria to safely conduct these operations.

1444-8: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. It should be noted that medical isotopes would continue to be produced at ATR regardless of which alternative is selected in the Record of Decision. The FFTF would produce spent nuclear fuel and low-level radioactive waste, and as discussed throughout Section 4.3 of Volume 1, none of the proposed alternatives would add waste to the high-level waste tanks at Hanford or INEEL. Also, it should

Commentor No. 1444: Ariel Simmons (Cont'd)

would be inconsistent with United States policy to discourage use of this technology due to the capability this class of reactors has to produce more plutonium than is consumed. "

Thank you for the opportunity to comment on this plan.

Sincerely,

Ariel Simmons (Boise, Idaho)

**1444-8
(Cont'd)**

Response to Commentor No. 1444

be pointed out that while FFTF supported the breeder reactor program, it is not itself a breeder reactor, but rather a fast flux research reactor.

Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.8.3.4 was revised to clarify that, while analysis shows that the waste management options considered in the NI PEIS would have only a small impact on the Hanford waste management infrastructure, if a decision were made to restart FFTF, DOE would seek an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to treat and dispose of waste generated from FFTF. DOE would use this approach in order to provide additional assurance that the management of wastes resulting from the restart and operation of FFTF would not impact cleanup activities at the site. In either case, whether commercial or the Hanford waste management infrastructure is used, the waste would be managed in accordance with applicable Federal and state laws and regulations and appropriate DOE orders. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

With respect to cleanup of wastes at Hanford or INEEL, the proposed action and the existing cleanup missions are independent programs and actions related to one will not impact the other. While the cleanup activities at both Hanford and INEEL are high priority to DOE, it should be noted that the cleanup of legacy wastes is beyond the scope of the NI PEIS.

Commentor No. 1445: Rene T. Murry

From: Rene Murry[SMTP:RENETMURRY@EXCITE.COM]
Sent: Thursday, September 14, 2000 5:29:26 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Hanford
Auto forwarded by a Rule

Dear Sir/Madame, I am very concerned about the government's plan to restarting a reactor at Hanford. This area does not need to deal with more nuclear waste. Please consider my voice as one against reactivating. Thank you.

Rene T. Murry, 322 N. 97th St. Seattle, WA 98013

1445-1

1445-2

Response to Commentor No. 1445

- 1445-1:** The restart of FFTF or any of the other proposed alternative facilities would not impact the schedule or available funding for existing cleanup activities. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.
- 1445-2:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1446: Ruth Yarrow

From: Ruth Yarrow[SMTP:RUTHY@WPSR.ORG]
Sent: Thursday, September 14, 2000 6:00:50 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Oppose FFTF Restart
Auto forwarded by a Rule

I support Option 5 _ permanently deactivate FFTF with no new missions.

Thank you.

1446-1

Response to Commentor No. 1446

1446-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 1447: Tod McVicar

From: Tod McVicar[SMTP:TODMCVICAR@EARTHLINK.NET]
Sent: Thursday, September 14, 2000 7:11:57 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF
Auto forwarded by a Rule

This to let you know that I support the restart of FFTF for the production of Medical Isotopes. We need to have all of the science available to combat Medical problems, as more and more needs arise. We can not afford to be caught without any solutions for the future. I feel very strong about this production and encourage you to consider all possibilities and not just listen to the information in the EIS.

Thank You

___ Tod McVicar
___ todmccvicar@earthlink.net
___ EarthLink: It's your Internet.

1447-1

Response to Commentor No. 1447

1447-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1448: Chris Johnson

From: CLJohnson4@aol.com%internet
[SMTP:CLJOHNSON4@AOL.COM]
Sent: Thursday, September 14, 2000 8:25:52 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Start FFTF!
Auto forwarded by a Rule

This is such a vital project that I am taking a moment to write and let you know that we care! It is so important to start FFTF back up. The lives we could save by getting this research completed are just too important. We in the Tri_Cities area know the opposition is strong, but the good that could come out of this expense is worth it. Let's use this facility for good. Let's get it started back up as soon as we can.

Thank you,

Chris Johnson

1448-1**Response to Commentor No. 1448**

1448-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1449: Julie Dinwiddie

From: Julie[SMTP:LSTFRONTIER@HOTMAIL.COM]
Sent: Thursday, September 14, 2000 8:28:08 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: INEEL
Auto forwarded by a Rule

September 13, 2000
Ms. Colette Brown
DOE, Office of Space and Defense Power Systems

Dear Ms. Brown,
Your Department's recent proposal to expand the civilian nuclear infrastructure, outlined in the Draft Programmatic Environmental Impact Statement for accomplishing expanded civilian nuclear energy research and development and isotope production mission in the United States, including the role of the Fast Flux Test Facility, raises significant nuclear weapons proliferation and environmental issues.

As a member of the Snake River Alliance I have become aware of the serious nuclear contamination and waste problems at INEEL. INEEL is one of the most contaminated areas in America. The Department's recent estimate on cleaning up our site is \$22 billion and is expected to take 50 years__longer than any other DOE facility. In addition, we have over 360 individual superfund sites within the 890 sq. mile area that comprises INEEL. With this known, the last thing we need is a plan to generate more nuclear waste at a site that needs more waste like the DOE needs security scandals. Out of concern for Idaho's environment, I strongly urge you not to pursue the plutonium_238 production mission outlined in your PEIS.

One of the most daunting problems confronting cleanup at major DOE facilities such as Hanford and INEEL, is the solidification of liquid high_level nuclear waste. Your current plan for plutonium_238 production entails the generation of approximately 288,000 additional gallons of this waste over the project's 35 year span. While this is a small portion of Hanford's high level waste, it is

Response to Commentor No. 1449

1449-1: The commentor's position regarding plutonium-238 production at INEEL is noted. Production of plutonium-238 at one or more of the candidate sites would be conducted in support of NASA's deep space missions Volume 1, Section 1.2.2 of the NI PEIS). As discussed in Sections 4.3.2.1.13 and 4.4.2.1.13 of the EIS, selection of the Fluorinel Dissolution Processing Facility and/or the Advanced Test Reactor to support production of plutonium-238 would have no significant impact on the waste management system at INEEL. Use of any of the facilities proposed in this PEIS for the stated missions would not impact cleanup missions at DOE sites.

1449-2: The use of proposed alternative facilities associated with processing of neptunium-237 targets would have no impact on schedules or available funding for high-level radioactive waste programs at either Hanford or INEEL. At INEEL, the tanks would not be used although certain facilities at the Idaho Nuclear Technology Engineering Center (INTEC) would be used to treat the wastes resulting from processing the irradiated targets. These are reliable systems that would process a maximum of 1,050 cubic meters of low-level radioactive waste over the 35-year nuclear infrastructure operational period. The higher activity waste would be treated as a solid form via a stand-alone vitrification system, separate from any tank waste treatment system. At Hanford, the existing high level radioactive waste facilities would not be used, and as analyzed in the PEIS, no existing or planned high-level radioactive waste facilities would be used to treat the wastes resulting from processing the irradiated targets.

1449-3: Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will

1449-1

1449-2

Commentor No. 1449: Julie Dinwiddie (Cont'd)

approximately one fifth of what we have remaining here in Idaho, which makes it a very significant amount. Previous leakage of this waste at INEEL and Hanford threatens our water supplies. What we certainly don't need is any more of this most highly problematic of waste forms.

Given the certain risks inherent in production of plutonium, the justified need for this material would have to be tremendous, and the PEIS does a poor job of providing ample justification. Beyond the risks involved in production, and the aforementioned resulting waste problem, there is also the issue of an accident occurring upon lift_off or reentry of a space probe carrying this material. The cassini probe, launched in 1997, carried 72 pounds of Pu_238. The potential for an explosion during lift_off or upon an inadvertent reentry during the fly_by phase, gave many in the scientific community pause, including scientists within NASA. According to NASA's own conservative estimate, a burn up upon reentry of the cassini probe could have caused 2,300 cancer fatalities, independent analyses ranged much higher. This potential for a catastrophic release of this extremely toxic material will remain so long as the US government remains committed to the use of plutonium_238. If DOE is to have a role in developing power systems for NASA's instrumentation, it should focus on promising solar technology, an alternative that has been promoted in the European scientific community.

There are also proliferation concerns as it pertains to this plan. A return to production of this isotope, however poorly justified, means a return to the use of aqueous reprocessing at DOE facilities where this technology has been used to extract bomb material for the weapons program. From President Carter to presidents Bush and Clinton, US policy has been to halt reprocessing in this country in order to set a global precedent to curtail the spread of nuclear weapons material_a noble effort in serious need of bolstering through action.

Indeed, an otherwise lukewarm Nuclear Infrastructure Nonproliferation Impact Assessment

1449-2
(Cont'd)

1449-3

1449-4

1449-5

Response to Commentor No. 1449

be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed production of plutonium-238 are relatively low and are discussed in detail in Chapter 4 of Volume 1, and Appendixes H, I, and J of Volume 2 in the Final NI PEIS.

- 1449-4:** DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternative energy sources for space missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. The Cassini fly-by occurred exactly as planned, with no release of nuclear material..
- 1449-5:** The commentor is correct in stating that the aqueous processing technology that would be used to separate plutonium consisting of over 80 percent plutonium-238 and neptunium from the irradiated target is similar to the technology that was used to extract plutonium-239. However, unlike plutonium-239, plutonium-238 is not used in nuclear weapons, but rather it would be used as a power source for NASA space missions. The technology that is discussed in EIS Sections S.3, 2.2.3 and A.1.4 would be used to chemically separate plutonium-238 and neptunium from irradiated targets and not from irradiated or spent nuclear fuel whereas reprocessing separates weapons grade plutonium-239 from irradiated nuclear fuel. As discussed in the separate nonproliferation impact assessment report, use of this technology to produce

Commentor No. 1449: Julie Dinwiddie (Cont'd)

conducted by your Office of Arms Control and Nonproliferation questions whether our commitment to nonproliferation isn't weakened by the use of the Fluorinel Dissolution Process Facility within Building 666 at INEEL. INEEL's reprocessing facility is next door to a wet storage unit for Navy spent fuel, which contains a greater than average amount of highly enriched uranium. It was reprocessed from 1953 to 1989 at INEEL for the weapons program. Use of this facility to carry out plutonium_238 extraction, especially considering the dubious need for this isotope, at the very least raises the concern that DOE is not fully committed to ending reprocessing. The international community cannot be expected to trust DOE's civilian_mission claim when an agency devoutly committed to development of weapons uses a nuclear weapons technology at a weapons facility.

**1449-5
(Cont'd)**

Considering all these factors that could adversely affect our environment and commitment to nonproliferation, I strongly urge you to select alternative 5 in the current PEIS. This alternative would allow the Advanced Test Reactor at INEEL to continue producing medical and industrial isotopes for the commercial sector and would not lead to the production of anymore highly radioactive liquid waste at Hanford or INEEL. The main mission at these two facilities has been and should continue to be cleanup of the mess left over from previous nuclear weapons work. Additional waste production would interfere with this already difficult and expensive work. Alternative 5 also calls for the decommissioning of the FFTF reactor at Hanford. FFTF is an aging breeder reactor whose use would be inconsistent with United States policy to discourage use of this technology due to the capability this class of reactors has to produce more plutonium than is consumed. Thank you for the opportunity to comment on this plan.

1449-6

Sincerely,

Julie Dinwiddie

Response to Commentor No. 1449

plutonium-238 from irradiated targets will not create a nonproliferation threat. DOE is committed to full compliance with and support of the U.S. policy prohibiting reprocessing. The juxtaposition of INEEL Building 666 to wet storage of highly enriched uranium Navy spent nuclear fuel and its previous mission of reprocessing spent nuclear fuel were considered in the separate nonproliferation impact assessment.

1449-6: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. It should be noted that medical isotopes would continue to be produced at ATR regardless of which alternative is selected in the Record of Decision. The FFTF would produce spent nuclear fuel and low-level radioactive waste, and as discussed throughout Section 4.3 of Volume 1, none of the proposed alternatives would add waste to the high-level waste tanks at Hanford or INEEL. Also, it should be pointed out that while FFTF supported the breeder reactor program, it is not itself a breeder reactor, but rather a fast flux research reactor.

Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

With respect to cleanup of wastes at Hanford or INEEL, the proposed action and the existing cleanup missions are independent programs and actions related to one will not impact the other. While the cleanup activities at both Hanford and INEEL are high priority to DOE, it should be noted that the cleanup of legacy wastes is beyond the scope of the NI PEIS.

Commentor No. 1450: Alvin Twitchell

From: AlvinTwitchell@cs.com%internet
[SMTP:ALVINTWITCHELL@CS.COM]
Sent: Thursday, September 14, 2000 10:01:47 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Restart FFTF
Auto forwarded by a Rule

I strongly support the restart of the Fast Flux Test Facility. I believe it can fulfill an important need for medical isotopes and be good for the Tri_Cities economy.

Alvin Twitchell

1450-1**Response to Commentor No. 1450**

1450-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1451: Sheila Del Signore

From: Sheila[SMTP:SDELSIGN@SUNVALLEY.NET]
 Sent: Thursday, September 14, 2000 10:18:58 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Plutonium proposal at the INEEL
 Auto forwarded by a Rule

September 15, 2000

Ms. Colette Brown
 DOE, Office of Space and Defense Power Systems

Dear Ms. Brown,

Your Department's recent proposal to expand the civilian nuclear infrastructure, outlined in the Draft Programmatic Environmental Impact Statement for accomplishing expanded civilian nuclear energy research and development and isotope production mission in the United States, including the role of the Fast Flux Test Facility, raises significant nuclear weapons proliferation and environmental issues.

As a member of the Snake River Alliance I have become aware of the serious nuclear contamination and waste problems at INEEL. INEEL is one of the most contaminated areas in America. The Department's recent estimate on cleaning up our site is \$22 billion and is expected to take 50 years__longer than any other DOE facility. In addition, we have over 360 individual superfund sites within the 890 sq. mile area that comprises INEEL. With this known, the last thing we need is a plan to generate more nuclear waste at a site that needs more waste like the DOE needs security scandals. Out of concern for Idaho's environment, I strongly urge you not to pursue the plutonium_238 production mission outlined in your PEIS.

1451-1

Response to Commentor No. 1451

1451-1: The commentor's position regarding plutonium-238 production at INEEL is noted. Production of plutonium-238 at one or more of the candidate sites would be conducted in support of NASA's deep space missions Volume 1, Section 1.2.2 of the NI PEIS). As discussed in Sections 4.3.2.1.13 and 4.4.2.1.13 of the EIS, selection of the Fluorinel Dissolution Processing Facility and/or the Advanced Test Reactor to support production of plutonium-238 would have no significant impact on the waste management system at INEEL. Use of any of the facilities proposed in this PEIS for the stated missions would not impact cleanup missions at DOE sites.

Commentor No. 1451: Sheila Del Signore (Cont'd)

One of the most daunting problems confronting cleanup at major DOE facilities such as Hanford and INEEL, is the solidification of liquid high_level nuclear waste. Your current plan for plutonium_238 production entails the generation of approximately 288,000 additional gallons of this waste over the project's 35 year span. While this is a small portion of Hanford's high level waste, it is approximately one fifth of what we have remaining here in Idaho, which makes it a very significant amount. Previous leakage of this waste at INEEL and Hanford threatens our water supplies. What we certainly don't need is any more of this most highly problematic of waste forms.

I strongly urge you to select alternative 5 in the current PEIS. This alternative would allow the Advanced Test Reactor at INEEL to continue producing medical and industrial isotopes for the commercial sector and would not lead to the production of anymore highly radioactive liquid waste at Hanford or INEEL.

Thank you for the opportunity to comment on this plan.

Sincerely,

Sheila Del Signore

1451-2

1451-3

Response to Commentor No. 1451

1451-2: The use of proposed alternative facilities associated with processing of neptunium-237 targets would have no impact on schedules or available funding for high-level radioactive waste programs at either Hanford or INEEL. At INEEL, the tanks would not be used although certain facilities at the Idaho Nuclear Technology Engineering Center (INTEC) would be used to treat the wastes resulting from processing the irradiated targets. These are reliable systems that would process a maximum of 1,050 cubic meters of low-level radioactive waste over the 35-year nuclear infrastructure operational period. The higher activity waste would be treated as a solid form via a stand-alone vitrification system, separate from any tank waste treatment system. At Hanford, the existing high level radioactive waste facilities would not be used, and as analyzed in the PEIS, no existing or planned high-level radioactive waste facilities would be used to treat the wastes resulting from processing the irradiated targets.

1451-3: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. It should be noted that medical isotopes would continue to be produced at ATR regardless of which alternative is selected in the Record of Decision. The FFTF would produce spent nuclear fuel and low-level radioactive waste, and as discussed throughout Section 4.3 of Volume 1, none of the proposed alternatives would add waste to the high-level waste tanks at Hanford or INEEL.

With respect to cleanup of wastes at Hanford or INEEL, the proposed action and the existing cleanup missions are independent programs and actions related to one will not impact the other. While the cleanup activities at both Hanford and INEEL are high priority to DOE, it should be noted that the cleanup of legacy wastes is beyond the scope of the NI PEIS.

Commentor No. 1452: Esther Powell

From: EMuirPowell@aol.com%internet
[SMTP:EMUIRPOWELL@AOL.COM]
Sent: Thursday, September 14, 2000 10:24:19 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF
Auto forwarded by a Rule

I am writing to let you know that I believe DOE should keep FFTF as an active facility for medical isotope production. This mission is vital to the millions of people who need effective treatments for cancer. In addition, shutting down FFTF just because of a few screaming environmental groups who don't even live here in the Tri_Cities would be a huge waste of the tax dollars that have were spent to build the facility in the first place. Thank you.

Esther Powell
1616 Hains
Richland, WA 99352

1452-1

1452-2

Response to Commentor No. 1452

- 1452-1:** DOE notes the commentor's support for Alternative 1, Restart FFTF.
- 1452-2:** DOE notes the commentor's opinion. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

Commentor No. 1453: Florence Lemle

From: FLemle@aol.com%internet[SMTP:FLEMLE@AOL.COM]
 Sent: Thursday, September 14, 2000 11:32:48 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Re: produce potatoes not plutonium
 Auto forwarded by a Rule

Ms. Colette Brown
 DOE, Office of Space and Defense Power Systems

Dear Ms. Brown:
 Your Department's recent proposal to expand the civilian nuclear infrastructure, outlined in the Draft Programmatic Environmental Impact Statement for accomplishing expanded civilian nuclear energy research and development and isotope production mission in the United States, including the role of the Fast Flux Test Facility, raises significant nuclear weapons proliferation and environmental issues.

As a member of the Snake River Alliance I have become aware of the serious nuclear contamination and waste problems at INEEL. INEEL is one of the most contaminated areas in America. The Department's recent estimate on cleaning up our site is \$22 billion and is expected to take 50 years__longer than any other DOE facility. In addition, we have over 360 individual superfund sites within the 890 sq. mile area that comprises INEEL. With this known, the last thing we need is a plan to generate more nuclear waste at a site that needs more waste like the DOE needs security scandals. Out of concern for Idaho's environment, I strongly urge you not to pursue the plutonium_238 production mission outlined in your PEIS.

One of the most daunting problems confronting cleanup at major DOE facilities such as Hanford and INEEL, is the solidification of liquid high_level nuclear waste. Your current plan for plutonium_238 production entails the generation of approximately 288,000 additional gallons of this waste over the project's 35 year span. While this is a small portion of Hanford's high level waste, it

1453-1

1453-2

Response to Commentor No. 1453

- 1453-1:** The commentor's position regarding plutonium-238 production at INEEL is noted. Production of plutonium-238 at one or more of the candidate sites would be conducted in support of NASA's deep space missions Volume 1, Section 1.2.2 of the NI PEIS). As discussed in Sections 4.3.2.1.13 and 4.4.2.1.13 of the EIS, selection of the Fluorinel Dissolution Processing Facility and/or the Advanced Test Reactor to support production of plutonium-238 would have no significant impact on the waste management system at INEEL. Use of any of the facilities proposed in this PEIS for the stated missions would not impact cleanup missions at DOE sites.
- 1453-2:** The use of proposed alternative facilities associated with reprocessing of neptunium-237 targets would have no impact on schedules or available funding for high-level radioactive waste programs at either Hanford or INEEL. At INEEL, the tanks would not be used although certain facilities at the Idaho Nuclear Technology Engineering Center (INTEC) would be used to treat the wastes resulting from processing the irradiated targets. These are reliable systems that would process a maximum of 1,050 cubic meters of low-level radioactive waste over the 35-year nuclear infrastructure operational period. The higher activity waste would be treated as a solid form via a stand-alone vitrification system, separate from any tank waste treatment system. At Hanford, the existing high level radioactive waste facilities would not be used, and as analyzed in the PEIS, no existing or planned high-level radioactive waste facilities would be used to treat the wastes resulting from processing the irradiated targets.
- 1453-3:** Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will

Commentor No. 1453: Florence Lemle (Cont'd)

is approximately one_fifth of what we have remaining here in Idaho, which makes it a very significant amount. Previous leakage of this waste at INEEL and Hanford threatens our water supplies. What we certainly don't need is any more of this most highly problematic of waste forms.

Given the certain risks inherent in production of plutonium, the justified need for this material would have to be tremendous, and the PEIS does a poor job of providing ample justification. Beyond the risks involved in production, and the aforementioned resulting waste problem, there is also the issue of an accident occurring upon liftoff or reentry of a space probe carrying this material. The cassini probe, launched in 1997, carried 72 pounds of Pu_238. The potential for an explosion during liftoff or upon an inadvertent reentry during the fly_by phase, gave many in the scientific community pause, including scientists within NASA. According to NASA's own conservative estimate, a burn up upon reentry of the cassini probe could have caused 2,300 cancer fatalities, independent analyses ranged much higher. This potential for a catastrophic release of this extremely toxic material will remain so long as the US government remains committed to the use of plutonium_238. If DOE is to have a role in developing power systems for NASA's instrumentation, it should focus on promising solar technology, an alternative that has been promoted in the European scientific community.

There are also proliferation concerns as it pertains to this plan. A return to production of this isotope, however poorly justified, means a return to the use of aqueous reprocessing at DOE facilities where this technology has been used to extract bomb material for the weapons program. From President Carter to presidents Bush and Clinton, US policy has been to halt reprocessing in this country in order to set a global precedent to curtail the spread of nuclear weapons material_a noble effort in serious need of bolstering through action.

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1453-5

Response to Commentor No. 1453

be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed production of plutonium-238 are relatively low and are discussed in detail in Chapter 4 of Volume 1, and Appendixes H, I, and J of Volume 2 in the Final NI PEIS.

1453-4: DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternative energy sources for space missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. The Cassini fly-by occurred exactly as planned, with no release of nuclear material.

1453-5: The commentor is correct in stating that the aqueous processing technology that would be used to separate plutonium consisting of over 80 percent plutonium-238 and neptunium from the irradiated target is similar to the technology that was used to extract plutonium-239. However, unlike plutonium-239, plutonium-238 is not used in nuclear weapons, but rather it would be used as a power source for NASA space missions. The technology that is discussed in EIS Sections S.3, 2.2.3 and A.1.4 would be used to chemically separate plutonium-238 and neptunium from irradiated targets and not from irradiated or spent nuclear fuel whereas reprocessing separates weapons grade plutonium-239 from irradiated nuclear fuel. As discussed in the separate nonproliferation impact assessment report, use of this technology to produce

Commentor No. 1453: Florence Lemle (Cont'd)

Indeed, an otherwise lukewarm Nuclear Infrastructure Nonproliferation Impact Assessment conducted by your Office of Arms Control and Nonproliferation questions whether our commitment to nonproliferation isn't weakened by the use of the Fluorinel Dissolution Process Facility within Building 666 at INEEL. INEEL's reprocessing facility is next door to a wet storage unit for Navy spent fuel, which contains a greater than average amount of highly enriched uranium. It was reprocessed from 1953 to 1989 at INEEL for the weapons program. Use of this facility to carry out plutonium_238 extraction, especially considering the dubious need for this isotope, at the very least raises the concern that DOE is not fully committed to ending reprocessing. The international community cannot be expected to trust DOE's civilian_mission claim when an agency devoutly committed to development of weapons uses a nuclear weapons technology at a weapons facility.

Considering all these factors that could adversely affect our environment and commitment to nonproliferation, I strongly urge you to select alternative 5 in the current PEIS. This alternative would allow the Advanced Test Reactor at INEEL to continue producing medical and industrial isotopes for the commercial sector and would not lead to the production of anymore highly radioactive liquid waste at Hanford or INEEL. The main mission at these two facilities has been and should continue to be cleanup of the mess left over from previous nuclear weapons work. Additional waste production would interfere with this already difficult and expensive work. Alternative 5 also calls for the decommissioning of the FFTF reactor at Hanford. FFTF is an aging breeder reactor whose use would be inconsistent with United States policy to discourage use of this technology due to the capability this class of reactors has to produce more plutonium than is consumed. Thank you for the opportunity to comment on this plan.

Sincerely,

Florence Lemle
PO Box 3575
Jackson, WY 83001
Flemle@aol.com

1453-5
(Cont'd)

1453-6

Response to Commentor No. 1453

plutonium-238 from irradiated targets will not create a nonproliferation threat. DOE is committed to full compliance with and support of the U.S. policy prohibiting reprocessing. The juxtaposition of INEEL Building 666 to wet storage of highly enriched uranium Navy spent nuclear fuel and its previous mission of reprocessing spent nuclear fuel were considered in the separate nonproliferation impact assessment.

1453-6: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. It should be noted that medical isotopes would continue to be produced at ATR regardless of which alternative is selected in the Record of Decision. The FFTF would produce spent nuclear fuel and low-level radioactive waste, and as discussed throughout Section 4.3 of Volume 1, none of the proposed alternatives would add waste to the high-level waste tanks at Hanford or INEEL. Also, it should be pointed out that while FFTF supported the breeder reactor program, it is not itself a breeder reactor, but rather a fast flux research reactor.

Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

With respect to cleanup of wastes at Hanford or INEEL, the proposed action and the existing cleanup missions are independent programs and actions related to one will not impact the other. While the cleanup activities at both Hanford and INEEL are high priority to DOE, it should be noted that the cleanup of legacy wastes is beyond the scope of the NI PEIS.

Commentor No. 1454: James R. McGrath

From: james mcgrath
[SMTP:JIMMCGRATH@EARTHLINK.NET]
Sent: Thursday, September 14, 2000 11:19:44 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF
Auto forwarded by a Rule

We want to add our voices to those opposing the restart of the Fast Flux Test Facility at Hanford, WA. To begin the production now of radioactive isotopes which competent nuclear medicine leaders have said is not needed and to begin again producing a stream of radioactive waste in the midst of a cesspool of radioactivity which the D.O.E. agreed 11 years ago to clean up and has failed it's part is almost unbelievable.

If we (as a nation) would set put our energies and resources into a genuine and full fledged cleanup action, it would provide a new economic base for the stessed tri_cities area and turn people in a direction they can feel good about. Nobody can be proud to be part of an activity which is unnecessary and destructive.

Let's shut down the FFTF permanently.

James R. McGrath, MD Charlotte B. McGrath, RN
10901 176th Circle NE #1712
Redmond, WA (*052_7248 425_881_2220

1454-1

1454-2

1454-3

1454-4

Response to Commentor No. 1454

1454-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

1454-2: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advise regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

The NI PEIS provides an estimate of waste generation and potential human health impacts associated with each of the alternatives proposed for the production of medical isotopes. Any additional wastes generated in support of this mission would be managed in a safe an environmentally protective manner and in compliance with all applicable Federal and state laws, regulations, and applicable DOE orders. In terms of potential human health impacts, the NI PEIS analysis indicates that the most likely impacts would not result in additional cancer fatalities among the population surrounding the DOE facilities that may be selected for use.

Commentor No. 1454: James R. McGrath (Cont'd)

Response to Commentor No. 1454

In addition, the proposed action would not have an impact on the cleanup missions at any of the candidate sites.

1454-3: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "... ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

1454-4: See response to comment 1454-1.

Commentor No. 1455: George N. Ruge

From: GNRuge@aol.com%internet
[SMTP:GNRUGE@AOL.COM]
Sent: Friday, September 15, 2000 1:25:29 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: PEIS
Auto forwarded by a Rule

I support the restart of the FFTF Reactor Facility at Hanford to meet the national needs for medical isotopes and other peaceful nuclear materials. The FFTF is the most economical, safe, and environmental friendly method available to meet these needs.

Thanx!
George N. Ruge
509_387_0675

1455-1

Response to Commentor No. 1455

1455-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1456: John F. Covey

From: JCovey50@aol.com%internet
 [SMTP:JCOVEY50@AOL.COM]
 Sent: Thursday, September 14, 2000 11:36:15 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Draft Programmatic Environmental Impact Statement
 (PEIS)
 Auto forwarded by a Rule

To whom it may concern,

I am writing concerning the Draft Programmatic Environmental Impact Statement (PEIS) for supporting civilian nuclear energy research and development and isotope production missions in the United States, including the role of the Fast Flux Test Facility. I attended the meeting in Richland, Wa concerning this Statement. I think that FFTF should be used for the medical isotope production. I come from a family that has seen cancer numerous times on both sides. I have a sister who has had skin cancer. Therefore, I am looking at a good possibility of getting cancer. We need the research and development done now, with a restart of FFTF this could happen. FFTF could be on line and producing isotopes while the other options are still being engineered and attempting to go through their approval processes. I have read and listened to the opposition for FFTF and I see only scare tactics being used to attempt to sway public opinion.

John F Covey
 2163 Clearview Ave.
 Richland, Wa 99352

1456-1

1456-2

Response to Commentor No. 1456

1456-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

1456-2: DOE notes the commentor's views.

Commentor No. 1457: Carol Halvorson

From: Halvocar@aol.com%internet
[SMTP:HALVOCAR@AOL.COM]
Sent: Friday, September 15, 2000 3:05:23 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: No to Hanford Restart of the FFTF
Auto forwarded by a Rule

I cannot believe that any sane person would consider restarting the FFTF Nuclear Reactor at Hanford. We already are having trouble dealing with the radioactive wastes that were created in the past, and we're considering a decision that would create MORE waste? This is insanity. Let's clean up or attempt to clean up the mess that has already been created.

Your own people are telling you that the medical isotopes and the Plutonium is not necessary. Listen to them. Listen to the voices of reason and not to those who would send money your way. They care not for your lives and ours.

Do not restart the FFTF at Hanford.
Carol Halvorson
HS Teacher in Portland

1457-1

1457-2

1457-3

1457-4

Response to Commentor No. 1457

1457-1: The restart of FFTF or any of the other proposed alternative facilities would not impact the schedule or available funding for existing cleanup activities at Hanford, INEEL, or ORR. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

1457-2: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

1457-3: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use

Commentor No. 1457: Carol Halvorson (Cont'd)

Response to Commentor No. 1457

has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Although research to identify other potential fuel sources to support these space exploration missions has been conducted, no viable alternative to using plutonium-238 has been established. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

1457-4: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1458: Russell D. Hoffman

From: Russell D. Hoffman
[SMTP:RHOFFMAN@ANIMATEDSOFTWARE.COM]
Sent: Friday, September 15, 2000 7:36:49 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Cc: president@whitehouse.gov%internet; Post Cassini Flyby News
Subject: Re: Time Extension __ Monday, September 18 __ Help
Stop Plutonium Development for Space __ October 7 Action List
Auto forwarded by a Rule

To: Colette E. Brown,
U.S. Department of Energy, NE_50,
19901 Germantown Road, Germantown, MD 20874_1290
Nuclear.Infrastructure_PEIS@hq.doe.gov

From: Russell D. Hoffman
P.O. Box 1936
Carlsbad California USA 92018
rhoffman@animatedsoftware.com
September 14th, 2000

Dear Ms Brown,

I would like to submit the following electronic newsletter I received today as a supplement to my prior letter of September 9th, 2000. Also, I would appreciate being informed of what sort of response I can expect from DoE on the matters I raised in my previous email.

The enclosed newsletter is from the "NOFLYBY" webmaster, Jonathan Haber. It suggests that all readers send their comments not only to DoE but to __ not Jonathan Haber __ but Bruce Gagnon, that is, Global Net.

In my previous email I referred to Global Net __ that is, Bruce Gagnon's group __ as the "The official organization which opposes nuclear power in space". By "official" I did not mean to imply that there was a publicly documented sanctioning (there may be, for all I know), but rather that NASA, DOE, and other government agencies,

Response to Commentor No. 1458

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- 1458-1** **1458-1:** DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and concern over nuclear waste. The scope of this Nuclear Infrastructure PEIS is limited to analysis of alternatives to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development (see Volume 1, Section 1.2 of the NI PEIS).

Commentor No. 1458: Russell D. Hoffman (Cont'd)

and the media, and other activist groups, have all behaved *as if* that group were somehow officially sanctioned. NASA for example a few years ago held a "town meeting" about Cassini with Gagnon's group, and at that meeting Gagnon specifically excluded local (Florida) NASA sub_contractor scientist Horst Poehler from participating at a panel level. Gagnon had no comparable expert available. (Dr. Poehler is the author of the excellent Cassini Cancers article, available at my STOP CASSINI web site.)

I submit the attached newsletter as an indication that Gagnon's group is indeed considered, even by many people in the movement itself, as the "de facto" leadership organization in opposition to DOE plans.

But I also claim that Bruce Gagnon, and several others associated with his group, are both secretive, and extraordinarily unproductive, specifically because they are frauds. Such behavior is utterly UNConstitutional against a U.S. citizen, yet these "operatives" are agents of American military policy acting against American citizens (among others). At the same time, they are acting as if in utter ignorance of numerous scientific principals.

Such activities have got to stop for our democracy to solve its problems, such as the continued hazard from the growing nuclear waste piles all around our country (nearly all DOE's fault), and the growing pile of official lies being told in order to support a bankrupt national nuclear policy and its corrupt and blindfolded industry __ an industry which does not even dare to examine its own dangers.

It is very likely that if the American public understood the true dangers we are facing from the various nuclear threats our own government makes against us __ which are all cumulative in their effects on the biosphere and on our health __ we, the public, would have stopped this mad behavior long ago.

So one must ask, why haven't we?

Indeed, why have a few closed_minded scientists at NASA actually managed to convince the world to let a particularly large and

**1458-1
(Cont'd)**

Response to Commentor No. 1458

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch.

As discussed in Chapter 4 of Volume 1 (e.g. sections 4.3.1.1.13, 4.3.2.1.13, 4.3.3.1.13), waste will be generated by all of the alternatives, including the No Action Alternative. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. DOE activities associated with this program would not impact the schedule or available funding for existing cleanup activities at candidate sites for implementation of the nuclear infrastructure alternatives (see Section N.3.2).

DOE does not place operatives in environmental organizations, the news media, NASA, or any other organization. Individuals and organizations are free to make any comment on the NI PEIS. Responses to all comments received during the comment period are given in the Comment Response Document that comprises Volume 3 of this NI PEIS.

Commentor No. 1458: Russell D. Hoffman (Cont'd)

cumbersome probe be sent to Saturn, thus risking spilling 400,000 Curies of Plutonium 238 in vaporized form into our small biosphere with 6 billion human souls on board?

Why couldn't NASA have flown two non_nuclear missions to replace Cassini's ugly and dangerous nuclear solution ___ dangerous, as proven by NASA's own subsequent failures? (Titan's have failed, orbital insertions have failed, the Shuttles have been grounded for potentially catastrophic failures found by chance, etc. etc. etc.)

Why did NASA not only risk our (citizens of planet Earth's) lives, and do so for no scientific gain at all since the entire science gain could have been developed with non_nuclear electrical power sources, but why also did NASA risk its own reputation by attempting such a dangerous and foolhardy thing?

The answer is surely the military connection I discussed in my previous letter.

The fact is, I doubt the American public, if given a fair chance to look at the issues, would go along with such madness as is currently being proposed by DOE. The only explanation I can accept for my fellow Americans making such wrong decisions collectively is that they have not been given the facts.

When I became involved, in 1997, with the issue of nukes in space, it quickly became apparent that, except for the dedicated work of one investigative journalist (Karl Grossman), nukes in space was largely a forgotten issue ___ a slumbering horror which needed to be stopped.

Soon, even more appeared to be amiss than just silence from the major media and from other environmental organizations (the issue won a Project Censored award about that time).

Eventually, with careful study, I was able to identify the problem of why the public didn't understand how little we (the public) were gaining from such great dangers DOE was permitting: The real

**1458-1
(Cont'd)**

Response to Commentor No. 1458

Commentor No. 1458: Russell D. Hoffman (Cont'd)

problem?

Government is playing both sides of the issue.

I believe that our government is able to control, through carefully placed operatives both in environmental organizations and in the media __ not only everything NASA officially says to the media about what is going on, and many media outlets themselves __ but in addition, through agents and infiltrators of the various movements opposed to what the Government is doing, they control even what the media hears the opposition say.

These infiltrators are particularly potent, because they cause the wrong questions to be asked, or if anyone does ask the right questions, they are willing to accept the wrong answers. These infiltrators fight only half heartedly, except at their efforts to gain control of all phases of the movement. They commit 100s of other sins of both omission and commission to prevent other activists from becoming effective in actually changing public policy by effecting public opinion.

I would like to submit as additional suggested reading, all 253 prior issues of the Stop Cassini newsletter, and all three prior issues of the Nukes, Kooks and Spooks newsletter, all of which are available either online at my web site (for the Stop Cassini newsletters) or by request directly from me (for the Nukes, Kooks and Spooks newsletters, which I have not yet been posted).

And I again request to be informed when I can expect detailed, honest answers to my charges. The American public has a right to know the full truth. This country was founded on truth and the purpose of the Environmental Impact Statement process is to present the truth fairly and completely so that the American public can decide for themselves what they want to do.

Sincerely,

Russell D. Hoffman
Concerned Citizen, Activist, Carlsbad, California
Attachment: Email received 9/14/00 from NOFLYBY (followed by my standard contact information to close the email)

1458-1
(Cont'd)

Response to Commentor No. 1458

Commentor No. 1459: Elizabeth N. Presley

From: Betsy Presley[SMTP:BEEP@TELISPHERE.COM]
Sent: Wednesday, September 13, 2000 1:24:12 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Hanford
Auto forwarded by a Rule

Please add my name to those vigorously opposing the start_up of the FFTF in Hanford. My reasons remain the same as those you hear from thousands of informed citizens in this state: the current amount of waste must be cleaned up; no new waste should be added; the facility is not needed for medical reasons; the environmental impact on all life is endangered by such a project. The alternative? Shut the facility down forever.

Elizabeth N. Presley, Federal Way WA

- || 1459-1
- || 1459-2
- || 1459-3
- || 1459-4
- || 1459-5
- || 1459-6

Response to Commentor No. 1459

- 1459-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.
- 1459-2:** DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.
- 1459-3:** DOE notes the commentor's concern regarding waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.
- 1459-4:** DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings.

Commentor No. 1459: Elizabeth N. Presley (Cont'd)

Response to Commentor No. 1459

Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

For nearly 50 years, DOE has actively promoted the use of radioisotopes to improve the health and well-being of U.S. citizens. DOE's use of its unique technologies and capabilities to develop isotopes for civilian purposes has enabled the widespread application of medical isotopes seen today. While its market share is a small fraction of total world isotope production, DOE remains the key provider for a large number of isotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially experimental, these isotopes are not generally purchased in large-enough quantities to make their production financially attractive to private industry. DOE's intent is to complement commercial sector capabilities to ensure that a reliable supply of isotopes is available in the U.S. to meet future demand, and to encourage the commercial sector to privatize the production of isotopes that have established applications to a level that would support commercial ventures.

Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions (basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term (less than 5 years).

1459-5: The concerns expressed on the potential health and environmental effects of NI PEIS Alternative 1 are noted. The environmental impacts associated with operation of the FFTF and support facilities at Hanford during normal operations and from postulated accidents are presented and discussed in Section 4.3 of the NI PEIS. All impacts to human health and to ecological resources would be small in the immediate area of the Hanford site and negligible at all distant locations.

1459-6: See response to comment 1459-1.

Commentor No. 1460: J. H. Browne, Jr.

From: jb4juddcreek@webtv.net%internet
[SMTP:JB4JUDDCREEK@WEBTV.NET]
Sent: Wednesday, September 13, 2000 3:24:37 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Possible restart of the FFTF facility at Hanford (Richland, Wa) Auto forwarded by a Rule

With regard to the chairman f NERAC's statement to the Energy Secretary that "There is an urgent sense that the nation must rapidly restore an adequate investment in basic & applied research in nuclear energy if it is to sustain a viable United States capability in the 21st Century"_ I'd be interested in the actual Location of that 'urgent sense.' The representation (in the NI PEIS "Summary") that NERAC provides "independent expert advice' on such matters is not a true representation; many of the 'experts' have something to gain by increased funding of 'basic & applied research in nuclear energy, which calls into question their alleged 'independent' status. Additionally, a lack of _true_ independence calls into question their determination of the parameters of "viable U.S. capability" in the future. Despite the thrust of the NI PEIS, ie that this is a process that is designed to put U.S. assets to work (& a small subset of U.S. assets located at/ near USDOE facilities, at that), & that this justifies ignoring foreign sources of supply of some products from these assets, this policy ignores that we have Partners in many of our present ventures into space exploration. To ignore their potential contributions (& cost_ effective ones, most likely) of Pu_238 is to support a 'demand' economy_ something we (ie our Nation) determined was 'The Problem' with industrial policies in the former Soviet Union, & other places as well. While I appreciate that deactivation of the FFTF facility will increase cleanup costs at Hanford in the near future, it will ultimately have to be done. I'd say, as long as our Gov't is supporting more internationally regulated global trade, it would be the height of hypocrisy to deny that, in this particular area, we must ignore our own policies in order to support a 'mission' for this facility. (While I may have qualms, personally, about support of global 'free' trade, NAFTA is presently 'the law of the land.')

1460-1

1460-2

1460-3

1460-4

Response to Commentor No. 1460

- 1460-1:** Clean, safe, reliable nuclear power has a role today and in the future for our national energy security. In recognition of this need, nuclear energy research and development programs have been initiated to address potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) and to ensure that current nuclear power plants can continue to deliver adequate and affordable energy supplies. An enhanced DOE nuclear facility infrastructure is required to support such nuclear energy research and development for civilian applications. Information on the need for nuclear energy research and development is provided in Section 1.2.3 of Volume 1.
- 1460-2:** The United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.
- DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.
- 1460-3:** Deactivation of FFTF would be a Hanford cleanup cost.
- 1460-4:** The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily Molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. Further, supplies of many research isotopes are not readily available from existing foreign or domestic sources, causing a number of medical research programs to be terminated, deferred, or seriously delayed. As such, reliance on these other sources

Commentor No. 1460: J. H. Browne, Jr. (Cont'd)

I support Alternative 5, but consider that Alt 4 might be my first choice, had it been structured differently. Thanks for your consideration.

(206) 463_9641

JHBrowne, Jr.
Vashon Island, Wa

1460-5**Response to Commentor No. 1460**

of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

1460-5: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. DOE also notes that the commentor would have supported Alternative 4, Construct New Research Reactor, if it had been structured differently.

Commentor No. 1461: Dennis Crockett

From: Dennis Crockett[SMTP:CROCKEDC@WHITMAN.EDU]
Sent: Wednesday, September 13, 2000 3:36:21 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Hanford FFTF
Auto forwarded by a Rule

I am writing to express my desire that Hanford's FFTF be permanently shut down and deactivated. It is an irresponsible affront to the health and welfare of the citizens of eastern Washington to add more radioactive wastestreams to the nation's most polluted nuclear site. The Washington State Medical Association, Washington Academy of Family Physicians and the Physicians for Social Responsibility have all passed formal resolutions opposing the restart of Hanford's FFTF. Clean up and not restart, as outlined in the TPA, should be the future mission at Hanford.

Sincerely,

Dennis Crockett, Ph.D.
1221 Alvarado Terrace
Walla Walla, WA 99362

1461-1

1461-2

1461-3

1461-4

Response to Commentor No. 1461

- 1461-1:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.
- 1461-2:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- Each alternative of the NI PEIS considered and evaluated potential health effects, both in terms of consequences and risks, associated with normal operations and accidental releases from a complete spectrum of accidents including severe accidents. All of the alternatives, including the restart of FFTF, are shown to pose very little risk to the health and safety of the public.
- 1461-3:** See response to comment 1461-1.
- 1461-4:** See response to comment 1461-2.

Commentor No. 1462: Shayne R. Bono

From: MsFans@aol.com%internet[SMTP:MSFANS@AOL.COM]
 Sent: Wednesday, September 13, 2000 5:05:28 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: RESTART FOR LIFE
 Auto forwarded by a Rule

To Whom It May Concern:

I strongly urge the DOE to restart FFTF and use this modern and safe reactor to make the life saving isotopes that the cancer patients of this country so desperately need!!! I am not only a cancer survivor, but also the wife of an employee at this precious facility. Please help my husband and all of the FFTF employees, to help cancer patients such as myself be able to fight this unfair killer with more authority. Let's not confuse the issue of postwar cleanup in our area with the mission of the FFTF. FFTF is a safe and efficient reactor, which can produce a very wide variety of medical isotopes with very little waste as a result. Please ignore radical environmental groups' opinions, for they speak only out of ignorance and misplaced passion. They are not a part of this community, and can only benefit from the production of the isotopes at FFTF. Please do America and all of us in Eastern Washington a favor and RESTART FFTF to embark on these new and exciting missions. Let us all make the Tri_Cities and Hanford a place to be proud of. Let's start saving lives!!!!

Sincerely,

Shayne R. Bono

1462-1

1462-2

1462-1

Response to Commentor No. 1462

1462-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

1462-2: It is DOE policy to encourage public input on matters of regional, national and international importance as part of its commitment to facilitate a public participation process that is open and unbiased. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

Commentor No. 1463: Doris Cellarius

From: Doris Cellarius[SMTP:DORIS@CELLARIUS.NET]
 Sent: Wednesday, September 13, 2000 5:25:08 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: DO NOT RESTART THE FFTF
 Auto forwarded by a Rule

To: Colette E. Brown
 US Department of Energy, NE_50
 19901 Germantown Road
 Germantown, MD 20874_1290

From: Doris Cellarius
 621 Park Avenue, Prescott, AZ 86303_4044

I lived in Washington State for 27 years (until last September) and was very concerned about Hanford Clean_up. I served for several years on the DOIT Mixed Waste Advisory Committee. I oppose the proposed restart of FFTF Nuclear Reactor at Hanford to produce research medical isotopes and plutonium_238.

Restart of that reactor would add more high_level waste to the cleanup problem, further complicating an already unacceptable cleanup effort by the Department of Energy.

Furthermore, the DOE has never been able to document why such a restart is needed. Many medical professionals have testified that demands for medical isotopes can be met using other facilities. Plutonium to power NASA space missions can be met using existing supplies, supplemented by foreign sources if necessary.

I am disgusted with the way the Department of Energy has attempted to manipulate politicians and the public in Washington state. Playing on the public's fears is not an honorable practice for a government agency established to serve the public good. Please give up on this faulty proposal.

Thank you.

Doris Cellarius

Response to Commentor No. 1463

1463-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1463-2: The restart of FFTF would not impact the schedule or available funding for existing cleanup activities at Hanford nor would it generate any high-level radioactive wastes. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The use of proposed alternative facilities associated with processing of neptunium-237 targets would have no impact on schedules or available funding for high-level radioactive waste programs at Hanford. The higher-activity waste would be treated as a solid form via a stand-alone vitrification system, separate from any tank waste treatment system. Therefore, the existing Hanford high-level radioactive waste facilities would not be used and, as analyzed in the PEIS, no existing or planned high-level radioactive waste facilities would be used to treat the wastes resulting from processing the irradiated targets.

1463-3: The United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements.

Although other manufacturers produce medical isotopes, DOE remains the key provider for a large number of isotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially experimental, these isotopes are not generally purchased in large-enough quantities to make their production financially attractive to private industry. Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of

1463-1

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Commentor No. 1463: Doris Cellarius (Cont'd)

Response to Commentor No. 1463

the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions (basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

1463-4: There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Although research to identify other potential fuel sources to support these space exploration missions has been conducted, no viable alternative to using plutonium-238 has been established. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

1463-5: DOE notes the commentor's views. DOE is committed to discharging its responsibilities in an open and unbiased manner and providing the public with comprehensive environmental reviews of its proposed actions. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the environmental impact analysis of DOE's proposed alternatives for meeting mission requirements, and gave equal consideration to all comments, regardless of how or where they were received. All comments received during the public comment period have been responded to in this NI PEIS.

Commentor No. 1464: Theresa Smith

From: Theresa Smith
[SMTP:TESABOUT@HEVANET.COM]
Sent: Wednesday, September 13, 2000 6:02:28 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Hanford
Auto forwarded by a Rule

PUBLIC COMMENT

NO. I do NOT want Handford restarted. NOT to make medical isotopes or for ANY reason. Until we can resolve the issues of radio active wastes, it is irresponsible to create more. We may cure some cancer but at what cost? WE DON'T KNOW THE FULL COSTS.

- || 1464-1
- || 1464-2
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Response to Commentor No. 1464

- 1464-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 1464-2:** DOE notes the commentor's opposition to restarting FFTF to produce medical isotopes or for any other reason.
- 1464-3:** DOE notes the commentor's concern regarding waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.
- 1464-4:** DOE notes the commentor's concerns about the need for radioactive isotopes in medical procedures and the wastes produced in their production. Radioisotopes are used for both therapy and diagnosis. In ongoing clinical testing, therapeutic isotopes have proven effective in treating cancer and other illnesses by cell-directed localized radiation therapy (i.e., deploying antibodies or carriers of radioisotopes to seek and destroy invasive cancer cells). This directed therapy can minimize adverse side effects (e.g., healthy tissue damage, nausea, hair loss), making it an effective, attractive alternative to traditional chemotherapy or radiation treatments. In addition to therapy for cancer and other illnesses, radioisotopes are also used for diagnostic purposes, such as imaging internal organs. Unlike conventional radiology, imaging with radioisotopes reveals organ function and structure, which provides additional data for a more accurate diagnosis, and assists in the early detection of abnormalities. The generation of wastes from the production of medical isotopes, which are small in comparison to the candidate sites' current generation rates, are discussed for each alternative in Chapter 4, Volume 1 of the NI PEIS. The additional waste generated would only have a small impact on the management of wastes at the candidate sites.
- Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the medical isotope mission are relatively low and are discussed in detail in Chapter 4 of Volume 1 and appendixes H, I, and J of Volume 2 in the Final NI PEIS. In terms of potential human health impacts, the NI PEIS analysis

Commentor No. 1464: Theresa Smith (Cont'd)

Response to Commentor No. 1464

indicates that the most likely impacts would not result in additional cancer fatalities among the population surrounding the DOE facilities that may be selected for use.

The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such an ancillary document need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed this document to about 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P in the Final NI PEIS.

Commentor No. 1465: Galena Kline

From: Galena Kline
[SMTP:GALENAKLINE@HOTMAIL.COM]
Sent: Wednesday, September 13, 2000 7:02:57 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Hanford Reactor Re_activation
Auto forwarded by a Rule

I just received an e_mail concerning the restart of reactors at Hanford. I am writing this brief message to say that I am opposed to this restart. Hanford has caused enough trouble for the Columbia River and its residents. Please do not put us in danger any longer.

Sincerely,

Galena Kline

1465-1

1465-2

Response to Commentor No. 1465

1465-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1465-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford and the risk of contamination to the Columbia River. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is committed to honoring this agreement.

The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Commentor No. 1466: Darlene Hickman

From: DHTRACK@aol.com%internet
 [SMTP:DHTRACK@AOL.COM]
 Sent: Wednesday, September 13, 2000 7:45:06 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Re: No to proposal to restart Hanford
 Auto forwarded by a Rule

As a citizen of the Pacific NW, I am very concerned about the US Dept. of Energy's proposal to restart Hanford's Fast Flux Test Facility Nuclear Reactor. I wish to have my opinion incorporated into the formal administrative record and taken into consideration when adopting the final record of decision. I would also like you to respond to my concerns before you make your record of decision.

Looking at Hanford's problems, e.g., crisis with tank waste treatment and damage caused by and radiation released from the Hanford wildfire, restarting FFTF is absolutely unacceptable. We must deal with the waste already at Hanford and focus on the clean_up mission. Tank wastes are already seeping towards the Columbia River. More wastes must not be added to those tanks. Clean_up must be the only priority. We must save our Columbia River—we do not get a second chance.

You have not told us how you will deal with non_proliferation issues or additional waste from FFTF. Should FFTF be restarted, that decision will be illegal under Federal law and will be overturned! Do the right thing, shut down FFTF right now and save the future of our Columbia River!

Sincerely,
 Darlene Hickman

1466-1

1466-2

1466-3

1466-2

1466-1

1466-4

1466-1

1466-5

Response to Commentor No. 1466

- 1466-1:** DOE notes the commentor's concerns. This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. DOE prepared a separate Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such an ancillary document need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed this document to about 730 interested parties on September 8, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Nuclear Infrastructure Nonproliferation Impact Assessment in Appendix Q in the Final NI PEIS. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.
- 1466-2:** DOE notes the commentor's concern regarding the existing cleanup mission at Hanford and the risk of contamination to the Columbia River. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Commentor No. 1466: Darlene Hickman (Cont'd)

Response to Commentor No. 1466

The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

None of the alternatives considered in this PEIS would add to the Hanford waste tanks.

In regards to the Hanford wildfire of 2000, the DOE Richland Operations Office, the State of Washington Department of Health, and U.S. Environmental Protection Agency performed environmental monitoring on and around the Site to assess potential radiological impacts. The wildfire did not cause a release of radioactive materials from any Hanford facilities but did result in resuspension of radioactive materials which were already in the environment. The very low levels of radioactive materials that were resuspended were slightly above natural background levels and required several days of analysis to quantify. Information on this event has been made available to the public and can be accessed at <http://www.Hanford.gov/envmon/indes.html>. This site also provides a link to information on the independent offsite air monitoring that was conducted by the U.S. Environmental Protection Agency.

- 1466-3:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.
- 1466-4:** Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE

Commentor No. 1466: Darlene Hickman (Cont'd)

Response to Commentor No. 1466

Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

1466-5: See response to comment 1466-3.

Commentor No. 1467: Wolfgang F. Kluge

From: Wolfgang Kluge
 [SMTP:KLUGES@EARTHLINK.NET]
 Sent: Wednesday, September 13, 2000 1:35:43 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Cc: Ruth Yarrow
 Subject: Hanford
 Auto forwarded by a Rule

Reg.FFTF at Hanford

There is no reason to restart the FFTF at Hanford. There is no shortage of medical isotopes, our suppliers (mainly Canada) are very reliable. We need to clean up Hanford and not add to the pollution by restating FFTF.

Wolfgang F.Kluge MD.

1467-1

1467-2

Response to Commentor No. 1467

1467-1: The United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements.

Although other manufacturers produce medical isotopes, DOE remains the key provider for a large number of isotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially experimental, these isotopes are not generally purchased in large-enough quantities to make their production financially attractive to private industry. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

1467-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. The DOE

Commentor No. 1467: Wolfgang F. Kluge (Cont'd)

Response to Commentor No. 1467

missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities. DOE is fully committed to honoring this agreement.

In regards to additional pollution, the NI PEIS evaluated the maximum cumulative impacts to the public from all reasonably foreseeable Hanford Site activities over the 35 year time-frame. Table S-21 shows the maximum cumulative air pollutant concentrations for Hanford and the NI PEIS activities. As shown, Hanford is currently in compliance with all Federal and state ambient air quality standards, and would continue to remain well within the standards with the small contribution of air pollutants that would be attributable to the NI PEIS alternatives. Table S-22 shows the maximum radiological radiation exposure for Hanford and the NI PEIS activities. As shown, the dose to the maximally exposed individual would be expected to remain well within regulatory limits. Based on an exposure period of 35 years, 0.21 (<1) latent cancer fatalities would be expected to occur among the local population over the 35-year period as a result of Hanford related radiation exposure.

Commentor No. 1468: T. H. Vertrees

From: TVertrees@aol.com%internet
 [SMTP:TVERTREES@AOL.COM]
 Sent: Wednesday, September 13, 2000 8:01:09 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: FFTF startup
 Auto forwarded by a Rule

To Whom It May Concern.

The Fast Flux Test Facility is a resource which is completed, built with government funds and is being wasted by not being used. Our tax money built the facility and it should be used for our benefit.

Importing nuclear isotopes for cancer treatment and research is a wasteful use of our resources. With FFTF we can produce our own. The facility, which I have toured, is safe and a welcome part of our community. We're not saying "no nukes in our back yard" and those who oppose the use of any nuclear device are largely uninformed about them and live so far from them that their concern is irrelevant.

We, who live next door to FFTF, have dealt with nuclear reactors for more than 50 years, and now are tending to the nuclear cleanup. This industry has a history of such low accident rates that it could serve as a model for the nation.

We are foolish not to use the FFTF as a resource to produce isotopes for cancer treatment and research and for other types of research as well. This versatile facility does not have to have a weapons mission to be useful to mankind. Nuclear energy, per se, is a resource that can be as beneficial to mankind as we allow it to be. It is not, of itself, a menace or environmental hazard. Properly run, it is as fine an industry as we've seen _ certainly much less hazardous to the public health and the environment as the mining and burning of coal for power in the nineteenth century.

I and my neighbors heartily support the startup and use of FFTF for peaceful and healthful pursuits.

T. H. Vertrees,
 Kennewick, WA

Response to Commentor No. 1468

- 1468-1** **1468-1:** DOE notes the commentor's opinion. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.
- 1468-2** **1468-2:** DOE notes the commentor's views.
- 1468-3** **1468-3:** DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1469: Kathryn Kuskie

From: Kathy Kuskie[SMTP:KKUSKIE@TELEPORT.COM]
Sent: Thursday, September 14, 2000 12:26:09 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF
Auto forwarded by a Rule

Keep FFTF open! It is incredibly stupid to close FFTF when it can easily be used to create medical isotopes__an increasingly important part of medicine. Politics should not play a roll in something as important as the lives of our citizens!

If you would like to talk to me, I can be contacted at (503) 648_7285.

Thank you,
Kathryn Kuskie
Hillsboro, Oregon

1469-1***Response to Commentor No. 1469***

1469-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1470: Eric Schmieman

From: eric schmieman[SMTP:SUSANS@BENTONREA.COM]
Sent: Wednesday, September 13, 2000 11:38:38 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Cc: susans@bentonrea.com%internet
Subject: FFTF restart
Auto forwarded by a Rule

I am opposed to the permanent shutdown of the Fast Flux Test Facility (FFTF). The draft EIS states many reasons in favor of restart but, I believe, misses an important point.

Most environmentalists are opposed to allowing a species to go extinct not because of the current contributions of the species to the ecology, but because of unknown future benefits. For example, if we allow salmon to go extinct we'll miss some good meals now, but, more importantly, we may be forever forfeiting a future cure for AIDS or cancer.

If we allow the permanent closure of FFTF now, we will forgo some immediate benefits as stated in the draft EIS. However, we need to recognize that it is highly unlikely that a future government will ever again garner the public will to build a similar machine. If we allow the permanent closure of FFTF, we may be forever forfeiting a future outcome of enormous benefit that is not now visible to us.

Please do not permanently shutdown the FFTF. Preserve yet unidentified future benefits likely to spring from this unique national resource.

Thanks for considering my comments

Eric Schmieman, PhD
47608 N. Whitmore Rd.
Benton City, WA 99320
509_588_2919
susans@bentonrea.com

Response to Commentor No. 1470

1470-1 **1470-1:** DOE notes the commentor's support for Alternative 1, Restart FFTF, and opposition to Alternative 5, Permanently Deactivate FFTF.

Commentor No. 1471: Kevin Welsh

From: KWONE@aol.com%internet[SMTP:KWONE@AOL.COM]
 Sent: Thursday, September 14, 2000 1:16:46 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR;
 helen@mail.house.gov%internet;
 mike.simpson@mail.house.gov%internet;
 governor@governor.state.id.us%internet
 Subject: (no subject)
 Auto forwarded by a Rule
 September 13, 2000

Ms. Colette Brown
 DOE, Office of Space and Defense Power Systems

Dear Ms. Brown:
 Your Department's recent proposal to expand the civilian nuclear infrastructure, outlined in the Draft Programmatic Environmental Impact Statement for accomplishing expanded civilian nuclear energy research and development and isotope production mission in the United States, including the role of the Fast Flux Test Facility, raises significant nuclear weapons proliferation and environmental issues.

As a member of the Snake River Alliance I have become aware of the serious nuclear contamination and waste problems at INEEL. INEEL is one of the most contaminated areas in America. The Department's recent estimate on cleaning up our site is \$22 billion and is expected to take 50 years__longer than any other DOE facility. In addition, we have over 360 individual superfund sites within the 890 sq. mile area that comprises INEEL. With this known, the last thing we need is a plan to generate more nuclear waste at a site that needs more waste like the DOE needs security scandals. Out of concern for Idaho's environment, I strongly urge you not to pursue the plutonium_238 production mission outlined in your PEIS.

One of the most daunting problems confronting cleanup at major DOE facilities such as Hanford and INEEL, is the solidification of liquid high_level nuclear waste. Your current plan for plutonium_238

1471-1

1471-2

Response to Commentor No. 1471

- 1471-1:** The commentor's position regarding plutonium-238 production at INEEL is noted. Production of plutonium-238 at one or more of the candidate sites would be conducted in support of NASA's deep space missions Volume 1, Section 1.2.2 of the NI PEIS). As discussed in Sections 4.3.2.1.13 and 4.4.2.1.13 of the EIS, selection of the Fluorinel Dissolution Processing Facility and/or the Advanced Test Reactor to support production of plutonium-238 would have no significant impact on the waste management system at INEEL. Use of any of the facilities proposed in this PEIS for the stated missions would not impact cleanup missions at DOE sites.
- 1471-2:** The use of proposed alternative facilities associated with processing of neptunium-237 targets would have no impact on schedules or available funding for high-level radioactive waste programs at either Hanford or INEEL. At INEEL, the tanks would not be used although certain facilities at the Idaho Nuclear Technology Engineering Center (INTEC) would be used to treat the wastes resulting from processing the irradiated targets. These are reliable systems that would process a maximum of 1,050 cubic meters of low-level radioactive waste over the 35-year nuclear infrastructure operational period. The higher activity waste would be treated as a solid form via a stand-alone vitrification system, separate from any tank waste treatment system. At Hanford, the existing high level radioactive waste facilities would not be used, and as analyzed in the PEIS, no existing or planned high-level radioactive waste facilities would be used to treat the wastes resulting from processing the irradiated targets.
- 1471-3:** Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic

Commentor No. 1471: Kevin Welsh (Cont'd)

production entails the generation of approximately 288,000 additional gallons of this waste over the project's 35 year span. While this is a small portion of Hanford's high level waste, it is approximately one_fifth of what we have remaining here in Idaho, which makes it a very significant amount. Previous leakage of this waste at INEEL and Hanford threatens our water supplies. What we certainly don't need is any more of this most highly problematic of waste forms.

Given the certain risks inherent in production of plutonium, the justified need for this material would have to be tremendous, and the PEIS does a poor job of providing ample justification. Beyond the risks involved in production, and the aforementioned resulting waste problem, there is also the issue of an accident occurring upon lift_off or reentry of a space probe carrying this material. The cassini probe, launched in 1997, carried 72 pounds of Pu_238. The potential for an explosion during lift_off or upon an inadvertent reentry during the fly_by phase, gave many in the scientific community pause, including scientists within NASA. According to NASA's own conservative estimate, a burn up upon reentry of the cassini probe could have caused 2,300 cancer fatalities, independent analyses ranged much higher. This potential for a catastrophic release of this extremely toxic material will remain so long as the US government remains committed to the use of plutonium_238. If DOE is to have a role in developing power systems for NASA's instrumentation, it should focus on promising solar technology, an alternative that has been promoted in the European scientific community.

There are also proliferation concerns as it pertains to this plan. A return to production of this isotope, however poorly justified, means a return to the use of aqueous reprocessing at DOE facilities where this technology has been used to extract bomb material for the weapons program. From President Carter to presidents Bush and Clinton, US policy has been to halt reprocessing in this country in order to set a global precedent to curtail the spread of nuclear weapons material_a noble effort in serious need of bolstering through_action.

**1471-2
(Cont'd)**

1471-3

1471-4

1471-5

Response to Commentor No. 1471

supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed production of plutonium-238 are relatively low and are discussed in detail in Chapter 4 of Volume 1, and Appendixes H, I, and J of Volume 2 in the Final NI PEIS.

1471-4: DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternative energy sources for space missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. The Cassini fly-by occurred exactly as planned, with no release of nuclear material.

1471-5: The commentor is correct in stating that the aqueous processing technology that would be used to separate plutonium consisting of over 80 percent plutonium-238 and neptunium from the irradiated target is similar to the technology that was used to extract plutonium-239. However, unlike plutonium-239, plutonium-238 is not used in nuclear weapons, but rather it would be used as a power source for NASA space missions. The technology that is discussed in EIS Sections S.3, 2.2.3 and A.1.4 would be used to chemically separate plutonium-238 and neptunium from irradiated targets and not from irradiated or spent nuclear fuel whereas reprocessing separates weapons grade plutonium-239 from irradiated nuclear fuel. As discussed in the separate nonproliferation impact assessment report, use of this technology to produce plutonium-238 from irradiated targets will not create a nonproliferation threat. DOE is committed to full compliance with and support of the U.S.

Commentor No. 1471: Kevin Welsh (Cont'd)

Indeed, an otherwise lukewarm Nuclear Infrastructure Nonproliferation Impact Assessment conducted by your Office of Arms Control and Nonproliferation questions whether our commitment to nonproliferation isn't weakened by the use of the Fluorinel Dissolution Process Facility within Building 666 at INEEL. INEEL's reprocessing facility is next door to a wet storage unit for Navy spent fuel, which contains a greater than average amount of highly enriched uranium. It was reprocessed from 1953 to 1989 at INEEL for the weapons program. Use of this facility to carry out plutonium_238 extraction, especially considering the dubious need for this isotope, at the very least raises the concern that DOE is not fully committed to ending reprocessing. The international community cannot be expected to trust DOE's civilian_mission claim when an agency devoutly committed to development of weapons uses a nuclear weapons technology at a weapons facility.

Considering all these factors that could adversely affect our environment and commitment to nonproliferation, I strongly urge you to select alternative 5 in the current PEIS. This alternative would allow the Advanced Test Reactor at INEEL to continue producing medical and industrial isotopes for the commercial sector and would not lead to the production of anymore highly radioactive liquid waste at Hanford or INEEL. The main mission at these two facilities has been and should continue to be cleanup of the mess left over from previous nuclear weapons work. Additional waste production would interfere with this already difficult and expensive work. Alternative 5 also calls for the decommissioning of the FFTF reactor at Hanford. FFTF is an aging breeder reactor whose use would be inconsistent with United States policy to discourage use of this technology due to the capability this class of reactors has to produce more plutonium than is consumed. Thank you for the opportunity to comment on this plan.

Sincerely,
Kevin Welsh

1471-5
(Cont'd)

1471-6

Response to Commentor No. 1471

policy prohibiting reprocessing. The juxtaposition of INEEL Building 666 to wet storage of highly enriched uranium Navy spent nuclear fuel and its previous mission of reprocessing spent nuclear fuel were considered in the separate nonproliferation impact assessment.

1471-6: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. It should be noted that medical isotopes would continue to be produced at ATR regardless of which alternative is selected in the Record of Decision. The FFTF would produce spent nuclear fuel and low-level radioactive waste, and as discussed throughout Section 4.3 of Volume 1, none of the proposed alternatives would generate high-level radioactive waste or add waste to the high-level waste tanks at Hanford. Also, it should be pointed out that while FFTF supported the breeder reactor program, it is not itself a breeder reactor, but rather a fast flux research reactor.

Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

With respect to cleanup of wastes at Hanford or INEEL, the proposed action and the existing cleanup missions are independent programs and actions related to one will not impact the other. While the cleanup activities at both Hanford and INEEL are high priority to DOE, it should be noted that the cleanup of legacy wastes is beyond the scope of the NI PEIS.

Commentor No. 1472: Carol Witherell

From: Carol Witherell[SMTP:CSW@LCLARK.EDU]
Sent: Thursday, September 14, 2000 12:55:35 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Hanford reactor
Auto forwarded by a Rule

I am completely opposed to restarting the Hanford Nuclear Reactor for safety and environmental reasons that have been well documented by the Heart of America organization.

Sincerely,

Carol Witherell

Carol S. Witherell, Professor of Education
Program in Teacher Education, Campus Box 14
Lewis & Clark College
0615 SW Palatine Hill Rd.
Portland, OR 97219 PHONE: (503) 768_7766 FAX: (503)
768_7764

1472-1

Response to Commentor No. 1472

1472-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1473: Gemma Hall-Hart

From: Greg and Gemma Hart
 [SMTP:GGBBHART@AZ.COM]
 Sent: Thursday, September 14, 2000 12:09:51 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR;
 Ruthy@wpsr.org%internet
 Subject: Hanford
 Auto forwarded by a Rule

I favor OPTION FIVE _ permanently deactivate FFTF with no new missions. Hanford is the most highly contaminated nuclear site in the western world. The mission at Handford is CLEAN_UP not productin.

Gemma Hall_Hart
 908 16th Street
 Bellingham, Wa. 98225.

1473-1**1473-2****Response to Commentor No. 1473**

1473-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

1473-2: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "... ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

Commentor No. 1474: Dave Mendenhall

From: Dave Mendenhall
[SMTP:DBMEND@PACIFIER.COM]
Sent: Wednesday, September 13, 2000 11:43:14 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF at Hanford
Auto forwarded by a Rule

I urge you to act responsibly and not add to the leaking and dangerous radioactive waste at Hanford.

When the site is cleaned up (if it is even possible), then would be the time to mull future uses!

Sincerely,

Dave Mendenhall
Portland, OR

1474-1

Response to Commentor No. 1474

1474-1: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Waste tank issues are not within the scope of the NI PEIS, as none of the alternatives considered would add to these waste volumes.

Commentor No. 1475: KDDNEP@aol.com

From: KDDNEP@aol.com%internet
[SMTP:KDDNEP@AOL.COM]
Sent: Friday, September 15, 2000 9:34:24 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF Restart YES!
Auto forwarded by a Rule

Dear Sec. of Energy,

Please have the FFTF be your preferred alternative to fulfill the need for medical isotopes. Please restart FFTF!

Thanks,
Nancy P

1475-1

Response to Commentor No. 1475

1475-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1476: Sid Altschuler

From: SID ALTSCHULER[SMTP:SALT@BOSSIG.COM]
Sent: Thursday, September 14, 2000 1:34:45 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Comments on Restarting FFTF
Auto forwarded by a Rule

This email expands comments I made at Richland on August 31st.

I recommend AGAINST the accelerator option.
Accelerators have not been of much use in producing isotopes in any appreciable quantities.

In the early '50s, a very large Linac (linear accelerator) was shut down at UCRL (the University of California Radiation Laboratory, now Lawrence Livermore National Laboratory). It had been built to produce plutonium but had been unable to compete with the production reactors at Hanford and Savannah River. At a seminar at Berkeley, it was mentioned that it was a bargain. Each proton only cost only one ten quadrillionth of a dollar (\$E_16). Unfortunately, a gram of plutonium made this way would cost 400 times more than if a reactor were used.

In the '60s, Atomic Energy of Canada Ltd. considered the ING Project (Intense Neutron Generator) which used a proton accelerator to produce neutrons by spallation. They never broke ground.

In the '70s, FMIT (Fusion Materials Investigation), a similar facility was also considered. Again, ground was not broken.

In the '80s, an accelerator was also the dark horse as a candidate for the New Production Reactor to no avail.

The problem is that Avogadro's number is just too large given the energy inefficiency of an accelerator!

An additional problem today is that by the time a accelerator system is developed, designed, and permitted, there will be, barring a sea change in policy, a major shortage of the electrical generating capacity required. Building the required capacity opens a new can of worms.

1476-1

1476-2

Response to Commentor No. 1476

1476-1: DOE notes the commentor's opposition to Alternative 3, Construct New Accelerator(s), and support for Alternative 1, Restart FFTF.

1476-2: The NIP EIS evaluates alternative ways of achieving the program objectives on a programmatic basis. Therefore both reactors and accelerators were considered in the evaluation of irradiation facilities. DOE acknowledges that all of the alternatives are not equally effective in meeting the program objectives.

DOE acknowledges that the high-energy accelerator provides a significant load on the local electrical grid. In the event that the Record of Decision selects the high-energy accelerator for further development, subsequent NEPA review will assess grid stability and other electrical load assessment criteria in the evaluation of alternative site locations.

Commentor No. 1476: Sid Altschuler (Cont'd)

There is another MAJOR RISK which has NOT been addressed in the EIS. It is the political risk which will occur if the demand for isotopes suddenly increases (due to the development of a new treatment for even a single relatively common form of cancer) and the capacity to produce them is not available. It will make the outrage which occurred when the Salk vaccine was not immediately available in sufficient quantities pale in comparison. The Washington Post's Herblock had an excellent cartoon at the time to which you may choose to refer. The activism over AIDS will be multiplied many times as will the lawsuits.

"A word to the wise is sufficient."
RESTART the FFTF!!!

1476-3**1476-4****Response to Commentor No. 1476**

1476-3: DOE notes the commentor's viewpoint. DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing dates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

1476-4: See response to comment 1476-1.

Commentor No. 1477: Ida Isley

From: IDA115@aol.com%internet
[SMTP:IDA115@AOL.COM]
Sent: Thursday, September 14, 2000 2:17:11 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: (no subject)
Auto forwarded by a Rule

I would like to express my request that FFTF be restarted and used for cancer research and for whatever benefits it could have to the American people.

Sincerely, Ida Isley

1477-1

Response to Commentor No. 1477

1477-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1478: Arika S. Grace-Kelly

From: Arika S.
 Grace_Kelly[SMTP:ARIKAGRACE@EARTHLINK.NET]
 Sent: Thursday, September 14, 2000 4:16:25 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: nuke waste
 Auto forwarded by a Rule

no nuclear waste.

no fftf. do not restart hanford!

Man, can't you people stop for a minute to think about how your grandchildren are going to feel when they have to clean up your mess, that's if we make it that far? if you can't clean it up, don't mess it up! do you not care about the animals and plants? if it isn't your house, your family, your pets, you just don't give a shit? do you have any mercy or sense of responsibility at all? if you do this, you will die a horrible miserable death. this isn't a threat, it's simple cause and effect. you will pay for your misdeeds, one way or another. you'll get cancer, or watch your loved ones get it, or both, or you'll watch the world suffocate and know you're the culprit, or something. but you won't get away with it. there is no justification for killing...anything, present or future. don't kid yourself, you will be sorry! jeez! how many times do we have to explain it to you? THERE IS NO JUSTIFICATION FOR FUCKING UP THE ENVIRONMENT FOR MONEY OR BECAUSE WE CAN! if you do this, i'm done with you all. i'm not coming back here ever again! the problem is the freakin' solution. you can't safely dispose of it, don't make it! If you don't like the taste of it, don't eat it. how hard is this concept?

|| 1478-1

|| 1478-2

|| 1478-1

|| 1478-3

|| 1478-1

Response to Commentor No. 1478

- 1478-1:** The restart of FFTF or any of the other proposed alternative facilities would not impact the schedule or available funding for existing cleanup activities at Hanford, INEEL, or ORR. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.
- 1478-2:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 1478-3:** DOE notes the commentor's concerns. Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed action are relatively low and are discussed in detail in Chapter 4 of Volume 1 and appendixes H, I, and J of Volume 2 in the Final NI PEIS.

Commentor No. 1479: James J. Hurst

From: jimhurst[SMTP:JIMHURST@GATEWAY.NET]
 Sent: Thursday, September 14, 2000 10:04:13 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Public Comments, Isotope Production & the FFTF
 Auto forwarded by a Rule

To: Office of Nuclear Energy
 Subject: The FFTF & Isotope Production

This text is in response to your request for input concerning the role of the FFTF in Isotope Production.

For some years the Fast Flux Test Facility has been in a standby mode and can best be described as a facility long in search of a mission. It was designed to do one thing well. But it was put in standby mode because it no longer had any programmatic support. One must ask if this reactor has the ability to be converted to isotope production without a massive infusion of dollars to retool it to do that which it was not designed to do. A second concern is the age and condition of the facility infrastructure in part due to radiation damage.

In a recent AIP mailing, the DOE is described as finding its isotope production infrastructure "diminished" because of the shutdown of the HFBR at Brookhaven & the cyclotron at Oak Ridge.

Two observations can be made. The FFTF standby mode costs have for sometime been twice what the DOE said it could not afford in the case of the HFBR being brought back on line. This attitude is unacceptable in a time of tight research dollars. I also note that the DOE must find its ability to do neutron scattering research in the US "diminished" due to a political (not environment, safety or health) decision concerning the HFBR restart.

Therefore, the solution to the issue of isotope production should not even consider the FFTF. The DOE must consider a reactor that can support a dual role. The FFTF is not a candidate.

1479-1**1479-2****Response to Commentor No. 1479**

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- 1479-1:** As stated in EIS Section 2.3.1.1.2, several upgrades would be implemented if a decision to restart FFTF was made by DOE. These upgrades would improve efficiency and reliability, minimize waste, and conform to current industry standards. The FFTF is in excellent condition and evaluations have shown that it has sufficient life remaining to fully support the proposed 35 year mission. The age and condition of the FFTF facility infrastructure will be considered by DOE in its decision making process. The separate cost report accounts for costs associated with expected FFTF facility modifications, including those required to support the new missions.
- 1479-2:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF. It should be noted that the FFTF would not be used as a single purpose reactor under the proposed action, rather it would be used to fulfill each of the three project missions. As discussed in Volume 1, Section 2.6.1 of the NI PEIS, the HFBR was initially considered as a potential irradiation source to support the proposed action, but was subsequently dismissed from further consideration after Secretary Richardson decided the facility would be permanently shut down.

Commentor No. 1479: James J. Hurst (Cont'd)

Political consideration played an overwhelming role in Secretary Richardson's decision on the shutdown of the HFBR. There have clearly been political considerations made to keep the FFTF in its current mode. DOE must now consider that playing politics does not support good science or technology. Look for a dual use facility. A restart of the HFBR should be considered as a sensible option. The political climate seems to be changing in New York, and the current Secretary will soon leave office.

If restart is not an option, then consider a new dual use facility that serves the same function as the HFBR did (and still can do).

James J. Hurst
207 Oak Street
Medford, NY 11763_4035

separate copy:
Hon. James Sensenbrenner, Chair,
House Science Committee

**1479-2
(Cont'd)**

Response to Commentor No. 1479

Commentor No. 1480: Shelly Wandler

From: Shelly Wandler[SMTP:SJWWILDONE@NETSCAPE.NET]
Sent: Thursday, September 14, 2000 10:36:53 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF startup
Auto forwarded by a Rule

I am greatly saddened by the fact that for the past 7 years a facility such as FFTF has been in such down. Not only has this been a great loss of tax payer money, but it also serves as an excellent example for the waist of Government spending in its inability to make decisions. FFTF was at the top of it's class and still is. It is unfortunate that so many other possibilities of it's continuing operation have been passed by. It seems that now we are down to the final one and this happens to be one of the most important concerning humanities health today. The fact that every expert over the past seven years has given FFTF nothing but the highest regards should be proof enough that those with political pull in Seattle & Portland know nothing of the truth when they fight against the startup of FFTF. Considering the fact that it's startup to produce medical isotopes would not only be extremely beneficial to the medical community in the US but abroad as well, and the continued fight against this by some of those same politicians is further proof of their ignorance. FFTF would be beneficial to the medical community, the millions of people suffering from various cancers world wide, as well as the space exploration industry. My faith in the Government, especially DOE has been greatly damaged over the past 7 years because of its true ignorance in the benefits of such a facility as FFTF. I can only hope that DOE and the rest of the Government will finally come to their senses and give FFTF the startup notice it so rightly deserves for the facility itself & the rest of Humanity.

Shelly Wandler
Concerned Citizen

Response to Commentor No. 1480

1480-1 **1480-1:** DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1481: Randy Lishka

From: RLISHKA@aol.com%internet
[SMTP:RLISHKA@AOL.COM]
Sent: Thursday, September 14, 2000 12:58:32 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: help
Auto forwarded by a Rule

Ever have a loved one die of Cancer? Don't listen to uncaring people that can be bought be pac money. Using the Fast Flux Test Facility reactor to produce medical isotopes is a start to ending the death of many people who's representatives couldn't care less about.

Randy Lishka
A concerned citizen

1481-1**Response to Commentor No. 1481**

1481-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1482: Mary R. Colton

From: mrcolton2@juno.com%internet
 [SMTP:MRCOLTON2@JUNO.COM]
 Sent: Thursday, September 14, 2000 1:59:54 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: FFTF Comments
 Auto forwarded by a Rule

Attn: Collette Brown:

I am in favor of starting the FFTF for medical and industrial research.

I have lived in the Richland area since 1983, and worked at Hanford for 14 years before retiring. I worked at the N Reactor the 300 area, K Basin and in the orth Richland area. During this time, I had the opportunity of touring the FFT area and buildings. What I saw impressed me very much, the stainless steel equipment that was installed and costing millions of dollars to sit and do nothing is appalling.

Why not take advantage of this facility. Instead of spending our tax payers money on duplicating this area, and now spending billions of dollars to do so.

It is also appalling that the Heart of American, NW can throw so much weight in an area they don't even truly know about. They don't seem to care how much money it is costing them and the tax payers to prolong the issue.

What do we have in Washington, D.C. A bunch of dummies that can't understand the more we tarry on this issue the more money it will take. Which in the long run will take away from the very thing that FFTF is trying to do, develop medical research, that some day might save a member of their family.

As I see it _ the bottom line is political and to hell with the money it will cost, or the medical research that can help to days generation and generations to come.

Mary R. Colton, mrcolton2@juno.com

Response to Commentor No. 1482

1482-1

1482-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

1482-2: DOE notes the commentor's views. Selection of facilities and site locations for accomplishing expanded civilian nuclear energy research and development and isotope production missions is not a political decision. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

1482-2

Commentor No. 1483: Dennis Lupkes

From: lupkde@ksd1mail.org [mailto:lupkde@ksd1mail.org]
 Sent: Wednesday, August 30, 2000 11:37 PM
 To: FFTF@rl.gov
 Subject: Comments from FFTF Talk to Us

1 Name = Dennis Lupkes
 2 Comments = Dear Administrator:

Considering the tremendous breakthroughs constantly being made in genetics and cancer research, the days of nuclear medicine as a standard cancer treatment are probably numbered. Shortly, the nuclear material provided by FFTF will not be needed in great enough quantity to warrant the money spent. It will be more cost effective to buy the material elsewhere.

Not knowing the current available service life of the facility, I would say run commit to operating it for five years to produce the medical isotopes and other materials and then pull the plug. JUST DO SOMETHING.

Thanks,

Dennis Lupkes
 Kennewick High School

1483-1

1483-2

Response to Commentor No. 1483

1483-1: DOE notes the commentor's concern that medical breakthroughs may reduce the need for radioisotopes. However, DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

For nearly 50 years, DOE has actively promoted the use of isotopes to improve the health and well-being of U.S. citizens. DOE's use of its unique technologies and capabilities to develop isotopes for civilian purposes has enabled the widespread application of medical isotopes seen today. While its market share is a small fraction of total world isotope production, DOE remains the key provider for a large number of radioisotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially experimental, these isotopes are not generally purchased in large-enough quantities to make their production financially attractive to private industry. DOE's intent is to complement commercial sector capabilities to ensure that a reliable supply of isotopes is available in the U.S. to meet future demand, and to encourage the commercial sector to privatize the production of isotopes that have established applications to a level that would support commercial ventures. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

Commentor No. 1483: Dennis Lupkes (Cont'd)

Response to Commentor No. 1483

1483-2: DOE notes the commentor's support for Alternative 1, Restart FFTF. It should be pointed out that it would not be cost effective to operate FFTF for only 5 years. Further, limiting FFTF operation to 5 years would not satisfy the long-term needs of the three DOE missions.

**Commentor No. 1484: Gail Hudson McCarthy
and John W. McCarthy**

2000-022414 Aug 29 p 2:41

Secretary, The

From: Hudson-McCarthy [hudson@gorge.net]
Sent: Tuesday, August 29, 2000 12:11 AM
To: Secretary, The
Subject: Re: Hood River, OR, DOE Meeting 08-29-00 relative to start up of FFTF at Hanford

Dear Secretary Richardson: I implore you to please read the following plea to shut down FFTF at Hanford, WA. We have just witnessed the information meeting relative to the EIS that was presented only last Friday to the public eye; therefore, none of us has had time to review the statements made in it. However, we do have watchdog groups here that are very "on top of" all information relative to this process. We believe that you are not receiving all of the input that various groups from the Columbia River Gorge; and that you are being "fed" only the positive side from those persons interested in keeping their DOE alive and well at Hanford. You need to investigate and be assured of the thousands of residents who are opposed to this start up; Collette Brown tonight admitted that they cannot redistribute the future waste from the plutonium - and that it would be deposited underground at the Hanford site. The citizens of this area cannot believe that this is the fact!! You have had several billions of dollars already of the taxpayers monies going out the door to contractors, who eventually throw up their hands and say that they cannot clean up the waste or even contain it properly. This site is one of the most toxic waste dumps on this planet; it is insane to produce more waste until a process to contain what is already deposited is completed. Please do not ignore these statements of the evening of 08-29-00 at Hood River, OR. These citizens are opposed to your plan to start up the FFTF OR to begin commercial processes of any nuclear waste products. We have been backed up by Senator Ron Weiden, OR, and others in the government in a statement read this evening. Thank you. If you care to respond, it would be greatly appreciated. Also, if you have an interest, there are people who would like to visit you in person to discuss this plan. Gail Hudson McCarthy, resident of WA State - John W. McCarthy, resident of WA State - our grandchildren and their future children!

1484-1

1484-2

1484-3

1484-4

1484-2

1484-1

Response to Commentor No. 1484

1484-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF. Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

1484-2: DOE notes the commentor's remarks concerning the views expressed during the Hood River, Oregon public hearing. It is DOE policy to encourage public input on matters of regional, national and international importance as part of its commitment to facilitate a public participation process that is open and unbiased. DOE is aware that there is a considerable difference of public opinion regarding the alternatives evaluated in this NI PEIS to accomplish the DOE missions, including direct support as well as opposition to Alternative 1, Restart FFTF. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the environmental impact analysis of DOE's proposed alternatives for meeting the mission requirements, and gave equal consideration to all comments, regardless of how or where they were received. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

1484-3: The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The

Commentor No. 1484: Gail Hudson McCarthy and John W. McCarthy (Cont'd)

Response to Commentor No. 1484

waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Sections 4.3.1.1.13, 4.3.2.1.13, 4.3.3.1.13, and 4.4.3.1.13 were revised to address comments received during the public comment period. This section now states that “DOE is considering whether the waste from processing of irradiated neptunium-237 targets should be classified as high-level radioactive waste and not transuranic waste. Irrespective of how the waste is classified (i.e., transuranic or high-level radioactive waste), the composition and characteristics are the same and the waste management activities (i.e., treatment and on-site storage) as described in this NI PEIS would be the same. In addition, either waste type would require disposal in a suitable repository. If it is transuranic waste, it would be nondefense waste and could not be disposed of at WIPP under current law. Because nondefense transuranic waste has no current disposal path, DOE Headquarters' approval would be necessary before a decision is made to generate such waste, as required by DOE Order 435.1. “If the waste is classified as high-level radioactive waste, it is assumed for the purposes of this analysis that Yucca Mountain, Nevada, if approved, would be the final disposal site for DOE's high-level radioactive waste.”

- 1484-4:** DOE notes the commentor’s concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

Commentor No. 1485: Daniel LaVassar**Response to Commentor No. 1485**

2000-016096 Jun 20 p 5:23

3430 26th Ave West
Seattle, WA 98199Secretary Richardson
U.S. Department of Energy, Headquarters
Forrestal Building
1000 Independence Avenue, S.W.
Washington, DC 20585
June 12, 2000

Dear Secretary Richardson:

I am writing to you in support of restarting the Fast Flux Test Facility. I believe this facility can be instrumental in increasing the United States' supply of radioactive isotopes for medical and industrial uses. This reactor is a sitting investment of one billion dollars, and would cost more than twice that to replicate. It would also be much quicker to restart than building an as-yet-unplanned facility designed to produce medical isotopes. I feel it would be criminal to shut down such a national asset.

I realize the issue is clouded in the legacy of nuclear weapon production and proposals to use the facility for tritium production, but I urge you to look at the issue from a dispassionate point of view. There is a growing need for medical isotopes, and we rely on foreign sources for ninety percent of our supply. With new applications for isotopes being developed every year, such as for treating blocked arteries to ensure they do not relog, to name just one potentially lucrative market, can we really afford to rely on uncertain supplies?

The FFTF also represents an opportunity to create a revenue stream. Some project \$88 million worth of revenues from isotope sales by 2008. Perhaps these revenues could be utilized in Hanford cleanup. This would address the concerns of critics that a restart diverts funds from cleanup.

I hope you will examine this issue, and come to the conclusion I have: a restart makes good scientific and financial sense.

Sincerely,



Daniel La Vassar

1485-1

1485-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

1485-2

1485-2: DOE notes the commentor's views regarding the use of revenues from isotope production in FFTF for Hanford cleanup. The estimated costs of the range of reasonable alternatives are presented in the Cost Report, summarized in Appendix P of the Final NI PEIS. However, the Cost Report is not a cost-benefit analysis. While it is reasonable to believe that the benefits of medical isotopes are substantial, the purpose of this NI PEIS is to describe the nuclear infrastructure missions (Section 1.2 of Volume 1), a range of reasonable alternatives for satisfying the mission requirements (Section 2.5 of Volume 1), and the environmental impacts that would result from implementation of the alternatives. According to 40 CFR Section 1502.23, if a cost-benefit analysis exists, it must be reported and summarized in the NI PEIS.

1485-1

Commentor No. 1486: Chris Fick

2000-022421 Aug 29 p 2:42

Secretary, The

From: chris fick (c_fick@hotmail.com)
Sent: Saturday, August 26, 2000 3:29 AM
To: Secretary, The
Subject: hanford

Dear Secretary Richardson,

I am writing you today to strongly voice my opposition to the proposed restart of the Fast Flux Test Facility nuclear reactor at Hanford. Not only has nuclear power been shown to be a dangerous and nefarious method of energy, Hanford has repeatedly been shown to be leaking toxic chemicals and destroying the environment, and human health along with it, since its construction.

Restarting the reactor would produce large amounts of nuclear waste, adding to nuclear waste that is already an overwhelming burden.

Furthermore it would take away from money that was directed for clean-up in a sight in desperate need of such a clean up. Hanfords only mission is supposed to be clean-up!! Please do not exacerbate this current problem with Hanford into a larger one.

I strongly urge you to put an end to the idea of restarting this reactor, Hanford has only caused problems for the entire region. Please fix these problems, do not cause more!

Sincerely,
Chris Fick
Portland, Oregon

Get Your Private, Free E-mail from MSN Hotmail at http://www.hotmail.com

1486-1

1486-2

1486-3

1486-2

Response to Commentor No. 1486

1486-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1486-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

1486-3: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

Commentor No. 1487: Paul Strand

Secretary, The

022359

From: Paul Strand [pstrand@tricity.wsu.edu]
Sent: Wednesday, August 23, 2000 11:13 AM
To: Secretary, The
Subject: FFTF

Dear Mr. Secretary,

As someone who has lost more than one relative to cancer, I hope you will decide in favor of starting FFTF at the Hanford Nuclear Reservation. Given the country's potential need for medical isotopes, it seems that FFTF is a tool that should be used rather than shut down for political reasons.

Paul Strand, Ph.D.
8640 W. Klarnath Ave.
Kennewick WA 99336

1487-1

Response to Commentor No. 1487

1487-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1488: Laurel Piippo

PEOPLE FOR A KINDER AND GENTLER TREATMENT FOR CANCER



CANCER SURVIVOR LAUREL PIIPPO

FFTF3

1334 Sacramento Street
Richland, WA 99352
August 1, 2000

Colette E. Brown
Public Hearings on FFTF, US Department of Energy
Office of Space and Defense Power Systems, NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

*Copy for Secy of Energy
Bill Richardson*

Dear Ms. Brown,

As a three-time cancer survivor who has lived in Richland since 1951, I plan to attend public hearings in Hood River on August 28 and Portland August 29 to advocate restarting FFTF. Our children were born here, their spouses lived here, and our seven grandchildren were born and reared here. I am the only one of 13 Piippos afflicted with cancer. Never having worked at Hanford, I don't blame Hanford. Apparently I am unkillable, having lived 49 of my 73 years a few miles from the waste dump and am strong and healthy, thanks to and in spite of the brutality of traditional cancer treatment -- slash, burn, poison (surgery, radiation, chemotherapy).

Three other Tri-Cities residents are coming with me to the hearings. I especially want Betty Bergdahl to testify. She is 88 years old, moved here in the 1940's, had four children here, and has many grandchildren and great-grandchildren. She and her husband built a house on the Columbia River where the kids swam. NO ONE IN THEIR ENTIRE FAMILY had or has cancer. Anti-nuclear fanatics need to hear this, and so does DOE secretary Richardson. Diane Aungst, age 86, moved here with her husband in 1951, had a child here, and no one has cancer. Kay Hess, Kennewick, will also attend the hearings. Her daughter had surgery for a pre-cancerous condition. All of us want FFTF activated for the production of medical isotopes for a kinder gentler treatment of cancer.

I don't understand why an issue so vital to the health of the American people should be determined by showmanship at public hearings. Listen to the scientists, please! I don't know the most fair way for all points of view to be heard equally at these hearings; but if you have people sign up in advance, Pollette and his gang will be there at 3 a.m. to monopolize the time. Perhaps a roving microphone works best, but please be sure your master of ceremonies hears from Betty Bergdahl. I'll just roam around in my shirt. See above picture!

Please don't send me any more lengthy reports. The last box cost \$10 postage. I don't want tax dollars spent to mail me material I will never read. Thank you.

Sincerely,
Laurel Piippo
LAUREL PIIPPO

Copies to: Secy of DOE Richardson
US Senator Patty Murray
US Senator Slade Gorton
US Congressman Doc Hastings

2000-021026 Aug 11 p 3:57

Response to Commentor No. 1488

1488-1

1488-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

1488-1

1488-2: The public hearing format was designed to be fair and unbiased. The public hearing format used was based on stakeholder input and was presented in the Notice of Availability (65 FR 46443 et seq.) for the Draft NI PEIS. This format was intended to encourage public participation, regardless of the motivation for attending the hearing. It provided an opportunity for the participants to meet one another, exchange information, and share concerns with DOE personnel available throughout the course of each hearing to answer questions. The meetings were facilitated by an independent moderator to ensure that all persons wishing to speak had an opportunity to do so. Persons wishing to comment were selected at random from the audiences rather than according to the order in which they registered. This was accomplished by a random number drawing. In addition to the comment recorder stationed at the main hearing, a second recorder was available in an adjacent room to receive comments without the need to await selection at the main proceeding. The hearing format used promoted open and equal representation by all individuals and groups.

1488-2

DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

Commentor No. 1489: Mary Lou Blazek
Oregon Office of Energy



Oregon

John A. Kitzhaber, M.D., Governor

September 13, 2000

Colette E. Brown, Document Manager
 Office of Space and Defense Power Systems (EM-50)
 Office of Nuclear Energy, Science and Technology
 U.S. Department of Energy
 19901 Germantown Road
 Germantown, MD 20874

Dear Ms. Brown:

Thank you for the opportunity to review the draft Nuclear Infrastructure Programmatic Environmental Impact Statement (PEIS).

Attached is a letter from Oregon Governor John Kitzhaber to Energy Secretary Richardson. That letter presents the State of Oregon's position on this issue: that the U.S. Department of Energy (DOE) failed to make a compelling case that the Fast Flux Test Facility (FFTF) is needed to accomplish any of the proposed missions and therefore the reactor should be permanently shut down.

In scoping comments submitted in October 1999, the Oregon Office of Energy stated it could not support any new missions for FFTF unless the following criteria were satisfied:

- There is a compelling need for any new mission
- FFTF represents the best choice for any new missions from economic, technical, public health and safety and environmental standpoints
- Operation of FFTF will not compromise Hanford cleanup funding, schedule or resources
- Operation of FFTF will not significantly increase Hanford's radioactive or hazardous waste burden

The Office of Energy also said DOE must include the following in its Nuclear Infrastructure draft PEIS:

- A detailed examination of DOE's projections for irradiation needs
- A broader selection of options...to meet the stated needs
- A complete examination of the costs of restarting (the Fast Flux Test Facility)
- A thorough examination of all potential impacts of FFTF operation on all current and projected Hanford cleanup operations.

Office of Energy
 625 Marion St. NE, Suite 1
 Salem, OR 97301-3742
 Phone: (503) 378-4040
 Toll Free: 1-800-221-8035
 FAX: (503) 373-7806
 www.energy.state.or.us

1489-1

1489-2

1489-3

Response to Commentor No. 1489

1489-1: DOE notes the commentor's opposition to restarting FFTF for expanding its existing nuclear facility infrastructure. Consistent with its mandates under the Atomic Energy Act, DOE is proposing this expansion for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio.

DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert committees. In 1998, an Expert Panel convened to forecast future demand for medical isotopes estimated that the expected growth rate of medical isotope use during the next 20 years will range between 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by DOE's Nuclear Energy Research Advisory Committee (NERAC), established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. The growth projections were also adopted by DOE as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings.

The United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. Although other manufacturers produce medical isotopes, DOE remains the key provider for a large number of isotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially experimental, these isotopes are not generally purchased in large-enough quantities to make

Commentor No. 1489: Mary Lou Blazek (Cont'd)
Oregon Office of Energy

September 13, 2000
Page 2

We believe the draft PEIS is fundamentally flawed in three ways. The chief example is DOE's artificial attempt to find one alternative that can accomplish all of the missions, rather than find the best alternative to meet each individual mission. By lumping the missions together, the number of reasonable solutions is understandably limited. If the missions are separated, and DOE addresses how best to meet each of these individual needs, there are additional, reasonable and likely less expensive alternatives to consider.

Second, much of the information and analysis we requested during the scoping process was not included in the draft PEIS released in July 2000. For example, DOE did not provide specifics about medical isotope needs. Instead, the PEIS dealt in generalities. DOE also did not provide a thorough analysis of potential impacts of an FFTF restart on Hanford cleanup.

Third, we are concerned that key information – primarily the cost analysis and the non-proliferation study (even though not required by law) – was not made available to the public in time to be thoroughly considered in this process. This is a major policy decision and DOE does a disservice to the public by proceeding without allowing sufficient time for public review. In the future DOE should ensure adequate information is provided in a timely manner for public review.

Additional technical comments are attached. If you have any questions about our comments, please contact me at 503-378-5544.

Sincerely,



Mary Lou Blazek
Administrator, Nuclear Safety Division

1489-4

1489-3

1489-5

Response to Commentor No. 1489

their production financially attractive to private industry. However, supplies of many research isotopes are not readily available from existing domestic or foreign sources, causing a number of medical research programs to be terminated, deferred, or seriously delayed. Under the NI PEIS proposed action and consistent with its mandates under the Atomic Energy Act, DOE would enhance its existing nuclear facility infrastructure to, among other things, more effectively support production of isotopes for medical applications and research. DOE's intent is to complement commercial sector capabilities to ensure that a reliable supply of isotopes is available in the U.S. to meet future demand, and to encourage the commercial sector to privatize the production of isotopes that have established applications to a level that would support commercial ventures.

Through a Memorandum of Understanding with NASA, DOE also provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Although research to identify other potential fuel sources to support these space exploration missions has been conducted, no viable alternative to using plutonium-238 has been established. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost.

It is the policy of this Administration that clean, safe, reliable nuclear power continue as a viable component of the United States' energy portfolio. In recognition of this need, the Administration and Congress have initiated nuclear energy research and development programs to address potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) and to ensure that current nuclear power plants can continue to deliver adequate and

Commentor No. 1489: Mary Lou Blazek (Cont'd)

Oregon Office of Energy

September 13, 2000
Page 3

Additional technical comments from the Oregon Office of Energy

GENERAL COMMENTS:

- The draft PEIS does not answer many of our questions about the potential impacts of FFTF operation on Hanford cleanup. Issues involving waste generation and its disposition are not adequately answered. For example, the draft PEIS incorrectly states that transuranic waste generated from operations at FFTF would go to the Waste Isolation Pilot Plant (WIPP). WIPP is allowed to receive only waste generated in defense-related activities. Therefore, we are unable to determine what will really happen with this waste. The final PEIS should clearly explain the amount and types of waste that would be generated in the production, irradiation and processing of targets – including liquid waste – and the final disposition of all waste.
- The draft PEIS concedes that current DOE reactors – the High Flux Isotope Reactor (HFIR) and the Advanced Test Reactor (ATR) can continue their current support of the medical and industrial isotope missions, including some growth. The draft PEIS says the reactors can not meet increased isotope needs when the plutonium 238 production mission is added to these reactors. Our recommendation is not to add the plutonium 238 mission to these reactors. The final PEIS should analyze available capacities at each of these reactors for medical and industrial isotope missions, without the plutonium 238 mission added on.
- The draft EIS should address how using Hanford's 300 Area facilities for processing would impact current DOE-Richland plans to clean up and demolish these facilities prior to 2010.
- The final PEIS should not attempt to minimize the impact of adding 16 tons of spent fuel to the current spent fuel inventory at Hanford. There is currently more than 2,100 tons of corroding spent nuclear fuel stored in aging water filled basins just a quarter mile from the Columbia River. Moving this spent fuel out of the basins and away from the river is one of DOE's most urgent risk cleanup priorities nationwide and will cost more than \$1.6 billion to accomplish. The draft PEIS states that the environmental impacts from Hanford's existing spent fuel is minimal, and therefore adding another 16 tons of spent fuel from restarting the reactor would therefore be minimal as well. The final PEIS should realistically assess the impacts of managing additional spent fuel at Hanford.
- DOE should identify specific isotopes that are in short supply. The draft PEIS dealt in generalities and identified many radioisotopes which are already well supplied by commercial producers.

1489-6

1489-7

1489-8

1489-9

1489-10

Response to Commentor No. 1489

affordable energy supplies. An enhanced DOE nuclear facility infrastructure is required to support such nuclear energy research and development for civilian applications.

1489-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

1489-3: Based on the scoping comments, the scope of the NI PEIS was expanded in a number of areas as outlined in Section 1.4 of the NI PEIS. In preparing this NI PEIS, DOE carefully considered all scoping comments received for both the Plutonium-238 Production EIS and the NI PEIS from the public, and all comments received during the scoping periods are part of the Administrative Record for the NI PEIS.

DOE has sought independent analysis of trends in the use of medical radioisotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert committees. In 1998, an Expert Panel convened to forecast future demand for medical isotopes and estimated that the expected growth rate of medical isotope use during the next 20 years will range between 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by DOE's Nuclear Energy Research Advisory Committee (NERAC), established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. The growth projections were also adopted by DOE as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings.

Under the NI PEIS proposed action and consistent with its mandates under the Atomic Energy Act, DOE would enhance its existing nuclear facility infrastructure to, among other things, more effectively support production of radioisotopes for medical applications and research. DOE's intent is to complement commercial sector capabilities to ensure that a reliable supply of isotopes is available in the U.S. to meet future demand, and to encourage the commercial sector to privatize the production of isotopes that have established applications to a level that would support commercial ventures.

Commentor No. 1489: Mary Lou Blazek (Cont'd)
Oregon Office of Energy

September 13, 2000
Page 4

- DOE's conclusions should consider that new diagnostic or therapeutic uses of radioisotopes could be answered by private industry producing the necessary isotopes. The final PEIS should consider subsidizing private industry to produce some of the isotopes which are not yet economical but which show promise in research.
- In July 2000, DOE's Office of Nuclear Technology recommended "dedicated facilities with a primary mission to produce isotopes." The Department of Energy's Nuclear Energy Research Advisory Committee subcommittee for isotope research and production planning concluded in April 2000 that "the production needs of neutron-rich isotopes for research purposes can be met by existing reactors." The report singled out the Missouri University Research reactor and the HFIR as being "better suited to meeting the demands of users who need small quantities of research isotopes at irregular intervals." DOE should reconsider use of the University of Missouri reactor for research isotopes and other viable alternatives to meet other needs.
- The draft PEIS does not make a compelling case to support an annual production rate of 5 kilograms of plutonium 238. The PEIS contains no documentation from NASA or from DOE to justify this quantity. Even if DOE's stated need is not inflated, the draft PEIS clearly indicates viable options for acquiring this amount of plutonium – options which DOE has discarded even though they could, individually or in combination, meet all of our plutonium 238 needs. The final PEIS should thoroughly analyze purchasing plutonium 238 from Russia, use of Canadian reactors and use of commercial reactors in the United States for the production of plutonium 238. These options should not be discarded simply because they may not be able to meet all of the proposed missions or because they do not result in an enhancement of the United States' nuclear infrastructure.
- The draft PEIS speaks in generalities related to the future need for nuclear power. It even makes a bold and questionable statement about renewed interest in nuclear power in the United States – despite the fact that not a single utility has ordered a new nuclear power plant in more than 20 years. The final PEIS should be specific about what new interest for nuclear power there is in the United States.
- The final PEIS should discuss the capacity to produce medical isotopes at the Isotope Production Facility, now under construction at Los Alamos. The final PEIS should consider whether this facility – combined with other existing DOE reactors and accelerators – can meet existing and projected medical isotope needs.

1489-10
(Cont'd)

1489-11

1489-12

1489-13

1489-14

Response to Commentor No. 1489

Although Hanford cleanup is not within the scope of the NI PEIS, information is included about the cleanup mission at Hanford and the land-use planning efforts. The restart of FFTF or any of the other proposed alternative facilities would not have an impact on the cleanup missions at the candidate sites.

- 1489-4:** As discussed in Section 1.3 of Volume 1, in addition to the range of reasonable programmatic alternatives evaluated in the NI PEIS, DOE could choose in the Record of Decision to combine components of several alternatives in selecting the most appropriate strategy. For example, DOE could select a low-energy accelerator to produce certain medical, research, and industrial isotopes, and an existing operating reactor to produce plutonium-238 and conduct limited nuclear energy research and development.
- 1489-5:** CEQ (40 CFR 1500 et seq.) and DOE (10 CFR Part 1021) implementation regulations do not require inclusion of cost and nonproliferation studies in an environmental impact statement. The basic purpose of the NI PEIS is to describe the alternatives under consideration for implementation (Section 2.5 of Volume 1) and the environmental impacts that would occur if these alternatives were implemented (Chapter 4 of Volume 1). Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. The associated cost report and nonproliferation report were made available to the public on August 24, 2000 and September 8, 2000, respectively. DOE mailed these documents to approximately 730 interested parties, and the reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in public reading rooms.
- 1489-6:** The restart of FFTF would not impact the schedule or available funding for existing cleanup at Hanford. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. In particular, information on waste generation by waste types and how this waste will be managed can be found in the Waste Management Sections of Chapter 4 for each of the alternatives and alternative options.

Sections 4.3.1.1.13, 4.3.2.1.13, 4.3.3.1.13, and 4.4.3.1.13 were revised to address comments received during the public comment period. This

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Chapter 1

- On Page 1-3, the draft PEIS says that some research isotopes are not being explored in part because of their high price. Yet the draft PEIS does not address how FFTF or any of its other proposed options would be able to provide isotopes at a competitive price. The final PEIS should provide this information.
- On Page 1-4, the draft PEIS says DOE produces a large number of radioisotopes that are used in relatively small quantities for research and that they are not purchased in quantities that would permit private industry to take over their production. However, the draft PEIS never identifies these specific isotopes. With generalities such as this, it is difficult to ascertain the specific need which DOE purports to meet. The final PEIS should provide these specifics.
- On Page 1-7, the draft PEIS states that as far as renegotiating its agreement with Russia to purchase additional plutonium 238, "The long-term viability of pursuing additional contract extensions or entering into a new contract is unclear." It appears from that statement that DOE has not raised this issue with the Russians because DOE is pursuing its own production capability. We urge DOE to further explore the Russian option.

Chapter 2

- The term "preconceptual" design is used often in this section. This term should be defined.
- Section 2.3.1.1 – The NRC review of FFTF's Final Safety Analysis Report is not described in adequate detail.
- Section 2.3.1.1 – The draft PEIS should explain the upgrades that were done to FFTF's Final Safety Analysis Report following the accident at Three Mile Island.
- Section 2.3.1.1.3 – page 2-14 – The statement is made that impacts of using highly enriched uranium bound the use of low enriched uranium. The EIS should further explain the bounding criteria.
- The missions actually requiring fast neutrons should be explained.
- Section 2.3.1.4 – page 2-24. The description of a commercial light water reactor is incorrect. Most are not 2 loops with 2 pumps per loop. Most are 4 loops, one pump per loop. Fuel assemblies are now generally 17x17, and operating cycles in many reactors are 24 months.

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section now states that "DOE is considering whether the waste from processing of irradiated neptunium-237 targets should be classified as high-level radioactive waste and not transuranic waste. Irrespective of how the waste is classified (i.e., transuranic or high-level radioactive waste), the composition and characteristics are the same and the waste management activities (i.e., treatment and on-site storage) as described in this NI PEIS would be the same. In addition, either waste type would require disposal in a suitable repository. If it is transuranic waste, it would be nondefense waste and could not be disposed of at WIPP under current law. Because nondefense transuranic waste has no current disposal path, DOE Headquarters' approval would be necessary before a decision is made to generate such waste, as required by DOE Order 435.1. If the waste is classified as high-level radioactive waste, it is assumed for the purposes of this analysis that Yucca Mountain, Nevada, if approved, would be the final disposal site for DOE's high level radioactive waste."

- 1489-7:** Section 2.6.1 in Volume 1 of the NI PEIS was revised. As explained in this section, medical isotope production at DOE's HFIR and ATR may be sufficient for the short term, but would not be sufficient to meet long-term growth projections forecasted by the Expert Panel.
- 1489-8:** Hanford 300 Area facilities included in options under consideration for nuclear infrastructure activities are the Radiochemical Processing Laboratory (RPL) and Building 306-E (refer to Volume 1, Section 2.3.2.4 of the NI PEIS). There are no current plans to close down the RPL. However, Building 306-E is listed in the 300 Area accelerated closure plan (300 Area Initiative), with closure activities scheduled to begin in May, 2003. If the Nuclear Infrastructure Record of Decision selects for implementation an alternative option that utilizes Building 306-E, the building would be removed from the list of facilities to be closed until its part of the mission were completed.
- 1489-9:** The discussion in the Summary and Section 4.8.3.5 of the NI PEIS on the cumulative impacts for spent nuclear fuel management at the Hanford Site have been revised to clarify that the management of the existing spent nuclear fuel at Hanford results in a dose of less than 0.1 millirem per year to the maximally exposed member of the public.

This

dose is well within the DOE limits given in DOE Order 5400.5. As

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Chapter 3, Section 3.4

- Section 3.4.4.1.1 – page 3-89 does not and should discuss the recent discoveries of elevated groundwater tritium levels associated with the 618-11 burial ground.
- Section 3.4.9.4 – page 3-113 does not provide FFTF's accident/incident history. This should be included in addition to the generic site discussion.
- Section 3.4.9.4 – page 3-113. The origin of the accident categories mentioned in this section should be stated.
- Section 3.4.9.4. The Hanford Site's Industrial Safety Accident Rate should be stated.
- Section 3.4.11.1 – page 3-115. The processing of neptunium and medical isotope targets may result in the generation of liquid radioactive waste. The disposition of this waste stream should be clearly explained.
- Section 3.4.11.2, Transuranic Waste, page 3-116. This section discusses disposal of this waste at WIPP. The TRU waste generated from these missions will not be defense waste and cannot now be accepted at WIPP.
- Section 3.5.11.1 mentions that high level waste will not be discussed further in this section. However, for a commercial light water reactor, spent nuclear fuel is defined as high level waste by the Nuclear Regulatory Commission. It is appropriate to include this in the discussion of wastes in this section.

Chapter 4

- Section 4.2.4.9 – DOE should provide the basis for assuming that doses due to storage will be 10 percent of the doses due to target fabrication. This cannot be considered a conservative assumption without providing justification.
- The section refers the reader to Section 4.4.3.1.9 and Appendix H. Section 4.4.3.1.9 contains no information germane to this assumption, and Appendix H simply reiterates the assumption.
- Option 4 impacts should include increased decontamination and decommissioning impacts due to the storage of radioactive material in a currently clean building.
- Section 4.3.1.1.10, page 4-44 – The draft EIS should explain the basis for the 1×10^{-6} accident frequency.

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discussed in that Order, the dose limit from airborne emissions is 10 millirem per year, as required by the Clean Air Act; drinking water is 4 millirem per year, as required by the Safe Drinking Water Act; and the dose limit from all pathways combined is 100 millirem per year. DOE has committed to remove the spent nuclear fuel at Hanford for ultimate disposition in a geologic repository.

1489-10: Consistent with the mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure to support production of radioisotopes for medical applications and research. DOE is not proposing to restart or build any new facility for the primary mission of serving commercial medical isotope producers. DOE merely seeks to fulfill its responsibility to ensure that there is a reliable supply of isotopes in the U.S. to meet future demand. DOE does not subsidize commercial producers. DOE does encourage the commercial sector to privatize the production of medical isotopes in certain instances. DOE does this by turning over production of certain isotopes to commercial entities once DOE has established that commercial production is economically viable, i.e., still continue to produce about 90 percent of the isotopes at its facilities. Over the years, about 10 percent of the isotopes initially produced by DOE have been privatized.

1489-11: DOE acknowledges that while some existing reactors may possess the potential capability or capacity to support research isotope production as suggested in the "NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000", it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without disturbing the existing missions of these facilities. As described in Table 2-4 of the NI PEIS, the research reactor at the University of Missouri lacks sufficient neutron production capacity to support the proposed action without impacting existing missions.

1489-12: As explained in Section 1.2.2 of Volume 1 of the PEIS, the Russian purchase of plutonium-238 satisfies the near-term responsibility to supply NASA with the necessary fuel for space exploration. As discussed in Section 1.1 of Volume 1, in view of DOE's responsibilities under the Atomic Energy Act of 1954, as amended, DOE's preference is to establish a domestic plutonium-238 production capability. DOE's selection of 5 kg plutonium-238 production per year

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- Sections discussing Alternative 1, Options 4, 5, and 6 should contain a discussion of radiological consequences for normal operations, as well as accident consequences.

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Chapter 5

- Page 5-16, section 5.1.4. Table 5-2 should list the August 1, 1997 Memorandum of Understanding (MOU) between DOE and the State of Oregon. A January 26, 1994 MOU with the Shoshone-Bannock Tribes is listed on the table for Idaho National Engineering and Environmental Laboratory at 5-17. The table indicates that the MOU with the Shoshone-Bannock requires consultation. The MOU with the State of Oregon also requires consultation. For completeness and consistency with the INEEL section, the *Draft PEIS* should be revised to include the MOU with the State of Oregon under the Hanford section of Table 5-2.
- Table 5-2 also omits the MOU between DOE and the Confederated Tribes of the Umatilla Indian Reservation (CTUIR). The *Draft PEIS* should be revised to include the MOU with the CTUIR in the Hanford section for completeness and consistency with the INEEL section.
- The *Draft PEIS* should be revised to include information in Chapter 5 on standards for environmental management systems that will be used for each of the alternatives being considered. For example, the International Organization for Standardization (ISO) 14000 standards are widely recognized nationally and internationally as effective tools for managing day-to-day operations that impact the environment. The ISO 14000 standards address a wide range of issues including: top management commitment to continuous improvement, compliance, and pollution prevention; integrating environmental considerations into operating procedures; training employees in regard to their environmental obligations; and conducting audits of the environmental management system. Inclusion of an environmental management system standard such as ISO 14000 in the list of applicable standards will provide a framework to move beyond compliance and demonstrate the DOE's commitment to effective environmental management for any of the alternatives being considered in the *Draft PEIS*. The inclusion of information on environmental management system standards will provide a more accurate basis for assessing the environmental impacts of each of the proposed alternatives.

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Appendix D

- Appendix D does not discuss the disadvantages of FFTF. Some disadvantages that we noted that should be included are: its large size makes it expensive to operate;

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is based on the uncertainties in the radioisotope power system technology development and requirements for backup units, as well as the variability in the amount needed to meet NASA's power requirements.

The continued procurement of plutonium-238 from Russia is evaluated as an element of the No Action Alternative. Use of commercial light water reactors (CLWRs) for the production of plutonium-238 is evaluated as Alternative 2, Options 4, 5, and 6. Section 2.6.1 of the PEIS discusses irradiation facilities including the Canadian reactors that were considered and dismissed.

1489-13: Nuclear energy currently provides approximately 20 percent of the United States' electricity needs. Clean, safe, reliable nuclear power has a role today and will continue as a viable component of the nation's energy portfolio. The NERAC Subcommittee on Long-Term Planning for Nuclear Energy Research has set forth a recommended 20-year research and development plan to guide DOE's nuclear energy programs in areas of material research, nuclear fuel, and reactor technology development. This plan stresses the need for DOE facilities to sustain the nuclear energy research mission in the years ahead. As discussed in Section 1.2.3 of the NI PEIS, such nuclear research and development initiatives requiring an enhanced DOE nuclear facility infrastructure fall into the three basic categories: materials research, nuclear fuel research, and advanced reactor development.

1489-14: The Isotope Production Facility (IPF) at Los Alamos National Laboratory produces radioisotopes using the Los Alamos Neutron Science Center's (LANSCE) half-mile accelerator that delivers medium energy protons. Among other isotopes, the IPF's three major products include germanium-68, strontium-82, and sodium-22. As a result of changing DOE missions, the production of radioisotopes at target area "A" of the LANSCE has been rendered inoperable. In order to replace the level of production lost due to this change, DOE is completing a new and more efficient IPF that would allow DOE to continue to produce most of these same isotopes in an effort to meet existing demand. As addressed in Section 2.6.1 of the NI PEIS, IPF at LANSCE was considered but dismissed from further evaluation because, although it can be used in tandem with the Brookhaven Linac Isotope Producer (BLIP) located at the Brookhaven National Laboratory to

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operating at reduced power; it uses MOX fuel or HEU fuel which results in supply problems and non-proliferation concerns; its protection system is 20 years old.

Appendix E

- Appendix E should discuss advantages or disadvantages associated with this new reactor. Appendix D in several places praises FFTF's advantages.

Appendix G

- Subsection G.3.1, at G-4 and G-5, discusses the Prevention of Significant Deterioration (PSD) requirements of the federal Clean Air Act. The *Draft PEIS* describes Hanford as a PSD Class II area, at G-5, and indicates that there are no PSD Class I areas within 100 kilometers of Hanford. The *Draft PEIS* further indicates that the designation of the Hanford Reach as a national monument may eventually lead to redesignation of the area as a PSD Class I area. Because the Hanford Reach is now a national monument, the *Draft PEIS* should be revised to analyze the impacts on Hanford as a PSD Class I area, not as a Class II area. This is consistent with "bounding" elsewhere in the *Draft PEIS*.
- Subsection G.4.2.2 describes the analysis of water quality impacts. Surface water and groundwater quality are described separately. However, surface water and groundwater are often connected hydraulically. The *Draft PEIS* should be revised to include an assessment of water quality and quantity impacts resulting from hydraulic connectivity between surface water and groundwater for each of the alternatives.
- Subsection G.7.2 describes impact assessment. The *Draft PEIS* indicates, at the bottom of G-12, that consultations have been initiated with state historic preservation officers and interested Native American tribes. The *Draft PEIS* should be revised to specify which tribes have been consulted. The omission of the MOU between DOE and the CTUIR from Table 5-2 suggests that DOE has not initiated consultations with the CTUIR. However, the Hanford Site contains significant CTUIR resources that may be impacted. The inclusion of a list of consultations will insure that such impacts are considered.
- G.9 Waste Management. The *Draft PEIS*, at G-16, indicates that "Hanford and the Nevada Test Site will be made available to all DOE sites for the disposal of low-level radioactive waste." This is one of a number of issues that the State of Washington has been negotiating with DOE. In accordance with "bounding" elsewhere in the *Draft PEIS*, this section should be revised to analyze how low-level waste from other DOE sites will be handled for each of the alternatives if it is not disposed at Hanford.

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supply near-term isotope requirements, it is unlikely that these facilities could accomplish reliable, increased isotope production at the level needed to support projected needs.

- 1489-15:** DOE's production and sale of radioisotopes fall into two categories - "commercial" and "research". "Commercial" radioisotopes are those that are produced in large, bulk quantities and sold to pharmaceutical companies or distributors, or to equipment or sealed source manufacturers. DOE prices these orders at full cost-recovery, meaning all direct and indirect costs of producing these isotopes are factored into the final cost. DOE only produces commercial isotopes when there is no U.S. private sector capability or when foreign sources do not have the capacity to meet U.S. needs reliably.

In contrast, "research" radioisotopes are typically produced and sold in small quantities in response to specialty orders from researchers preparing experiments in the field of medicine, with small quantities of these radioisotopes also purchased by industrial researchers. Unlike commercial radioisotopes, DOE prices research isotopes to produce a reasonable return to the government but not discourage their use. Because small-quantity production of research isotopes is not financially attractive to private-sector producers, it is generally not undertaken. DOE attempts to provide all research radioisotopes that are requested, subject to production capability, inventory, and financial constraints. As successful application of a specific research isotope is established, the production and sales of that radioisotope may shift from research to commercial status. In recent years, over 95 percent of DOE's sales of radioisotopes by dollar volume were commercial, and 5 percent have been for research.

- 1489-16:** DOE notes the commentor's views. Examples of research isotopes currently produced by DOE include Copper-67, used for the treatment and diagnosis of cancer, and Holmium-166, used for the treatment of rheumatoid arthritis. A full listing of the radioisotopes available from DOE is provided on the NE website at <http://www.nuclear.gov>. Section 2.7.3 of Volume 3 has been expanded to include a list of research isotopes identified by the Expert Panel (Section 1.2.1).
- 1489-17:** Under the No Action Alternative, DOE would continue to purchase plutonium-238 to meet the space mission needs for the 35-year evaluation period considered in the NI PEIS. However, DOE

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Appendix K

- K.3 Methodology. The *Draft PEIS* uses data from the 1990 Census as a baseline. The 2000 Census data is not due to be completed until December 31, 2000. However, some preliminary data has been released and reported in the media. DOE should include any 2000 Census data available when the final *PEIS* is issued and use such data to make its decision.

UNSOLICITED COMMENT:

Cost Analysis

The cost analysis is biased towards making FFTF look more competitive from a cost standpoint than it is. For example, the cost analysis adds \$281 million for the cost of deactivating FFTF to the options of building a new reactor or new accelerators, but doesn't add that cost to the "restart FFTF" option – even though the reactor would still have to be deactivated at some point, and future deactivation costs would be even greater. Alternatives 3 & 4 also presume new processing facilities will have to be built, even though existing facilities have already been identified in other alternatives as being available for modification at a lower cost.

Had DOE looked at separating the proposed missions, the cost analysis includes at least one alternative which is clearly far cheaper than restarting FFTF. A new low energy accelerator could support most of the medical and industrial isotope production mission and the nuclear research and development mission. Purchasing plutonium 238 from Russia would take care of that identified need. These numbers, taken from the cost analysis, provide one example of the much higher costs of restarting and operating FFTF:

Low energy accelerator/purchase Pu-238 from Russia	
Build new low energy accelerator	\$34.4 million (page 3-3)
Startup costs	\$0.79 million (page 3-3)
TOTAL CAPITOL COSTS	\$35.2 million (page 3-3)
Accelerator annual operating costs	\$ 4.5 million (page 3-3)
Purchasing plutonium from Russia	\$ 8.8 million (annually) (page S-5)
TOTAL ANNUAL COSTS	\$13.3 million
Costs after 10 years:	\$168.2 million
Costs after 35 years:	\$500.7 million
Restarting FFTF	
FFTF modification	\$37.7 million (page 3-3)
FFTF startup	\$276.3 million (page 3-3)

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recognizes that any purchase from Russia beyond the current contract period that ends in 2002 would require a contract extension or negotiation of a new contract and may require additional NEPA review.

- 1489-18:** Preconceptual design (or "pre-design") is a preliminary stage of design, based on knowledge of major items of equipment sufficient for approximate sizing, preliminary flow sheet specification, rough specification of utility requirements, and approximate sizing of buildings and structures.
- 1489-19:** Licensing of FFTF under the regulations for commercial reactors was not a regulatory requirement. However, the Energy Research and Development Administration (a predecessor to DOE) requested a technical review by the Nuclear Regulatory Commission. As a result, the FFTF underwent a technical safety review by the Nuclear Regulatory Commission before initial operation. The final safety analysis report (FSAR) for the FFTF, issued in 1975, was reviewed by the Nuclear Regulatory Commission and the Advisory Committee on Reactor Safeguards. The Nuclear Regulatory Commission safety evaluation report and recommendations were issued in 1979 and a 1979 amendment, and all open issues were addressed before the start of operation in 1982. One of the major issues addressed was verification of emergency decay heat removal by natural circulation of the sodium coolant. This was satisfactorily demonstrated during the extensive startup test program.
- Throughout the life of FFTF, the FSAR has been maintained via approved change control and engineering change notices. All updates and revisions have had the required reviews and approvals. No deficiencies in the FFTF design, analysis, facility condition, or operations have been identified or recognized that would prevent FFTF from meeting the safety objectives and intent of commercial nuclear safety regulations for equivalent facilities.
- 1489-20:** The FFTF was just beginning an extensive Acceptance Test Program at the time of the accident at Three Mile Island. Although a similar event could not occur at the FFTF because it is a liquid metal reactor, a detailed analysis of the causal factors was completed and a thorough review of the FFTF design, operation and emergency planning was performed, with consideration of recommendations made by the President's Commission on the accident, the Nuclear Regulatory

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TOTAL CAPITAL COSTS	\$314 million (page 3-3)
FFTF annual operating costs	\$56.2 million (lowest est) (page 3-3)
TOTAL ANNUAL COSTS	\$56.2 million
Costs after 10 years:	\$876 million
Costs after 35 years	\$2.281 billion

The above estimates presume similar costs for processing, transportation, etc, which should be the same. It does not include the costs needed to store and ultimately dispose of the additional spent nuclear fuel that would be generated by FFTF.

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Commission and various other industry groups. As a result of this review, a number of actions were identified to strengthen the FFTF's defense against occurrence of a serious emergency event and/or to improve the ability to cope with such an event, should one occur. These actions covered various topical areas including changes to the plant design and Technical Specifications, improvements to operating and maintenance procedures, enhanced operator training, and revisions to emergency planning and response. All of these actions were completed during the Acceptance Test Program (prior to the start of routine plant operations).

- 1489-21:** As presented in PEIS Section I.1.1.4.1, FFTF core radioisotope inventories were calculated for a mixed oxide fuel core and a highly enriched uranium fuel core. The radioisotope source term for the mixed oxide core is significantly larger than that for the highly enriched uranium core. The higher source term for mixed oxide fuel is due primarily to the plutonium inventory. Use of a lower enrichment uranium fuel core in FFTF would result in a source term similar to that for the highly enriched uranium core in inventory. Therefore, the radioactive source term for the mixed oxide core is bounding for both the highly enriched uranium and lower enriched uranium fuel cores at FFTF. In any case, as shown in the PEIS, even the mixed oxide fuel source term results in very low risk under accident conditions.
- 1489-22:** The missions requiring fast neutrons include: (1) production of certain medical radioisotopes and (2) certain materials research. Six of the 30 representative medical radioisotopes listed in Table C-1 of the NI PEIS can not be produced with thermal neutrons, but instead require fast neutrons. These product medical radioisotopes are: copper-64, copper-67, phosphorus-32, phosphorus-33, scandium-47, and yttrium-91. Production of these medical radioisotopes require fast neutrons because their neutron absorption cross sections are insignificant for thermal neutrons, but are largest for fast neutrons. Table 1-1 contained in Section 1.2.2 of Volume 1 presents the important treatment and diagnostic uses for these radioisotopes. Some areas of nuclear materials research require a fast neutron flux to simulate the effects of fast neutrons on components in nuclear power plants. Although nuclear power plants are designed to operate with a larger thermal neutron flux, they do produce a significant fast neutron flux which, over time, can affect material properties.

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- 1489-23:** The description of a commercial light water reactor in Section 2.3.1.4 of Volume 1 is intended as an example of one of many different pressurized water commercial light water reactor designs in operation in the U.S. The three pressurized water reactor vendors which designed all the currently operating pressurized water commercial nuclear power plants in the U.S. are: Babcock & Wilcox (now known as Framatome), Combustion Engineering (now part of BNFL), and Westinghouse (now part of BNFL). Their designs include: two hot and cold loops with two pumps, two hot loops and four cold loops with four pumps, three hot loops and three cold loops with three pumps, and four hot loops and four cold loops with four pumps. In addition, currently operating pressurized water nuclear power plants use fuel assemblies that are either 14 x 14, 15 x 15, 16 x 16, or 17 x 17 arrays of fuel rods. Current operating nuclear power plants operate 12-month, 18-month, or 24 month fuel cycles. The commercial light water reactor description for a pressurized water reactor design which is presented in Section 2.3.1.4 of the NI PEIS is representative of the range of loop and fuel designs.
- 1489-24:** Section 3.4.4 of Volume 1 is intended to provide a general overview of Hanford Site water resources. Specific discussions of surface water and groundwater resources in the Hanford 300 and 400 Areas, where facilities proposed to be utilized for the proposed activities are located, are provided in Volume 1, Sections 3.4.4.1.2 and 3.4.4.2.2, respectively. DOE considers the level of detail provided to already exceed that which is commensurate with the level of expected impact, as specified by CEQ regulations (40 CFR 1502.15). However, due to the relative magnitude of the cited finding and proximity of the 618-11 burial ground to the 400 Area, a brief discussion of identified tritium levels has been added to Section 3.4.4.2.2. Also, generalized groundwater contamination maps (including for tritium) have been added under Section 3.4.4.2 as a visual aid to understanding the discussions on Hanford groundwater contamination.
- 1489-25:** A history of incidents and accidents was added to Section 3.4.9.4 of Volume 1. No worker fatalities or serious injuries occurred during previous operations of the FFTF, nor did any significant radiological or chemical releases occur.
- 1489-26:** The accident categories given in Section 3.4.9.4 of Volume 1 have been removed. They were originally included as a convenience to the reader.

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- 1489-27:** A discussion of Hanford Site safety has been added to Section 3.4.9.4 in Volume 1.
- 1489-28:** As stated in the Waste Management Sections of Chapter 4 for each of the alternatives and alternative options, target fabrication and processing for medical isotope production would not produce any liquid radioactive wastes. Target fabrication and processing for plutonium-238 production would generate a small amount of liquid low level radioactive wastes. The amounts that would be generated, how the waste will be managed (i.e., treated, stored, and disposed) for each of the alternatives and alternative options are discussed in the Waste Management Sections of Chapter 4.
- 1489-29:** Information on waste generation by waste types and how this waste will be managed can be found in the Waste Management Sections of Chapter 4 for each of the alternatives and alternative options. Sections 4.3.1.1.13, 4.3.2.1.13, 4.3.3.1.13, and 4.4.3.1.13 were revised to address comments received during the public comment period. This section now states that “DOE is considering whether the waste from processing of irradiated neptunium-237 targets should be classified as high-level radioactive waste and not transuranic waste. Irrespective of how the waste is classified (i.e., transuranic or high-level radioactive waste), the composition and characteristics are the same and the waste management activities (i.e., treatment and on-site storage) as described in this NI PEIS would be the same. In addition, either waste type would require disposal in a suitable repository. If it is transuranic waste, it would be nondefense waste and could not be disposed of at WIPP under current law. Because nondefense transuranic waste has no current disposal path, DOE Headquarters' approval would be necessary before a decision is made to generate such waste, as required by DOE Order 435.1. If the waste is classified as high-level radioactive waste, it is assumed for the purposes of this analysis that Yucca Mountain, Nevada, if approved, would be the final disposal site for DOE's high level radioactive waste.”
- 1489-30:** To provide consistency throughout the document, the definition of high level waste in DOE Manual 451.1 was used. Therefore, spent nuclear fuel is not provided under the Waste Management sections of the document and is discussed separately under Spent Nuclear Fuel. Clarification is provided for the reader in Section 3.5.11.1 of Volume 1.

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- 1489-31:** Appendix H, Section 2.3 has been revised to incorporate a more complete discussion of this assumption.
- 1489-32:** Section H.2.3 has been revised to incorporate a more complete discussion of this assumption. The reference to Section 4.3.1.1.9 of Volume 1 is intended to provide the reader with the information on processing from which the storage impacts are derived.
- 1489-33:** Decontamination and Decommissioning (D&D) of existing facilities is not within the scope of the NI PEIS. Before D&D activities were undertaken, DOE would prepare the appropriate environmental documentation to address the associated environmental impacts.
- 1489-34:** The FFTF Final Safety Analysis Report states that the unprotected loss-of-flow event, resulting in a complete core melt, represents the most severe accident analyzed for the FFTF. The frequency of this event was estimated to be 10^{-9} per year based on a sequence of internally initiated events. For the NI PEIS analysis, the frequency was increased to be 10^{-6} to incorporate non-internally initiated events such as external events and natural phenomena that could contribute to the severe core melt scenario. The main contributor to the increased frequency is a catastrophic earthquake. The magnitude of potential earthquakes with return periods greater than 10,000 years is highly uncertain. For the purposes of the NI PEIS, it was assumed that an earthquake with a return period of 1 million years would result in sufficient ground motion to cause major damage to FFTF resulting in a core melt scenario. An earthquake of this magnitude could result in severe effects to the entire region, including building collapses, power outages, and road hazards.
- 1489-35:** The sections discussing Alternative 1 Options 4, 5, and 6 do provide a discussion of the radiological consequences of normal operations. As noted in Sections 4.3.4.1.9, 4.3.5.1.9, and 4.3.6.1.9 of Volume 1, the consequences of normal operations for Alternative 1 Options 4, 5, and 6 are the same as for Alternative 1 Options 1 (discussed in Section 4.3.1.1.9), 2 (Section 4.3.2.1.9), and 3 (Section 4.3.3.1.9), respectively.
- 1489-36:** In order to provide consistency and to clarify that Table 5-2 includes only state environmental laws, regulations, and agreements (i.e., those that are a result of a statute, regulation, or court order) the reference to the January 26, 1994 Memorandum of Understanding (MOU) and the

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Oregon Office of Energy

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Agreement-in-Principle between DOE and the Shoshone-Bannock Tribes was deleted from Table 5-2 of the NI PEIS. The MOU between DOE and the State of Oregon was also not included in the table for the same reason.

- 1489-37:** In order to provide consistency and to clarify that Table 5-2 includes only state environmental laws, regulations, and agreements (i.e., those that are a result of a statute, regulation, or court order) the reference to the January 26, 1994 Memorandum of Understanding (MOU) and the Agreement-in-Principle between DOE and the Shoshone-Bannock Tribes was deleted from Table 5-2 of the NI PEIS. The MOU between DOE and the Confederated Tribes of the Umatilla Indian Reservation was also not included in the table for the same reason.
- 1489-38:** Chapter 5 of the NI PEIS presents the laws, regulations, and other requirements that apply to the proposed action and alternatives. Voluntary or best management practices, such as the International Organization for Standardization (ISO) 14000 standards, are not included but may be implemented on a voluntary basis.
- 1489-39:** The cost to operate FFTF is addressed in the separate Cost Report. Non-proliferation issues involving FFTF, MOX fuel, and HEU fuel are addressed in the separate Nuclear Infrastructure Nonproliferation Impact Assessment. Both the Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment have been made available to the public. DOE has provided summaries of the Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment in Appendixes P and Q, respectively, in the Final NI PEIS.
- It is true that FFTF is 20 years old, but it is DOE's newest reactor. Evaluations have shown that FFTF has sufficient life remaining to fully support the proposed 35-year mission. Section 2.3.1.1.2 in Volume 1 of the NI PEIS discusses the upgrades of the plant protection system.
- 1489-40:** Positive features of the new research reactor are presented in Sections E.1 and E.8 (Appendix E) of the NI PEIS. Neither Appendix D nor Appendix E are intended to present advantages or disadvantages of FFTF or the new research reactor, but rather to present a description of the design and operation of these two facilities and their applicability to the stated missions described in Section 1.2 of Volume 1.

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- 1489-41:** DOE evaluates the impacts of any proposed projects/activities against the applicability thresholds for Prevention of Significant Deterioration (PSD) air permitting. This is because the Hanford Site is designated as attainment/unclassifiable for the criteria pollutants regulated (see Section 3.4.3.1 of Volume 1). Note that nonattainment areas are subject to the Clean Air Act, as amended in 1990, Title I program instead of the PSD air permitting provisions. The Class I designations for Washington State are listed under 40 CFR 81.434. The Hanford Reach National Monument is not included in this listing. In addition, DOE has not received any preliminary announcements of EPA's intention to redesignate the Hanford Reach National Monument as a Class I area. If such an announcement was made, EPA would communicate its intent via the Federal Register to allow public comment on the proposed action prior to implementation.
- 1489-42:** Separation of the surface water and groundwater discussions in Section G.4.2.2 is a formatting convention only. The hydraulic interconnection between surface water and groundwater at the DOE sites under consideration is recognized and discussed as appropriate in the applicable affected environment and environmental consequences sections. This includes provision of a more than adequate level of detail on hydrologic and hydrogeologic systems, sources of recharge and discharge, and existing surface water and groundwater contamination. As examples, the discharge of the unconfined aquifer system at Hanford in the form of seeps or springs along the Columbia River, as well as base flow to the river, is discussed in Volume 1, Section 3.4.4.1.1. Further, the affected environment sections for Hanford and INEEL (e.g., see Sections 3.3.4.1.2, 3.4.4.1.1, and 3.4.4.1.2) discuss wastewater disposal practices to surface ponds, the potential interaction of perched groundwater, and the quality of the associated discharges to underscore the significance of such discharges to groundwater quality. This is an important consideration for both the Hanford and INEEL sites, both of which are underlain by largely unconfined aquifer systems of great lateral extent. The same consideration for these interactions is also provided in the associated discussions of the Oak Ridge Reservation, in accordance with the differences in site geology and hydrogeology relative to Hanford and INEEL. Here the emphasis is on impacts to surface water. Due to the tilted nature of the underlying geologic strata, groundwater and surface contaminants follow relatively short flow paths to surface streams, and this unique distinction has been clarified

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in this NI PEIS (Section 3.2.4.2). Nevertheless, commensurate with the level of potential impact, these considerations have already been included in the assessment of impacts for each of the alternatives (e.g., wastewater management and water use).

- 1489-43:** A list of organizations contacted during the consultation process, including those related to Native Americans, Cultural Resources, and Threatened and Endangered Species (both Federal and State), has been included in Chapter 5. In order to provide consistency and to clarify that Table 5-2 includes only state environmental laws, regulations, and agreements (i.e., those that are a result of a statute, regulation, or court order), Memoranda of Understanding have been omitted from the table. Therefore, the MOU between DOE and the Confederated Tribes of the Umatilla Indian Reservation was not included in the table.
- 1489-44:** The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Information on waste generation by waste types and how this waste will be managed can be found in the Waste Management Sections of Chapter 4 for each of the alternatives and alternative options.
- 1489-45:** As discussed in Sections K.3.1 and K.3.2 of Appendix K, projections of minority populations require baseline data from the decennial census and population projections for potentially affected states by race and Hispanic-origin at the census tract-level or block group-level of spatial resolution. Relevant baseline minority population data obtained from the latest decennial census are scheduled for release by the U.S. Census Bureau in late 2001 (See the U.S. Census Bureau's website at address www.census.gov/population/www/censusdata/c2kproducts.html for a description of planned release dates for year 2000 census data). Updated population projections and data required for identification of low-income populations at block group-level spatial resolution are scheduled for release in mid-2002.
- 1489-46:** See response to comment 1489-5.

The Cost Report was structured to clearly identify the implementation costs of the various alternatives. As shown in Tables S-2 and S-3 of the Cost Report, deactivation of FFTF is a proposed action under Alternatives 2, 3, 4, and 5 and which is the basis for including FFTF

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deactivation costs. In the same manner that HFIR and ATR deactivation costs are not included in Alternative 2, FFTF deactivation costs are not included in Alternative 1.

**Commentor No. 1490: Gary S. Carter
Strategic Energy Resources, Inc.**

Response to Commentor No. 1490

9-12-00

**Strategic Energy Resources (SER) Comments on
The Programmatic Environmental Statement
For Accomplishing Expanded Civilian Nuclear Energy R&D and
{DOE} Isotope Production Missions in the United States (doe/eis-03100)**

Strategic Energy Resources, Inc. (SER) is a Virginia Company formed in 1997 to advance the production of nuclear isotopes in Commercial Light Water Reactors. Its president is Gary S. Carter, who is also currently a senior principal engineer at Framatome Technologies Inc. (FTI). Mr. Carter specializes in reactor vessel and internals design and repair. He works in nuclear service and nuclear electric project engineering functions. He was both a service and project engineer for the B&W TMI-2 recovery team and a submarine test engineer. Mr. J.R. Worsham is a senior principal physicist with FTI and is a partner in SER.

Points of Discussion:

1. The DOE has omitted the potential advantages of the PWR ex-core option for Pu-238 production, and discussed only the potential for in-core production. A major nuclear fuel supplier in conjunction with SER submitted proprietary information on ex-core and in-core production to the DOE in February of 1999. Now that in-core production has been discussed in the PEIS, ex-core potential should also be discussed in order to fully convey the increased economic benefits and improved safety issues. The safety issues that exist are those surrounding the higher potential environmental release of radioactive materials with in-core production. *Please note that SER requests the DOE to exclude the actual proprietary figures included in these comments from public record if possible.*
2. The ex-core option also needs to be addressed to balance the in-core discussion already offered. The in-core option requires significant fuel management change whereas the ex-core option does not. Furthermore, the ex-core option does not necessarily require any capital expenditures or hardware modifications to many of the currently operating PWRs.
3. PWR owners and operators are interested in Pu-238 given DOE discussion and mention of the ex-core option that requires no, or no significant, capital expenditures. They are not as enthusiastic regarding Pu-238 production given only in-core production options, with the corresponding licensing and required fuel management changes.
4. Since the DOE has included PWR in-core production option technical discussions in the PEIS, a fair and balanced discussion would address the ex-core option and the capability to adequately inform a broad base of the public, and the commercial nuclear utility industry. A balanced discussion of ex-core production capability would include:
 - 4.1 the increased safety potential for non-release of target and production material in any core breach or accident;

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- 4.2 the more likely potential to produce the required Pu-238 purity (<2ppm of Pu-236). (due to the neutron fluence spectrum and larger target diameter);
- 4.3. the ability to avoid the need for significant operator capital expenditures and fuel management changes;

5. Additionally, the DOE has summarily dismissed the capability of PWRs to produce long-lived medical and industrial isotopes in the ex-core region. SER also believes the discussion offered in Section 2.6.1 (Irradiation Facilities Dismissed) on page 2-67 is too harsh and final in its basic assumptions and conclusions with regard to PWR production capabilities. This is especially true given ex-core production potential for certain of these isotopes.

6. **First with regard to Pu-238 ex-core production.**

6.1 Strategic Energy Resources, Inc. (SER) has provided, (conceptually summarized in *Proprietary* Figures 1,2 & 3), a method (patent pending) for producing extremely pure Pu-238 (low Pu-236 <2 ppm) directly outside the nuclear core of many existing CLWRs, **with no reactor internals modifications required.**

6.2 This concept was formally presented in February of 1999 to the DOE in a proprietary prospectus from a prominent nuclear fuel company with the teaming support of SER. The prospectus included a statement of expression of interest in production of Pu-238 for NASA space missions from two (2) suitable reactor owners and operators. Many other appropriately designed, and operating PWRs with the necessary internals structures also currently exist. **Moreover, the commercial nuclear sector interest in the production of space, industrial and medical isotopes is just beginning to awaken. SER found significant interest from a number of contacted PWR operators when it became evident that no significant capital expenditures or fuel management perturbations are required to safely produce Pu-238 for NASA space missions. Similar interest exists for production of suitable medical isotopes.**

6.3 For the DOE to exclude mention of the ex-core production potential is an oversight in such a complex and comprehensive PEIS. Hopefully, the PEIS will be amended to include consideration of a safe, efficient and cost-effective production alternative to provide support and alternatives (depth) to the DOE nuclear energy isotope production missions.

6.4 Oak Ridge National Laboratory (ORNL) has expressed interest and capability to design the Np-237 targets for ex-core production as currently envisioned by SER in the previously mentioned 1999 prospectus.

Response to Commentor No. 1490

1490-1

1490-1: DOE notes that neptunium-237 targets can be placed in numerous commercial light-water reactor (CLWR) in-core and ex-core locations for the production of plutonium-238. The center fuel assembly in-core location was selected for evaluation in the NI PEIS because it was assumed that this would be the worst case location during postulated beyond design basis accident conditions. The Final NI PEIS has been revised (Section 2.3.1.4) to reflect that neptunium-237 targets can be dispersed in other in-core locations or in ex-core locations for the production of plutonium-238. Such design and core configuration details would be analyzed if DOE decides to pursue this option for the production of plutonium-238.

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6.5 Thermal neutron fluence levels have been evaluated by SER, Framatome Cogema Fuels / Framatome Technologies Inc. and found to be more than adequate for production. This production process has the added advantage of more thermalized high-energy neutrons. Thus there is less production of unwanted Pu-236. The potential for an adequate ex-core target design that meets the <2ppm Pu-236 requirement has been evaluated by competent nuclear physicists and is considered excellent. Core safety degradation and associated product release issues are essentially eliminated.

7.0 Notes: Regarding In-Core Limitations and Ex-Core Advantages

The current draft PEIS only mentions supposedly proprietary in-core PWR production potential.

7.1 In-core production target design will have to compensate for high energy neutrons (fast flux) in a very limited target diameter rod (≈ 0.430 " dia.) to gain any hope of achieving the required low levels of Pu-236. They are not yet even conceptually designed.

7.2 No matter how in-core production is viewed, even including production in the center core fuel assembly, addition of target rods to a fuel assembly will require increased power production from the remaining fuel and require significant perturbations in fuel management which are extremely troublesome and costly to reactor operators.

7.3 It will be necessary to disassemble a previously discharged fuel assembly and install the replacement target fuel rods prior to insertion in the core center position. After irradiation, the center fuel assembly will again have to be disassembled, and the target rods removed. The burned fuel rods that were removed to make room for the target rods will now have to be specially disposed and handled in a special and unusual (ie expensive) manner to permit proper storage and disposal handling.

7.4 The in-core target fuel rods are significantly limited in diameter as compared to the potential target diameter for ex-core production targets. Approximately 0.43" dia. vs. 1.32" diameter.

7.5 Furthermore, the proposed in-core control component target rods may be limited in the allowable Np-237 enrichment and quantity, and may also be limited in radial volume, or as yet undefined composite target development, to enable production with the required Pu-236 contamination levels of < 2ppm.

7.6 Conclusion: The above limitations regarding in-core production of Pu-238 are eliminated through the use of SER ex-core production methods.

8.0 Removal of the ex-core targets as proposed by SER will be accomplished during non-critical path refueling activities. Ex-core target exchange would not be as complicated or as time consuming as current removal and exchange of Reactor Vessel

1490-1
(Cont'd)

1490-2

Response to Commentor No. 1490

1490-2: The commentor is correct in stating that the use of in-core CLWR locations for the production of plutonium-238 would have a more significant effect on CLWR operations as well as the quantity and purity of plutonium-238 that is produced compared to ex-core CLWR location production. As stated in response 1490-1 and revisions in the Final NE PEIS, Section 2.3.1.4, different in-core and ex-core locations were evaluated and the center fuel assembly was selected solely for the purpose of analyzing the worst case environmental impacts of beyond design basis accidents. Specific CLWR design and core configuration details would be analyzed if DOE decides to pursue this option for the production of plutonium-238.

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Material Surveillance Specimen Capsules which are being removed or exchanged in many of the nation's PWRs.

9.0 Furthermore, no facilities modifications will be required.

10.0 No modifications will be required to the reactor internals or to the reactor vessels to implement PWR ex-core production of Pu-238, or other industrial and medical isotopes.

11.0 With regard to the DOE's assessment and conclusions on PWR production of medical and industrial isotopes:

11.1 The conclusions given in paragraph 2.6.1 (page 2-67, first paragraph, lines 2 through 8) have some validity only for some short-lived isotopes. In line 9, the report states, "In the event CLWRs are used for medical isotope production {with no mention of industrial isotopes}, the selection of isotopes to be produced would be limited to those with relatively long half-lives because there are no CLWR sites with facilities for processing irradiated targets. {DOE states the obvious in that CLWR sites can't be expected to have facilities for processing irradiated targets when nothing is currently produced and the DOE has previously not been willing to consider the idea! - Can DOE consider such a possibility given the available on-site space and a willing partner?}

11.1.1 **First and foremost**, it should be stated that PWRs would be ideal for production of many medical **and** industrial isotopes. This is especially true when ex-core production methods, A) do not impact fuel management; B) do not require significant capital expenditures, and C) do not extend or impose on critical path refueling outage activities.

11.1.2 **Second**; the contention that production of all isotopes (including those with moderate and long half-lives) will require significant facility modifications into the reactor vessel and potentially the containment vessel is patently incorrect. It can be argued that production of short half-life isotopes may require such modifications. However, ex-core production of long-life isotopes (eg. tritium- 12.3 yrs; Pu-238- 87.7 yrs; strontium 89- 50.52 days; Cobalt 60- 5.27 yrs; Cesium 137- 30.07 yrs), in a batch process, would require absolutely no facilities or reactor vessel and internals modifications in many of the operating PWRs in the US and the world.

11.1.3 **Third**; not only are no facilities and vessel modifications required for ex-core production, but the DOE's contention that subsequent refueling outage duration would be extended is also totally incorrect. To accomplish the DOE's Pu-238 production goals of approximately 7 or 8 Kilos per 18 month fuel cycle, no more than two or three ex-core production targets will be required. These ex-core targets can be easily exchanged at any time during the refueling outage with normal refueling pool levels and with the plenum assembly removed as is normally required for refueling.

1490-2
(Cont'd)

1490-3

Response to Commentor No. 1490

1490-3: The commentor is correct in stating that long half-life medical and industrial radioisotopes can be produced in CLWR ex-core locations without any significant impact on CLWR operation or plant modifications. The Final NI PEIS, Section 2.6.1, has been revised to recognize this capability. However, this revised NI PEIS section also notes that only one of the isotopes delineated in the Expert Panel's Report, strontium-89, was considered in candidate for CLWR ex-core production and that approximately 10 CLWRs with scheduled reactor refueling outages every 2 to 3 months would be required to provide a continuous and reliable supply of strontium-89. Since other isotopes identified in the Expert Panel's Report could not be produced in CLWRs with 18 to 24 month refueling schedules, CLWR use for medical and industrial radioisotope production was not considered a reasonable alternative.

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Strategic Energy Resources, Inc.

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11.1.4 **Forth**; initial installation and subsequent exchange of only 2 or 3 ex-core target rods is not expected to either meet or exceed the effort, and planning that is normally required for a B&W reactor specimen capsule exchange. Existing underwater on-site casks, refueling pool handling methods and some tooling may be applicable in both these endeavors for certain B&W designed reactors and possibly many other Combustion and Westinghouse reactors (eg McGuire, etc).

11.1.5 **Fifth**; since there are no penetrations or modifications required for long to moderate half-life isotopes being produced in a PWR ex-core region, the DOE statement that extra nozzle penetration inspections can extend an outage and increase outage cost is in error with regard to ex-core production of the long to moderate life isotopes.

11.1.6 **Sixth**; PWRs should not be summarily dismissed as being unable to support DOE nuclear research and development missions for long and moderate life isotopes when ex-core production methods are employed.

11.1.7 **Finally**; SER maintains the DOE conclusions given in section 2.6.1 concerning PWR isotope production require significant reevaluation with regard to the production of moderate and long half-life isotopes. The DOE has focused only on in-core production methods and omitted in-core safety considerations. By totally excluding consideration for development of SER's ex-core production methods, the DOE has effectively denied the PWR owners a fair opportunity to compete in that in-core production methods may prove unacceptable or unobtainable. *Lastly, the DOE has made no serious effort to place the expanded production of nuclear isotopes needed for industry and medicine in the hands of private industry in what should eventually become an indigenous commercial endeavor in the United States.*

SER continues to offer explanations and debate the PWR ex-core production capability in greater detail, and in person, and sincerely appreciates the efforts of Ms. Colette Brown of the Office of Nuclear Energy, Science and Technology to provide a venue for this presentation within her office. SER respectfully requests the DOE now consider these formal comments in more detail and appropriately amend the PEIS Report to include the ex-core production potential. These comments are herewith formally submitted in writing to the DOE at 2:00 pm on September 12, 2000 at the Germantown office of the DOE, Room A270. Copies are also being submitted to the Office of Management and Budget, to select members of the House and Senate Armed Services Committees and to the Nuclear Regulatory Commission.

1490-3
(Cont'd)

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Strategic Energy Resources, Inc.

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12.0 With regard to the DOE's COST assessment and conclusions on PWR production of Pu-238, medical and industrial isotopes:

12.1 SER believes the DOE has failed to consider significant options in their alternative 2 conclusions offered on page S-10 of the PEIS supplement "Cost Report for Alternatives". First SER and its associates have been in contact with Dr. Robert Wham at Oak Ridge regarding ex-core Pu-238 target design. Dr. Wham has been appraised of the ex-core potential and is familiar with the basic design parameters. SER's understanding of ORNL's target design capabilities and the advantages discussed with ORNL for ex-core target design do not, in SER's opinion, lend themselves to a "high risk" design. DOE is strongly recommended to discuss the PWR ex-core target design capability with Dr. Wham who continues to provide assistance to the Office of Science and Technology.

12.2 Secondly (Pg. S-10); If a development target were to experience design or operational problems in one reactor, it is a gross oversight to assume that DOE can only contract for development testing in any one reactor. Many U.S. PWRs will have the capability and will to support prototype target development given adequate compensation and design assurance for safe and unfettered plant operation with the target in place. The DOE should consider development testing contracts with more than one US PWR in any event to minimize the potential for operational problems at any one single reactor.

12.3 Third (Pg. S-10); CLWR irradiation costs are uncertain only because DOE has no known recent history of approaching the U.S. commercial nuclear power owners and operators to produce isotopes. If DOE engages more than one PWR owner/operator for isotope production, competition, American enterprise and ingenuity will prevail. The DOE should not interpret its charter, (as stated on page 1-1 under the amended Atomic Energy Act of 1954) as a license for the US government to directly produce non-defense related nuclear isotopes. However, there should be no reason that given proper safeguards, the DOE cannot sanction even the production of defense related (non-weapons) research and deep space power isotopes in commercial PWRs.

12.4 SER does not favor the option evaluated on page 2-3 whereby the US would continue the purchase of Pu-238 from Russia except as an interim measure in order to bring indigenous production capability on-line.

12.5 On page 2-9 DOE states that all alternative 2 options must be saddled with the deactivation costs for the FFTF. This can only be a fair assessment if the DOE also factors in the benefit of not operating the FFTF for all other alternatives during development of the quickest scheduled alternative. According to the OMB, FFTF operation cost may approach 30 to 40 million dollars per year. However, SER maintains the FFTF deactivation costs are inappropriately placed in relation to any cost evaluation of alternatives 2, 3 or 4. FFTF deactivation should stand alone and should have been funded under existing DOE/DOD program costs. SER notes that DOE includes FFTF deactivation costs associated with alternatives 3 and 4 (construct one or two new accelerators and construct a new research reactor- see page 3-4).

1490-4

1490-4: The CLWR target development evaluation assumed the prototype target design or multiple target designs would be irradiated in the CLWR for one fuel cycle. During the second fuel cycle the design or designs would be evaluated, the final design selected, and targets fabricated in production quantities. Production quantities of neptunium-237 targets are inserted into the CLWR for irradiation during the third fuel cycle. DOE considers the completion of all CLWR prototype target design testing in a single test cycle or fuel cycle a high risk.

1490-5

1490-5: The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS.

CLWR irradiation costs are uncertain because DOE has no recent history of contracting with CLWR owners for irradiating targets for the production of isotopes. The estimates were based on general discussions with representatives of the CLWR industry. CLWR owners have not directly contacted DOE with an expression of interest.

1490-6

1490-6: DOE would not purchase plutonium-238 as an interim measure in order to bring indigenous production capability on-line. Large quantities of plutonium-238 are not stockpiled in advance of needs due to budget constraints and the additional processing required to remove decay products that occur during extended storage. The purchase of plutonium-238 from Russia could take place under the No Action Alternative and Alternative 5, Permanently Deactivate FFTF; however, it would not occur if DOE decided in the Record of Decision to produce plutonium-238 domestically (i.e., if any other alternative were selected).

1490-7

1490-7: Deactivation of FFTF is not part of implementing Alternative 1, Restart FFTF. Deactivation of FFTF is part of implementing Alternatives 2, 3, 4, and 5 and including the cost of FFTF deactivation in the implementation costs for these alternatives is appropriate. The Cost Report was structured to identify the implementation costs of the various alternatives

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Strategic Energy Resources, Inc.

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12.6 Comments concerning evaluations on page 3-4; DOE may be per-supposing the PWR target design parameters without adequate consultation. Stainless steel encased Pu-238 targets may not be optimal for either PWR ex-core or in-core use. Zircaloy versus stainless tube encasements, for instance, could offer the best ex-core target design encasement material. DOE should consult with Dr. Wham (ORNL) regarding desired neutron fluence and spectra and SER regarding the available PWR ex-core and in-core neutron fluence and spectra.

12.7 On page 3-5, next to last paragraph, summary costs for alternative 2 seem to be omitted.

Respectfully,

Gary S. Carter
President: SER, Inc.
754 Winding Way Rd.
Lynchburg, Va. 24502
(804) 239-6701

J.R. Worsham
Senior Principal Physicist (SER)
4708 Alclif Rd.
Lynchburg, Va. 24503
(804) 384-9257



1490-8

1490-9

Response to Commentor No. 1490

so the Secretary of Energy would have this information along with other data for consideration. The Cost Report did not identify the source of funding for implementation.

1490-8: The Draft NI PEIS, Section 2.2.2.1, Plutonium-238 Production Target Fabrication, states that CLWR targets would have stainless steel or Zircaloy cladding. The PEIS did not presuppose the CLWR target design. The target designs were postulated to a level of detail appropriate to assess the environmental impacts associated with plutonium-238 production, target fabrication and post irradiation target processing.

1490-9: The commentor is referring to page 3-5 of the Cost Report. Summary costs for Alternative 2 are presented on page 3-4 of the Cost Report.

Commentor No. 1491: Patricia L. Clark

September 13, 2000

Ms. Colette Brown
DOE
Office of Space and Defense Power Systems

Dear Ms. Brown,

Your Department's recent proposal to expand the civilian nuclear infrastructure, outlined in the *Draft Programmatic Environmental Impact Statement for accomplishing expanded civilian nuclear energy research and development and isotope production mission in the United States, including the role of the Fast Flux Test Facility*, raises significant nuclear weapons proliferation and environmental issues.

As a member of the Snake River Alliance I have become aware of the serious nuclear contamination and waste problems at INEEL. INEEL is one of the most contaminated areas in America. The Department's recent estimate on cleaning up our site is \$22 billion and is expected to take 50 years—longer than any other DOE facility. In addition, we have over 360 individual superfund sites within the 890 sq. mile area that comprises INEEL. With this known, the last thing we need is a plan to generate more nuclear waste at a site that needs more waste like the DOE needs security scandals. Out of concern for Idaho's environment, I strongly urge you not to pursue the plutonium-238 production mission outlined in your PEIS.

One of the most daunting problems confronting cleanup at major DOE facilities such as Hanford and INEEL, is the solidification of liquid high-level nuclear waste. Your current plan for plutonium-238 production entails the generation of approximately 288,000 additional gallons of this waste over the project's 35 year span. While this is a small portion of Hanford's high level waste, it is approximately one fifth of what we have remaining here in Idaho, which makes it a very significant amount. Previous leakage of this waste at INEEL and Hanford threatens our water supplies. What we certainly don't need is any more of this most highly problematic of waste forms.

Given the certain risks inherent in production of plutonium, the justified need for this material would have to be tremendous, and the PEIS does a poor job of providing ample justification. Beyond the risks involved in production, and the aforementioned resulting waste problem, there is also the issue of an accident occurring upon lift-off or reentry of a space probe carrying this material. The cassini probe, launched in 1997, carried 72 pounds of Pu-238. The potential for an explosion during lift-off or upon an inadvertent reentry during the fly-by phase, gave many in the scientific community pause, including scientists within NASA. According to NASA's own conservative estimate, a burn up upon reentry of the cassini probe could have caused 2,300 cancer fatalities, independent analyses ranged much higher. This potential for a catastrophic release of this extremely toxic material will remain so long as the US government remains committed to the use of plutonium-238. If DOE is to have a role in developing power systems for NASA's instrumentation, it should focus on promising solar technology, an alternative that has been promoted in the European scientific community.

There are also proliferation concerns as it pertains to this plan. A return to production of this isotope, however poorly justified, means a return to the use of aqueous reprocessing at DOE facilities where this technology has been used to extract bomb material for the weapons program. From President Carter to presidents Bush and Clinton, US policy has been to halt reprocessing in this country in order to set a global precedent to curtail the spread of nuclear weapons material—a noble effort in serious need of bolstering through action.

Indeed, an otherwise lukewarm *Nuclear Infrastructure Nonproliferation Impact Assessment* conducted by your Office of Arms Control and Nonproliferation questions whether our commitment to nonproliferation isn't weakened by the use of the Fluorinel Dissolution Process Facility within Building 666 at INEEL.

Response to Commentor No. 1491

- 1491-1:** The commentor's position regarding plutonium-238 production at INEEL is noted. Production of plutonium-238 at one or more of the candidate sites would be conducted in support of NASA's deep space missions (Volume 1, Section 1.2.2 of the NI PEIS). As discussed in Sections 4.3.2.1.13 and 4.4.2.1.13 of the EIS, selection of the Fluorinel Dissolution Processing Facility and/or the Advanced Test Reactor to support production of plutonium-238 would have no significant impact on the waste management system at INEEL. Use of any of the facilities proposed in this PEIS for the stated missions would not impact cleanup missions at DOE sites.
- 1491-2:** The use of proposed alternative facilities associated with processing of neptunium-237 targets would have no impact on schedules or available funding for high-level radioactive waste programs at either Hanford or INEEL. At INEEL, the tanks would not be used although certain facilities at the Idaho Nuclear Technology Engineering Center INTEC) would be used to treat the wastes resulting from processing the irradiated targets. These are reliable systems that would process a maximum of 1,050 cubic meters of low-level radioactive waste over the 35-year nuclear infrastructure operational period. The higher activity waste would be treated as a solid form via a stand-alone vitrification system, separate from any tank waste treatment system. At Hanford, the existing high-level radioactive waste facilities would not be used, and as analyzed in the PEIS, no existing or planned high-level radioactive waste facilities would be used to treat the wastes resulting from processing the irradiated targets.
- 1491-3:** Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing

Commentor No. 1491: Patricia L. Clark (Cont'd)

INEEL's reprocessing facility is next door to a wet storage unit for Navy spent fuel, which contains a greater than average amount of highly enriched uranium. It was reprocessed from 1953 to 1989 at INEEL for the weapons program. Use of this facility to carry out plutonium-238 extraction, especially considering the dubious need for this isotope, at the very least raises the concern that DOE is not fully committed to ending reprocessing. The international community cannot be expected to trust DOE's civilian-mission claim when an agency devoutly committed to development of weapons uses a nuclear weapons technology at a weapons facility.

Considering all these factors that could adversely affect our environment and commitment to nonproliferation, I strongly urge you to select alternative 5 in the current PEIS. This alternative would allow the Advanced Test Reactor at INEEL to continue producing medical and industrial isotopes for the commercial sector and would not lead to the production of anymore highly radioactive liquid waste at Hanford or INEEL. The main mission at these two facilities has been and should continue to be cleanup of the mess left over from previous nuclear weapons work. Additional waste production would interfere with this already difficult and expensive work. Alternative 5 also calls for the decommissioning of the FFTF reactor at Hanford. FFTF is an aging breeder reactor whose use would be inconsistent with United States policy to discourage use of this technology due to the capability this class of reactors has to produce more plutonium than is consumed. Thank you for the opportunity to comment on this plan.

Sincerely,

Patricia L. Clark
3120 Crescent Rim # 305
 Boise, Id. 83706

1491-5
(Cont'd)

1491-6

Response to Commentor No. 1491

plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed production of plutonium-238 are relatively low and are discussed in detail in Chapter 4 of Volume 1, and Appendixes H, I, and J of Volume 2 in the Final NI PEIS.

- 1491-4:** DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternative energy sources for space missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. The Cassini fly-by occurred exactly as planned, with no release of nuclear material.
- 1491-5:** The commentor is correct in stating that the aqueous processing technology that would be used to separate plutonium consisting of over 80 percent plutonium-238 and neptunium from the irradiated target is similar to the technology that was used to extract plutonium-239. However, unlike plutonium-239, plutonium-238 is not used in nuclear weapons, but rather it would be used as a power source for NASA space missions. The technology that is discussed in EIS Sections S.3, 2.2.3 and A.1.4 would be used to chemically separate plutonium-238 and neptunium from irradiated targets and not from irradiated or spent nuclear fuel whereas reprocessing separates weapons grade plutonium-239 from irradiated nuclear fuel. As discussed in the separate nonproliferation

Commentor No. 1491: Patricia L. Clark (Cont'd)

Response to Commentor No. 1491

impact assessment report, use of this technology to produce plutonium-238 from irradiated targets will not create a nonproliferation threat. DOE is committed to full compliance with and support of the U.S. policy prohibiting reprocessing. The juxtaposition of INEEL Building 666 to wet storage of highly enriched uranium Navy spent nuclear fuel and its previous mission of reprocessing spent nuclear fuel were considered in the separate nonproliferation impact assessment.

- 1491-6:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. It should be noted that medical isotopes would continue to be produced at ATR regardless of which alternative is selected in the Record of Decision. The FFTF would produce spent nuclear fuel and low-level radioactive waste, and as discussed throughout Section 4.3 of Volume 1, none of the proposed alternatives would add waste to the high-level waste tanks at Hanford or INEEL. Also, it should be pointed out that while FFTF supported the breeder reactor program, it is not itself a breeder reactor, but rather a fast flux research reactor.

Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

With respect to cleanup of wastes at Hanford or INEEL, the proposed action and the existing cleanup missions are independent programs and actions related to one will not impact the other. While the cleanup activities at both Hanford and INEEL are high priority to DOE, it should

Commentor No. 1491: Patricia L. Clark (Cont'd)

Response to Commentor No. 1491

be noted that the cleanup of legacy wastes is beyond the scope of the NI PEIS.

Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

Commentor No. 1492: Evelyn Campbell

FROM : COAST MORTGAGE

FAX NO. : 5097360702

Sep. 14 2000 09:55AM P1

Sept. 14, 2000

Colleen Brown
Office of Nuclear Energy
U.S. Department of Energy

Dear Ms. Brown,

I stand adamantly in favor of restarting
FFTF at Hanford.

This facility stands ready for re-start
and will offer the citizens of America the
radical isotopes they need instead of looking
them from other countries. America needs to be on
the leading edge of science!

Some opponents propose building a
facility in another state - that's ludicrous and
an absolute waste of taxpayer's money.

This facility has a good track record and
a team of workers already on-site.

Keep FFTF at Hanford! Help all the
people in my family with cancer - and millions more!

Evelyn Campbell
3404 Mount Laniel Drive
West Richland, WA 99353

Response to Commentor No. 1492

1492-1

1492-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1493: Beth J. Christiansen

FROM : LEE E CHRISTIANSEN PHONE NO. : 503+297 4358 Sep. 14 2000 07:25PM P1

Juno e-mail for bethg-mom@juno.com printed on Thursday, September 14, 2000, 7:59 PM

From: "beth j christiansen" <bethg-mom@juno.com>
To: nuclear.infrastructure-PEIS@hq.doe.gov
Date: Thu, 14 Sep 2000 18:42:40 -0700
Subject: restart if FFTF

To the Department of Energy,

I'm writing on behalf of my many friends and family members who live in the state of Oregon very near the Columbia River. Promises and mission statements by your department have been made to close down the FFTF facility at Hanford in the best interest of our environment and the health and welfare of the citizens of Oregon. Now there is the possibility of restarting it in December for no good reason known to the public. Facts known to a few who have had to "dig out" the information after much investigation show that the restart is not necessary for reasons the Dept. claims. Since an atmosphere of mistrust prevails due to unkept promises and unpublicized information I would like to voice an opinion of those people mentioned in my first sentence.

Hanford's high level nuclear waste tanks are already leaking radioactive waste into groundwater which is moving closer to the Columbia River and threatening the life of the river and people downstream. Restart of FFTF will add more waste to the nuclear waste tanks endangering our future as human beings.

What are you thinking?? Please don't tell me it is an economic necessity or an energy conservation plan or a medical research plan or a space exploration plan or any other plan that is proven to not be necessary.

Please don't do this to us.

Yours truly,

Beth J. Christiansen, citizen of OR concerned about our future

citizens!

1493-1

1493-2

1493-3

1493-1

1493-4

1 of 1

Response to Commentor No. 1493

1493-1: DOE notes the commentor's views regarding the potential use of FFTF for enhancing DOE's existing nuclear facility infrastructure. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

1493-2: DOE notes the commentor's concerns regarding the migration of contaminants to the Columbia River. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

More specific to the DOE missions presented in the NI PEIS, no high level waste will be added to the Hanford high-level nuclear waste tanks as a result of operating FFTF. Additionally, FFTF is located approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

No food or water restrictions are in place outside the Hanford Reservation as a result of Hanford activities.

Commentor No. 1493: Beth J. Christiansen (Cont'd)

Response to Commentor No. 1493

1493-3: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. This waste would not be stored in the high-level radioactive waste tanks. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

1493-4: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1494: Susan Hamilton

From: Susan Hamilton[SMTP:SHAMILTON@BMI.NET]
Sent: Wednesday, September 13, 2000 1:46:29 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Cc: Victor Saavedra
Subject: Opposition Hanford FFTF restart
Auto forwarded by a Rule

|| 1494-1

Response to Commentor No. 1494

1494-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1495: Charlene G. Cooper

Cooper, Charlene G

To: Nuclear.infrastructure-pels@hq.doe.gov
 Cc: colette brown
 Subject: FFTF

hi my name is charlene I am a health physics tech at CH2M Hill I have been working on site since 1991. I think it would be a great opportunity for the people in this community and surrounding areas to have FFTF restarted and to make the isotopes needed for medical research needed for the people in this country. I don't feel that this would take away from the cleaning up of hanford as it would open up jobs for new people with the skills to operate FFTF's program. I would love to be a part of that mission someday. there would also be the opportunity for new skilled personnel to come to hanford to work from other sites and the cleanup project will still continue with the same amount of people as now. I mean what about the glassification project thats not going to take away from the cleanup so how will restarting FFTF make DOE stray away from the cleanup of hanford. there are all kinds of new projects forming out here on site and DOE is still focused on cleanup. Please think about this before turning down the FFTF restart.

Colette Brown,
 U.S. DOE,
 Office of Space & Defense
 Power Systems
 NE-50 19901
 Germantown, MD
 Germantown, MD 20874-1290

1

Response to Commentor No. 1495

1495-1

1495-1: DOE notes the commentor's support for Alternative 1, Restart FFTF. DOE will ensure that Hanford's efforts remain focused on its current high-priority cleanup mission. The restart of FFTF would not have an impact on the cleanup mission at Hanford.

Commentor No. 1496: Alison and Bob Hodges

Response to Commentor No. 1496

09/15/00 FRI 08:56 FAX

001/003

Draft PEIS Comment Form

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Hanford is still contaminated and a threat to our environment and health. We will continue to attend these meetings and try to make our voice heard.
 Clean up should be your #1 priority. It is irresponsible for you to consider any sort of start up and to accept additional toxic materials for storage.

1496-1
 1496-2
 1496-3
 1496-1

Listen to our ~~needs~~ comments. Stop having these redundant meetings and focus your energy instead on cleaning up the ~~plum~~ that continues to grow.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Alison + Bob Hodges

Organization: _____

Home Organization Address (circle one): 44 Wallace Rd

City: White Salmon State: WA Zip Code: 98672

Telephone (optional): 509-493-4342

E-mail (optional): bhodges@qarg.net

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colthe E. Brown, NE-60
 U.S. Department of Energy • 19921 Germantown Road • Germantown, MD 20854
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

- 1496-1:** DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.
- 1496-2:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF. Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.
- 1496-3:** DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and holding public hearings is an essential and required part of the NEPA process. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

Chapter 2—Written Comments and DOE Responses

**Commentor No. 1497: Andrew C. Klein
Oregon State University**

09/15/00 08:36 541 737 0480 RADIATION CENTER 001/002



To: Collette Braun

Location: DOE

Fax #: 877-562-4592

Voice #: 877-562-4593

From: Andy Klein

Department: NE

Fax #: (541) 737-0480

Voice #: (541) 737-2341

Comments:

Collette & Here are my comments to add to Ross for
the PERS.
A. Klein

Note: If any part of this message is missing or received poorly, please call (541) 737-2341 as soon as possible.

Number of pages, including cover page: 2

Today's Date: 9-15-00 Time: 9:30 AM

Response to Commentor No. 1497

Commentor No. 1497: Andrew C. Klein (Cont'd)
Oregon State University

09/15/00 08:36 541 737 0480

RADIATION CENTER

@002/002

September 15, 2000

Dear Secretary of Energy Richardson:

After a detailed personal and professional review of the Nuclear Infrastructure PEIS I find that it comprehensively discusses and justifies the needs to maintain and expand the nation's radioisotope production capabilities and the civilian nuclear energy infrastructure. This review included my participation in sessions aimed at searching for common ground between proponents and opponents of re-starting the Fast Flux Test Facility. It is my conclusion that the three areas covered in the PEIS: medical and industrial radioisotope production, Pu-238 production for space missions, and civilian nuclear energy research and development are all valuable roles that the U.S. government must maintain and expand if the world's future generations are to continue to move toward a higher quality of life.

I fully support Alternative 1 stated in the PEIS - Restart FFTF as the best and only option that can completely accomplish these objectives. There is absolutely no doubt in my mind that FFTF can safely provide the neutron irradiation services and nuclear energy research and development opportunities that are required to allow cancer patients to survive, humankind to reach to the stars, and scientists and engineers to further develop greenhouse gas emission free nuclear generated electricity well into the 21st century. None of the other alternatives or options included in the PEIS can accomplish these missions.

Medical revolutions must be fostered, supported and encouraged to enable new diagnostic and therapeutic techniques to improve the quality of life of the World's citizens. Radioisotopes from FFTF and nuclear research and investigations using these isotopes can and will provide enhanced quality and length of life for millions of people.

Humankind has an innate desire for exploration and discovery and nuclear power (including the use of Pu-238) is the best and often only way to accomplish robotic and human missions into space where sunlight is inadequate to provide the necessary power to sustain exploration activities. Pu-238 and it's engineered applications have a long history of providing safe and reliable power to space missions and the U.S. must maintain adequate domestic supplies if it is to continue to be the world-wide leader in space exploration and discovery.

The expansion of nuclear energy research and development is absolutely necessary if the world is to avoid the dual negative consequences of excessive dependence on fossil fuels for electricity production and global warming. The world must have a balanced energy supply and nuclear power has a well-deserved reputation for safely producing important quantities of greenhouse gas emissions free electricity.

Thus, I highly encourage you to select Alternative 1 of the Nuclear Infrastructure PEIS for implementation. It is the right decision for today and the future health and well being of the country's citizens.

If you have any questions about my comments or understanding of these issues, I would be very glad to discuss them with you or your Staff further.

Sincerely,



Andrew C. Klein
Professor and Head, Department of Nuclear Engineering
Director, Oregon Space Grant Program

130 Radiation Center
Oregon State University
Covallis, OR 97331-5902

Phone: 541-737-2343
Fax: 541-737-0480
email: klein@ne.orst.edu

Response to Commentor No. 1497

1497-1 1497-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1498: Anonymous

NI PEIS Toll_Free Telephone

9/15/00

Anonymous

I strongly oppose the restart of the nuclear reactor at Hanford. We need to clean up Hanford not have more activity there. We live down_river. Thank you.

|| 1498-1

|| 1498-2

Response to Commentor No. 1498

-
- 1498-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 1498-2:** DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

Commentor No. 1499: Anonymous

NI PEIS Toll_Free Telephone

9/15/00

Anonymous

Hi, I was just calling to say that I oppose the restart of the FFTF nuclear reactor at Hanford. I hope that does not happen. Bye.

1499-1

Response to Commentor No. 1499

1499-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1500: Sue Henry

NI PEIS Toll_Free Telephone

9/15/00

Sue Henry

My name is Sue Henry and I would like to go on record as saying that I oppose the restart of the nuclear reactor at Hanford. I am a tax_paying, voting citizen. Thank you.

1500-1

Response to Commentor No. 1500

1500-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1501: Carl Long

NI PEIS Toll_Free Telephone

9/15/00

Carl Long
Washington

Yes hello, my name is Carl Long. I'm a citizen of Washington state and I am concerned about the lobbyists trying to convince the Department of Energy to approve the restart of the FFTF, that Fast Flux Testing Facility nuclear reactor at Hanford and I am, like many, totally opposed to the restart of this. I'd like to see the area totally cleaned up and let's move on. If you want any other comments or discussion please feel free to call me at (360) 256_6643. Thank you for your time. Have a nice weekend.

||| 1501-1

|| 1501-2

|| 1501-3

Response to Commentor No. 1501

- 1501-1:** Selection of facilities and site locations for accomplishing expanded civilian nuclear energy research and development and isotope production missions is not being driven by special interests working on behalf of any corporate, institutional, or other non-governmental entity with a stake in the decisions to be made. The facilities and locations evaluated in this NI PEIS represent a range of reasonable alternatives for accomplishing the DOE missions and serve to enable DOE to meet its responsibilities under the Atomic Energy Act.
- 1501-2:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 1501-3:** DOE notes the commentor's regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

Commentor No. 1502: Agnes Schmoe

NI PEIS Toll_Free Telephone

9/15/00

Agnes Schmoe
24410 SE 103rd Street
Issaquah, WA 98027

I received a draft of the summary of the draft Programmatic Environmental Impact but I got a card that says there's also a report on the cost report and the Nuclear Infrastructure Impact Assessment. I would like those two. And if they are summaries, that would be acceptable.

I really feel very badly about our government going ahead with startup of the Fast Flux at this point. There have been mistakes and we certainly should learn from the one that was in Russia. And anyway I would like the Fast Flux information that you have. I hope we don't leave a planet that is not habitable for my great_grandchildren.

Thank you.

1502-1

Response to Commentor No. 1502

1502-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1503: Anonymous

NI PEIS Toll_Free Telephone

9/15/00

Anonymous

Hi. I'm a voter calling to add my voice against the Fast Flux Test Facility at Hanford. I feel very strongly about this and I would like to have my voice added against this. Thank you.

1503-1

Response to Commentor No. 1503

1503-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1504: Angel Tyse Colton

NI PEIS Toll_Free Telephone

9/15/00

Angel Tyse Colton
4822 Rimrock
Colton, WA 99113

Hello. A message please for Colette Brown that I support Alternative 5 which is a no to the restart of the FFTF nuclear reactor at Hanford nuclear reservation in Washington state.

Thank you very much.

1504-1

Response to Commentor No. 1504

1504-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.

Commentor No. 1505: Dana Gerome Ameo

NI PEIS_Toll Free Telephone

9/15/00

Dana Gerome Ameo
Chaktow, OR

Hi my name is Dana Gerome Ameo and I live in Chaktow, Oregon. I'm calling to leave the message to say that I oppose the restart of the FFTF nuclear reactor at Hanford. Thank you.

|| 1505-1

Response to Commentor No. 1505

1505-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1506: Evan McFadden

NI PEIS Toll_Free Telephone

9/14/00

Evan McFadden
Portland, Oregon

Yes, my name is Evan McFadden, I'm from Portland, Oregon. I'm calling to say I would prefer than you not restart the FFT nuclear reactor. FFTF I think. Thank you.

|| 1506-1

Response to Commentor No. 1506

1506-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1507: Mary Hanson

NI PEIS Toll_Free Telephone

9/14/00

Mary Hanson
(206) 528_0289

Hi. I'm asking you on the PEIS to go for Option 5 at Hanford. That would be, close FFTF permanently with no new missions. There are...I went to the hearing here in Seattle on the 30th and I put my name in but my number just never came up so I was not allowed to speak.

1507-1

What I would have said if I had been allowed to speak would have been, that it is, that the search for missions seems suspect at this time, unfortunately the culture, the history at Hanford and at FFTF does not inspire confidence.

1507-2

In my view the focus has to be totally on cleanup and the whole question of bringing isotopes and fuel and all these other issues in clouds the picture and adds to the waste stream and is in, I mean, it's just over for Hanford, I mean it's done, they've had second chances, third chances, fifth chances, nineteenth chances, agreements, it's that there just isn't, that is not a solid enough outfit to trust with something as potentially dangerous as some kind of nuclear mission, other than cleanup. You know, it's going to be rough enough and tough enough for them to get cleanup right. I feel for the people, but on the other hand we're in a very strong, we're not in an economy where people are having a hard time finding work, which has been the case during sometimes this whole scenario as it has played out.

1507-3

So, there again my opinion is no new missions. Close FFTF permanently. Thank you for your time. Bye.

1507-1

Response to Commentor No. 1507

1507-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

1507-2: All members of the public that requested an opportunity to speak at the hearing were given numbers. The numbers were placed in a container and picked at random to establish the speaking order. When the container was empty, the meeting facilitator said "Are there any additional ticket holders out there who've not been called? Is there anyone who does not have a ticket who wanted to speak? If not, this concludes the meeting." (See the last page of the Seattle Hearing transcripts). In addition, several times during the meeting the facilitator announced that members of the public could provide comments to a DOE official in a room adjacent to the hearing room. It was also announced that the comments would be recorded by a court recorder and have the same status as comments made in the hearing. The commentor apparently left the hearing before her number was called and did not take advantage of the opportunity to give formal comments to a DOE official and court recorder in the adjacent room.

DOE notes the commentor's views regarding the potential use of FFTF for enhancing DOE's existing nuclear facility infrastructure. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs:

- 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;
- 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and
- 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

1507-3: Restoration of the Hanford Site and waste management activities are the primary missions at Hanford. With respect to waste management and

Commentor No. 1507: Mary Hanson (Cont'd)

Response to Commentor No. 1507

cleanup issues, the Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. FFTF restart would not impact the cleanup missions at Hanford.

Commentor No. 1508: Jonathan Mark

NI PEIS Toll-Free Telephone

9/14/00

Jonathan Mark
PO 1999, Wendell Depot, MA 01380

Hi, this is Jonathan Mark, I've sent in an e-mail comment about the expected expansion of plutonium development especially plutonium 238. I just wanted to see if the request for proposal deadline has been extended to September 18th, that's good. You can send me, just the summary to Jonathan Mark, at PO 1999, Wendell Depot, MA 01380 .

The only other comment I wanted to add is that there is about 160 species disappearing each day and the lifetime of plutonium radiation and its harmful effects lasts much longer than we have awareness of what the problems that really may arise. There's a lot of ideas that Lyme disease and other such genetic changes of deer ticks causing great problems has been due to radioactivity. Millstone and other plants in Connecticut that altered this incident that's harming many, many people's lives. The lives of workers, the lives of the instability of the political process, it would be better off committing to disarmament, and not expanding plutonium development. We don't need to understand outer space so much that we have to threaten our very home. If we can develop space programs that don't threaten our home, than it's a good use of technology and ideas and I'm all support of it. But when it threatens life, and radiation does threaten life, it only takes one decaying atom shown in a 1997 report, showing that the alpha waves of radioactivity when it's internalized inside a body can cause a cancer reaction. It's just a bad idea, so I urge all those involved at DOE and the Defense Department to reconsider the expansion of Plutonium development and transform the direction towards total disarmament of dangerous amounts of radioactivity that can harm people. Thank you for listening to this, but I would thank you much more if you would take any action in this regard.

1508-1

Response to Commentor No. 1508

1508-1: DOE notes the commentor's concern for NASA's use of nuclear materials for space missions, interest in the development of alternative energy sources for space missions, and concern for the use of nuclear power in space-based weapons, although issues such as NASA research priorities are beyond the scope of this PEIS. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. It should be noted that none of the missions stated in the NI PEIS are defense- or weapons-related.

Commentor No. 1509: Sylvia Haven

NI PEIS Toll_Free Telephone

9/14/00

Sylvia Haven
Seattle, WA

Yes, I am vehemently opposed to the restarting of the Hanford FFTF nuclear reactor, mainly because it will make more problems for our environment and it doesn't seem, by some experts I've heard speak, that it's absolutely necessary and it might even, in fact, be a problem with the negotiated treaties that we've made with other people not to Produce more plutonium and bomb material.

Thank you very much for listening. Good_bye.

1509-1

1509-2

1509-3

Response to Commentor No. 1509

- 1509-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF. As shown in Chapter 4 of the PEIS, impacts to the environment are small for all the alternatives.
- 1509-2:** DOE notes the commentor's views regarding the potential use of FFTF for expanding DOE's existing nuclear facility infrastructure. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.
- 1509-3:** The use of FFTF to produce plutonium-238 does not mean that the process would produce plutonium-239, which is a weapon useable material. Unlike plutonium-239, plutonium-238 is not used in nuclear weapons, but rather it would be used as a power and heat source for NASA space missions. The technology that is discussed in the PEIS Sections S.3, 2.2.3 and A.1.4 would be used to chemically separate plutonium-238 and neptunium from irradiated targets and not from irradiated or spent nuclear fuel, whereas reprocessing separates weapons grade plutonium-239 from irradiated nuclear fuel. As discussed in the separate nonproliferation impact assessment report, use of this technology to produce plutonium-238 from irradiated targets will not create a nonproliferation threat.

Commentor No. 1510: Marc-Daniel Domond

NI PEIS Toll_Free Telephone

9/14/00

Marc_Daniel Domond

Hello. I'm calling because I don't agree with the restart of the nuclear reactor that's going to make the FFTF reactor take place because I feel that it's really dangerous to our well_being. Living in the Portland area, I mean, I already know that it's leaking radioactive waste and that type of thing so I am really definitely opposed to it. I'm a college student at the University of Oregon, so you can give Me a call at (503) 358_0722. Thanks a lot.

1510-1

1510-2

Response to Commentor No. 1510

1510-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1510-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

The environmental impacts associated with operation of the FFTF are addressed in Section 4.3 of Volume 1 of the NI PEIS. The impacts are shown to be small. These impacts specifically include the risks to human health during normal operations and associated with postulated accidents. Over the 35-year operational period no fatalities would be expected among workers or in the general public in the vicinity of Hanford or at distant locations. For perspective, the radiation dose the average American receives from naturally occurring radiation sources is about 300 mrem each year. Based on the same 35-year time period used above the health risk from the natural non-Hanford related radiation exposure would be 2,600 latent cancer fatalities to the same population.

All environmental parameters (e.g., air, soil, surface water, groundwater, vegetation, animals, etc.) in and around the Hanford Site are monitored on a set frequency. The information is available to the public in annual monitoring reports. No food or water restrictions are currently in place outside the Hanford Reservation as a result of Hanford activities.

Commentor No. 1511: Wrsew@aol.com/Theresa

From: Wrsew@aol.com%internet
[SMTP:WRSEW@AOL.COM]
Sent: Friday, September 15, 2000 9:47:46 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF restart YES!
Auto forwarded by a Rule

To Sec. of Energy:

Restart FFTF now. Make FFTF the preferred alternative.
Restart FFTF for medical isotope production.

Thanks,
Theresa

1511-1**Response to Commentor No. 1511**

1511-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1512: Wrsew@aol.com/Kitt

From: Wrsew@aol.com%internet
[SMTP:WRSEW@AOL.COM]
Sent: Friday, September 15, 2000 10:01:12 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: YES for FFTF restart
Auto forwarded by a Rule

Hi,

Please restart FFTF for medical isotopes. It is needed.

Thank you,
Kitt

|| 1512-1

Response to Commentor No. 1512

1512-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1513: Paul Ballard

From: Paul Ballard[SMTP:PBALLARD@OZ.NET]
 Sent: Friday, September 15, 2000 10:00:44 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Cc: Amber Waldref
 Subject: FFTF restart
 Auto forwarded by a Rule

Colette E. Brown
 US Department of Energy, NE_50
 19901 Germantown Road
 Germantown, MD 20874_1290

Don't restart the FFTF Nuclear Reactor at Hanford . The Hanford region needs the long overdue promise of clean_up, NOT another dangerous addition to the carnage. There must be another way.

Medical isotopes is a red herring. Future demands for medical isotopes can be met using other facilities.

Future needs for plutonium to power NASA space missions can be met using existing supplies, supplemented by foreign sources if necessary.

Weigh all of the costs in making this decision _ costs which extend out to the life of the waste produced and are going to be inherited by generations unborn beyond the length of recorded history.

I encourage choosing ALTERNATIVE #5: SHUT DOWN FFTF!!

This issue is growing into one of the most important issues to me. It is the main reason I am losing support for both of our Senators. It is one of the few issues which can get me out in the street and cause me to donate money. Over 20 years ago I devoted 3 years to stopping WPPSS. We succeeded. Don't get me started again.

Paul Ballard
 416 NW 92nd
 Seattle, WA 98117
 206 782 0924

|| 1513-1

|| 1513-2

|| 1513-3

|| 1513-4

|| 1513-5

|| 1513-6

Response to Commentor No. 1513

1513-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

1513-2: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "... ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

1513-3: The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements.

Although other manufacturers produce medical isotopes, DOE remains the key provider for a large number of radioisotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially experimental, these isotopes are not generally purchased in large-enough quantities to make their production financially attractive to private industry. However, supplies of many research isotopes are not readily available from existing domestic or foreign sources, causing a number of medical research

Commentor No. 1513: Paul Ballard (Cont'd)

Response to Commentor No. 1513

programs to be terminated, deferred, or seriously delayed. Under the NI PEIS proposed action and consistent with its mandates under the Atomic Energy Act, DOE would enhance its existing nuclear facility infrastructure to, among other things, more effectively support production of radioisotopes for medical applications and research. DOE's intent is to complement commercial sector capabilities to ensure that a reliable supply of isotopes is available in the U.S. to meet future demand, and to encourage the commercial sector to privatize the production of isotopes that have established applications to a level that would support commercial ventures. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

1513-4: There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Although research to identify other potential fuel sources to support these space exploration missions has been conducted, no viable alternative to using plutonium-238 has been established. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

1513-5: The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS.

The purpose of this NI PEIS is to evaluate the environmental impacts of a range of reasonable alternatives to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238 for NASA space missions, and nuclear research and development. DOE has made every effort to obtain and evaluate all of the information it needs to make a decision on expanding

Commentor No. 1513: Paul Ballard (Cont'd)

Response to Commentor No. 1513

civilian nuclear energy research and development and isotope production missions in the United States.

DOE's Record of Decision will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

1513-6: See response to comment 1513-1.

Commentor No. 1514: Joe Darden

From: Joe Darden[SMTP:JOEJAN2@HOME.COM]
Sent: Friday, September 15, 2000 10:17:37 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: I oppose the restart of the FFTF Nuclear Reactor at Hanford
Auto forwarded by a Rule

I oppose the restart of the FFTF Nuclear Reactor at Hanford

|| 1514-1

Response to Commentor No. 1514

1514-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1515: Andrea Perrine

From: Andrea Perrine
[SMTP:PERRINEA@HOTMAIL.COM]
Sent: Friday, September 15, 2000 10:43:05 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Restart FFTF
Auto forwarded by a Rule

We need to restart FFTF and make our own medical isotopes, instead of relying on our neighbors for them.

|| 1515-1

Response to Commentor No. 1515

1515-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1516: Paul Kylo

From: PKylo@nea.org%internet
[SMTP:PKYLLO@NEA.ORG]
Sent: Friday, September 15, 2000 11:02:20 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: ...no subject...
Auto forwarded by a Rule

I oppose the restart of FFTF Nuclear reactor at Hanford.
The isotopes are not needed for the stated purposes, and
the entire situation is a crisis waiting
to happen.

Paul Kylo
4054 IBEX St. NE
Salem, OR 97305

|| 1516-1

|| 1516-2

Response to Commentor No. 1516

1516-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1516-2: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs. The results of the analysis presented in the PEIS show that risks associated with operating FFTF are small.

Commentor No. 1517: Cyndy Maples

From: Cyndy Maples
[SMTP:CYNDY_MAPLES@PARKROSE.K12.OR.US]
Sent: Friday, September 15, 2000 11:22:10 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: I oppose the
Auto forwarded by a Rule

I oppose the restart of the FFTF Nuclear Reactor of Hanford.

|| 1517-1

Response to Commentor No. 1517

1517-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1518: L. L. Meyer

From: LMeyer1016@aol.com%internet
[SMTP:LMEYER1016@AOL.COM]
Sent: Friday, September 15, 2000 11:39:47 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Re: FFTF
Auto forwarded by a Rule

It would seem that since FFTF has the capability to make medical isotopes, it should be made the preferred alternative to make them. It makes economic sense as well as being humane to use a facility to produce those isotopes that are so critical to human care.

L.L. Meyer

1518-1

Response to Commentor No. 1518

1518-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1519: Barbara Bradshaw

From: Barbara bradshaw
[SMTP:BARBARA_BRADSHAW@PARKROSE.K12.OR.US]
Sent: Friday, September 15, 2000 12:10:40 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Cc: Carol_halfverson@parkrose.k12.or.us%internet
Subject: COLUMBIA RIVER
Auto forwarded by a Rule

I OPPOSE THE RESTART OF TH FFTF NUCLEAR
REACTOR AT HANFORD

THANK YOU,
BARBARA BRADSHAW
PARKROSE MIDDLE SCHOOL

1519-1

Response to Commentor No. 1519

1519-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1520: Joe Chelini

From: Joseph M. Chelini
SMTP:JCHELINI@IN_TCH.COM]
Sent: Tuesday, September 19, 2000 12:23:02 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Please restart the FFTF
Auto forwarded by a Rule

It appears that demand is larger than the present sources of isotopes used for cancer et al research and cure. The plant at Richmond can help alleviate this problem. Please give it a hard look.

Joe Chelini

1520-1

Response to Commentor No. 1520

1520-1: DOE notes the commentor's support for Alternative 1, Restart FFTF. It should be pointed out that FFTF is located at Hanford, not Richmond.

Commentor No. 1521: Hoi Tran

From: Hoi Tran
[SMTP:HOI_TRAN@PARKROSE.K12.OR.US]
Sent: Friday, September 15, 2000 12:12:10 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Nuclear Reactor at Hanford!!!!
Auto forwarded by a Rule

I oppose the restart of the FFTF Nuclear Reactor at Hanford.

1521-1

Response to Commentor No. 1521

1521-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1522: Carmen Smith

From: Carmen Smith
[SMTP:SASSYREDHEAD7@HOTMAIL.COM]
Sent: Friday, September 15, 2000 12:45:50 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: ?Check_Subject
Auto forwarded by a Rule

No to reactivation of Hanford.Please

|| 1522-1

Response to Commentor No. 1522

1522-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1523: Mike Rogers

From: Mike Rogers[SMTP:GOLDBABY@RMCI.NET]
 Sent: Tuesday, September 19, 2000 2:08:04 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: INEEL comments
 Auto forwarded by a Rule

Ms. Colette Brown
 DOE, Office of Space and Defense Power Systems

Dear Ms. Brown,

I wish to comment on the current plan under consideration on the INEEL laboratory here in Idaho. I support Alternative 5 in which production of plutonium would not be re_initiated. The incredible amount of waste already sitting above our primary aquifer is unacceptable. Our priority as a nation should be cleaning up this threat to our populace, rather than adding to it.

Mike Rogers
 Boise, ID

1523-1

1523-2

Response to Commentor No. 1523

1523-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

1523-2: The commentor's positions regarding waste above the Snake River Plain aquifer and cleanup as a priority at INEEL are noted. The Snake River Plain aquifer and DOE's use of the aquifer are described in Volume 1, Section 3.3.4.2.1 of the NI PEIS. Analyses of water resource impacts that would result from selection of the Fluorinel Dissolution Process Facility as a fabrication/processing facility for production of plutonium-238 are given in Section 4.3.2.1.4 of the NI PEIS. An annual increase of 23,000 liters of process wastewater would result from plutonium-238 target processing. Under normal operations, no radioactive liquid effluent discharges would occur. Selection of the Fluorinel Dissolution Process Facility as a fabrication/processing facility would have no significant effect on the Snake River Plain aquifer. As discussed in Section 4.4.1.1.4, selection of the Advanced Test Reactor for irradiation of plutonium-238 targets would not measurably alter groundwater use or effluent discharge from the reactor.

Schedules for the nuclear infrastructure alternatives given in Volume 1, Section 2.7.2 indicate the plutonium-238 production mission at INEEL, if implemented, would end well before DOE's planned completion date of 2050 for accomplishing major cleanup objectives. Selection of candidate facilities at INEEL to support plutonium-238 production would not impact existing cleanup activities at INEEL.

Commentor No. 1524: Joy Prestridge

From: JOY PRESTRIDGE
[SMTP:JPRESTR@HOME.COM]
Sent: Friday, September 15, 2000 1:23:06 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Future of FFTF
Auto forwarded by a Rule

The Hanford, WA Nuclear Facility should be reactivated to make radioisotopes to support the growth of this strong anti_cancer medical technology and provide better treatment opportunities for cancer patients. As to the issue as to fuel for space vehicles, why should we buy from Russia when we can make our own.

Thank you.

Joy B. Prestridge
2006 N. 87th Dr.
Phoenix, AZ 85037
623_936_9775
jprestr@home.com

1524-1

Response to Commentor No. 1524

1524-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1525: Eunice and Bill A. Petrowicz

From: Petrowiczb@cs.com%internet
 [SMTP:PETROWICZB@CS.COM]
 Sent: Friday, September 15, 2000 1:28:02 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Cc: KDDNEP@aol.com%internet
 Subject: Re: FFTF restart
 Auto forwarded by a Rule

:To Whom it may concern:

In regards to the FFTF facility, please consider a favorable decision to restart it to produce isotopes for the medical purposes. It seems to us that the investment of tax dollars in the facility is being wasted unless the facility is put to use. Your favorable consideration would be appreciated. Thank you.

Eunice and Bill A. Petrowicz
 2324 Grovedale Dr.
 Springfield, OR 97477_2104

1525-1

1525-2

Response to Commentor No. 1525

1525-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

1525-2: DOE notes the commentor's opinion. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

Commentor No. 1526: S. M. Ziring

From: Smartyz@aol.com%internet
 [SMTP:SMARTYZ@AOL.COM]
 Sent: Friday, September 15, 2000 1:32:57 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Cc: rhoffman@animatedsoftware.com%internet
 Subject: NI PEIS
 Auto forwarded by a Rule

Att: Colette E. Brown / DOE

In the Director Magwood communication of July 21, the DOE speaks of "alternatives" for producing PU_238. Ms. Brown, THERE ARE NO ALTERNATIVES !! Of the three mentioned, only the "no action" selection is plausible and sane.

You are seeking approval from the American public to support you in the manufacture of the deadliest brew that man has ever created, and I refuse to be an accomplice. To date, the DOE has proven to be incapable of harnessing the deadly, destructive potential of PU_238.

The price you want the American public to pay for the production of medical and industrial isotopes is too high. Environmental contamination at Hanford and Savannah continues. The number of contaminated victims at Piketon and Paducah continues to grow. A Fast Flux Test Facility in the hands of the DOE has already proven to be a threat to the American public. I urge "NO ACTION" for FFTF.

S.M. Ziring
 57 Boylston St. N.
 Meriden, CT 06450

1526-1

1526-2

1526-3

1526-4

1526-1

Response to Commentor No. 1526

1526-1: DOE notes the commentor's support for the No Action Alternative, under which FFTF would continue to be maintained in standby. Included in the PEIS are the results of analyses that show that the risks associated with operating the FFTF are very small.

1526-2: The commentor's position regarding production of plutonium-238 is noted. As discussed in Volume 1, Section 1.2.2 of the NI PEIS, DOE has supplied power systems that use plutonium-238 in support of NASA's space missions for over three decades. These systems have demonstrated their reliability and safety in a variety of space missions that include Apollo, Pioneer, Viking, Voyager, Galileo, Ulysses, Mars Pathfinder, and Cassini.

1526-3: The NI PEIS addresses the environmental impacts associated with the production of various isotopes, including those for medical and industrial purposes. The impacts are shown in Chapter 4, "Environmental Consequences," to be small. All air emissions and wastewater discharges would be in accordance with applicable permit and regulatory requirements such that any environmental contamination would be negligible.

DOE remains committed to its environmental restoration and cleanup missions at Hanford, Savannah River, and other sites independent of ultimate decisions on nuclear infrastructure activities. None of the alternatives proposed in this PEIS would have any impact on DOE site cleanup schedules or activities.

1526-4: DOE notes the commentor's concern for workers and the public near other DOE sites, although these issues are beyond the scope of this Nuclear Infrastructure PEIS.

Commentor No. 1527: Lorene Lamb**Lorene S. Lamb**Lorene S. Lamb
555 10th Street, #421
Oakland, CA 94607-4037

94601

Dear Colette Brown,

U.S. is polluting our earth. First it is with nuclear waste in the bullets that we use in our wars and now to use plut 238 for powering systems in deep space missions.

Is this what you want to leave for your grand children?

Yours truly
Lorene Lamb

1527-1

Response to Commentor No. 1527

1527-1: DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and concern for the use of nuclear materials in weapons, although issues such as NASA research priorities and the use of depleted uranium in weapons are beyond the scope of this NI PEIS. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch.

**Commentor No. 1528: Thalia Syracopoulos
National Organization for Women**



4649 SUNNYSIDE AVENUE N ROOM #222
SEATTLE WASHINGTON 98103
(206) 632-8547

10 September 2000

I am writing on behalf of the Seattle Chapter of the National Organization for Women [NOW].

I have read the Summary of the Draft EIS and found almost no information about what isotopes the Fast Flux Test Facility [FFTF] at Hanford might be able to produce. I also found no information about what specific isotopes that the FFTF might produce are in short supply.

The Draft EIS went on to say that it is possible that the DOE's isotope production facilities could be fully used in 5-10 years but it was unclear as to whether or not the Hanford FFTF facility was counted in this calculation. This projection was apparently made in the context of a worldwide market for "some radioisotopes". One aspect of the argument for reopening the FFTF at Hanford seems to be that at present DOE's market share is a small fraction of the overall total worldwide market for "some radioisotopes". This leads one to wonder if the DOE is considering restarting the FFTF in order to capture a larger portion of the worldwide market rather than to produce isotopes that are truly in short supply.

The Summary of the Draft EIS discusses medical applications of isotopes and some are even listed. However, there is no information on the present availability of those listed. These isotopes were listed as a "sample of possible isotopes that could be produced and DOE expects the actual isotopes produced would vary from year to year". This appears to mean that no one really knows if the FFTF at Hanford is capable of producing needed isotopes and thus far no one has identified particular isotopes that might actually be needed. Such speculation hardly justifies the restarting of the FFTF at Hanford.

My own profession requires that I read a wide variety of medical journals published in the United States and around

Response to Commentor No. 1528

1528-1: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual rate of growth of medical isotope use is consistent with the Expert Panel findings. Section 1.2.1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes

1528-1

Commentor No. 1528: Thalia Syracopoulos (Cont'd)
National Organization for Women

the world. At no time in the last 10 years have I encountered a single article in any medical journal mentioning the need for additional sources of isotopes for medical diagnosis, treatment or research.

Prior to writing this, I took the time to run a search of the National Library of Medicine to identify any such articles published during the last 12 years.

I initially searched "cancer AND isotope AND treatment", but this brought up 7,746 articles. I narrowed the search to "isotopes AND treatment AND supply" and brought up 118 articles, 82 of which have been published since 1988. I read the abstracts of those 82 articles and found almost nothing written by a clinician or research scientist that mentioned a shortage of isotopes.

The last search I ran was for "isotopes AND cancer AND supply". This yielded 75 articles, 46 of which have been published since 1988. I took the time to read these 46 abstracts and again found almost no mention by any of the authors of a shortage of isotopes for diagnosis, treatment or research.

I have appended a copy of the 3 abstracts that did address the subject. One is an historical article discussing the discovery of iodine isotopes for the treatment of thyroid disease. The next one related some of the history of the commercial scale production of yttrium-90 for medical research.

The last article was published in 1988 and dealt with cyclotrons and radiopharmaceuticals in positron emission tomography [PET scanning]. This last article was a report of the Positron Emission Tomography Panel of the Council on Scientific Affairs.

The lack of literature on the subject of a shortage of medical isotopes raises serious concerns about the validity of the arguments about isotope shortage and people dying from cancer because radioisotopes were unavailable. Indeed, this appears to be a red herring bandied about the by DOE to scare the public. One letter from Dr. Rainer Storb [submitted with the testimony given by Senator Slade Gorton in Seattle, WA] listing an isotope that he would like to have for his research does not qualify as a serious public health threat. If it did, one would have to

1528-1
(Cont'd)

Response to Commentor No. 1528

would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

DOE has taken the Expert Panel and NERAC report recommendations under consideration in developing the range of alternatives evaluated in the NI PEIS. These reports were made available to the public at the NI PEIS public information centers and on the Internet at www.nuclear.gov.

The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. Although other manufacturers produce medical radioisotopes, DOE remains the key provider for a large number of radioisotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially experimental, these isotopes are not generally purchased in large-enough quantities to make their production financially attractive to private industry. However, supplies of many research isotopes are not readily available from existing domestic or foreign sources, causing a number of medical research programs to be terminated, deferred, or seriously delayed. Under the NI PEIS proposed action and consistent with its mandates under the Atomic Energy Act, DOE would enhance its existing nuclear facility infrastructure to, among other things, more effectively support production of radioisotopes for medical applications and research. DOE's intent is to complement commercial sector capabilities to ensure that a reliable supply of isotopes is available in the U.S. to meet future demand, and to encourage the commercial sector to privatize the production of isotopes that have established applications to a level that would support commercial ventures. For the purposes of analyses in the NI PEIS, a

Commentor No. 1528: Thalia Syracopoulos (Cont'd)
National Organization for Women

question why Dr. Storb has never published anything about the shortages of this or any other isotope.

Most, if not all, isotopes are available from manufacturers in this and other countries. It may be that those isotopes produced in small quantities are extremely expensive and that NIH/NCI etc. research grants are not large enough to purchase as many as the researchers might want. If this is the case, then it is far simpler and less expensive to increase grant money for the purchasing of isotopes than it is to restart the FFTF at Hanford.

I would like to add that over the years, I have done research on the medical uses of radiation in this country. In that context, I have found that the DOE in general and Hanford in particular have an abysmal record regarding providing safe and adequate medical care for employees who are accidentally exposed to high levels of radiation.

There is no known public health reason to restart the FFTF at Hanford. There are numerous public health reasons NOT to restart the FFTF. More importantly, there is substantial medical and scientific evidence that the entire Hanford Reservation needs to be cleaned up, not perpetuated.

Thalia Syracopoulos

**1528-1
(Cont'd)**

1528-2

1528-3

1528-4

Response to Commentor No. 1528

representative set of isotopes was selected on the basis of the recommendations of the Expert Panel, medical market forecasts, reviews of medical literature, and more than 100 types of ongoing clinical trials that use radioisotopes for the treatment of cancer and other diseases. These isotopes, which are comprised of both reactor- and accelerator-produced isotopes, are listed in Chapter 1 of the NI PEIS along with a brief description of their medical and/or industrial applications. As identified in Appendix C of the NI PEIS, FFTF would be capable of producing the majority of these representative isotopes. These include research isotopes with currently limited availability, such as Copper-67, as well as commercial isotopes whose current application is inhibited by lack of availability or high cost, such as Palladium-103. However, the absence of any specific isotope from these tables should not be interpreted to mean that it could not be considered for production under the proposed action. DOE expects that the actual isotopes and specific amounts produced as a result of the proposed action would vary from year to year in response to the focus of clinical research and the specific market needs occurring at that time.

- 1528-2:** DOE notes the commentor's concern over DOE's past management and medical care practices, although these issues are beyond the scope of this NI PEIS. The health and safety of workers and the public is a DOE priority, regardless of which approach may be chosen. Operation of the facilities would comply with applicable Federal, state, and local laws and regulations governing radiological and hazardous chemical use.
- 1528-3:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 1528-4:** Restoration of the Hanford Site and waste management activities are the primary missions at Hanford. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. FFTF restart would not impact the cleanup missions at Hanford.

Commentor No. 1528: Thalia Syracopoulos (Cont'd)
National Organization for Women

1: *Semin Nucl Med* 1996
 Jul;26(3):155-64

Radioiodine and thyroid disease: the beginning.

Becker DV, Sawin CT

Department of Radiology, New York Hospital-Cornell
 Medical Center, New York 10021, USA.

In 1936, Karl Compton, then president of the Massachusetts Institute of Technology (MIT) and the thyroid group of the Massachusetts General Hospital (MGH), undertook a joint study that led to the production of small amounts of short-lived radioiodine (iodine 128, half-life, 25 min). The original intent was to use it for diagnosis and treatment of thyroid disease, but in order to explore the underlying physiology, their first work was performed in rabbits and published in 1938. It clearly showed that the radioiodine was selectively and avidly taken up by the thyroid gland. It was immediately apparent to the MGH-MIT group and another team working at the Berkeley, CA cyclotron that longer-lasting iodine isotopes were needed, and soon both developed procedures for cyclotron-produced ¹³⁰I (half-life, 12.5 hr) and ¹³¹I (half-life, 8 d). In 1939, the Berkeley group, using ¹³¹I, was the first to show that the normal human thyroid gland accumulated radioiodine. By 1941, the MGH-MIT team, using mainly ¹³⁰I, was able to successfully treat a few patients with hyperthyroidism, and so achieved their original goal. The Berkeley group did the same a few months later, using mainly ¹³¹I. Both presented results at the same meeting of the American Society for Clinical Investigation in Atlantic City, NJ in the spring of 1942. This was in the midst of World War II and it was not easy to get much ¹³⁰I or ¹³¹I, so experience was limited. Although effective, radioiodine treatment of hyperthyroidism had not been widely adopted by the end of the war in 1945, partly because radioiodine remained in short supply and partly because another medical therapy for hyperthyroidism, antithyroid drugs, had been invented. However, by 1946, fission-derived radioiodine became readily available as a by-product of the Manhattan project in Oak Ridge, TN; hundreds of patients were treated within a few years, both for hyperthyroidism and for thyroid cancer. A new treatment, based on the

Response to Commentor No. 1528

Commentor No. 1528: Thalia Syracopoulos (Cont'd)
National Organization for Women

physiological application of a radioisotope of iodine,
was then a reality.

2: *Int J Rad Appl Instrum [A]*
1990;41(9):861-5

Chemistry for commercial scale production of yttrium-90
for medical research.

Wike JS, Guyer CE, Ramey DW, Phillips BP

Chemical Technology Division, Oak Ridge National
Laboratory, TN 37831-6014.

Studies were initiated at Oak Ridge National Laboratory (ORNL) in 1982 for the radiolabeling of resin microspheres with yttrium-90 (90Y) for liver cancer therapy. Yttrium-90 is the decay product of strontium-90 (90Sr). Subsequently, 90Y became a major radioisotope of choice for labeling antibodies for therapeutic trials in the treatment of other forms of cancer. A 25-Ci 90Y 90Y generator or 90Sr cow was placed in service to supply the anticipated needs of customers. In vivo use of 90Y required that the 90Sr contamination levels be kept below 10 $\mu\text{Ci/Ci}$ 90Y (corrected to preparation time). Also, it was necessary to remove trace metals that interfered in the 90Y antibody radiolabeling process, giving low radiolabeling yields. Di-(2-ethylhexyl) phosphoric acid (HDEHP) in dodecane has been used routinely at ORNL to extract 90Y and thereby give a product that meets the radiochemical purity required with respect to 90Sr. Methods were also developed to remove interfering trace elements to provide acceptable labeling yields.

PMID: 2176193, UI: 91092923

3: *JAMA* 1988 Mar
25;259(12):1854-60

Cyclotrons and radiopharmaceuticals in positron emission tomography. Council on Scientific Affairs. Report of the

Response to Commentor No. 1528

Commentor No. 1528: Thalia Syracopoulos (Cont'd)
National Organization for Women

Positron Emission Tomography Panel.

Positron emission tomography (PET) can probe biochemical pathways in vivo and can provide quantitative data; for that purpose, tracers labeled with positron-emitting radioisotopes are essential. This report describes the tracers that are being used or that may have future use, their production by cyclotrons, and other needed resources for PET imaging. Current routine and automated methods for convenient production of labeled compounds, coupled with simple computer-controlled accelerators, can support the creation of clinical PET centers in any large medical institution, obviating the need for in-depth research teams. An alternate approach involves the development of regional centers that provide in-house service and that supply fluorine 18- and carbon 11-labeled compounds to nearby hospitals with PET machines.

Response to Commentor No. 1528

Commentor No. 1529: Donald A. Runciman

1315 SW 174th St.
Seattle, WA. 98166

September 9, 2000

Ms. Colette Brown
U. S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

Dear Ms. Brown:

Those who do not learn the lessons of history are bound to repeat them. As a private citizen I have learned the lessons of the Powder Plant, the local wartime name for the work going on at Hanford. This was just across the river from my uncle's ranch near West Richland.

The Department of Energy has demonstrated its inability to take care of the wastes generated by Hanford. While not all of the fault is with the Department of Energy, a part is the failure by Congress to provide funds to accomplish the necessary clean up of Hanford.

I am not about to let you generate more waste by starting up the Fast Flux Test Facility until you clean up the mess you have already have, if you can.

To repeat myself, the answer is NO! You are not to start up the FFTF.

Sincerely,



Donald A. Runciman
(206) 243-9307

1529-1

1529-2

Response to Commentor No. 1529

1529-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

1529-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1530: John Browne, Jr.

Draft PEIS Comment Form

SEP 10, 2000

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

ESSENTIALLY, THIS IS THE STORY OF A REACTOR (AND EXTENDED PLANT) LOOKING FOR A PURPOSE TO EXIST. THE NI PEIS HAS BEEN DESIGNED ESSENTIALLY TO "POINT THE FINGER" AT FTFE AND SUMMON IT TO ACTION. ALL (OR NEARLY ALL) DISMISSED ALTERNATIVES HAVE BEEN PRESENTED SO AS TO MAKE FTFE STARTUP AND ISOTOPE PRODUCTION APPEAR INEVITABLE. IN DOING SO, DOE HAS SET ITSELF UP TO RUN APOUL OF OUR (NAFTA) TREATY AGREEMENTS, AS WELL AS OTHER AGREEMENTS THAT INVOLVE INTERNATIONAL TRADE (e.g. WTO). IF THE EXPENDITURES AND SUBSIDIES TO RUN FTFE FOR ISOTOPE PRODUCTION, DESPITE PRESENT RELIANCE ON CANADA FOR A GREAT MANY OF OUR ISOTOPE NEEDS (AND KNOWLEDGE THAT THE CANDU PROJECT IS EXPANDING), IS CONSIDERED AN UNFAIR RESTRAINT OF TRADE BY CANADIANS (AND/OR OTHERS WHO MAY WISH TO MARKET ISOTOPE HERE) WHAT WILL BE THE OUTCOME? ADDITIONALLY, RECOGNITION THAT A NUMBER OF HOT CELL FACILITIES COULD DO THE REQUESTED WORK BUT AREN'T BEING CONSIDERED BECAUSE THEY'RE NOT PART OF A DOE SITE IS CERTAINLY SHORT CHANGING THE (WIDELY DISPERSED) POTENTIAL CUSTOMERS OF EASIEST ACCESS TO SHORT LIVED ISOTOPES, IN FAVOR OF A FACILITY FAR OFF IN ONE CORNER OF THE COUNTRY WHERE TRANSPORT TIME (AND INFRASTRUCTURE) ARE SEVERAL WAYS TO PROVIDE COMMENTS ON THE NUCLEAR INFRASTRUCTURE PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials (SEE OTHER SIDE)
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): JOHN BROWNE, JR.

Organization: CITIZEN OF U.S.A.

Home Organization Address (circle one):

P.O. Box 13378

City: BURTON State: WA Zip Code: 98013

Telephone (optional):

E-mail (optional): jbyjuddcreek@webtv.net

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 1900 Germantown Road • Germantown, MD 20874
Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Response to Commentor No. 1530

- 1530-1: DOE notes the commentor's views. DOE has sought independent analysis of trends in the use of medical radioisotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it has established two expert committees. The first, a thirteen-member Expert Panel convened in 1998 to forecast future demand for medical isotopes, included academicians from leading medical universities and schools of public health, and professional affiliations ranging from the National Cancer Institute to manufacturers of radiopharmaceuticals. The second consists of a subcommittee of DOE's Nuclear Energy Research Advisory Committee (NERAC), established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. The members of this Subcommittee were selected based upon their expertise and experience in the production, processing, distribution, and application of stable and radioactive isotopes in the biological and physical sciences, and in medicine. The members included basic and clinical scientists, administrators, and users of isotopes from academia, industry, and the federal government. The Expert Panel estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings.

The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily Molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. Further, supplies of many research isotopes are not readily available from existing foreign or domestic sources, causing a number of medical research programs to be terminated, deferred, or seriously delayed. As such, reliance on these other sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission.

Commentor No. 1530: John Browne, Jr. (Cont'd)

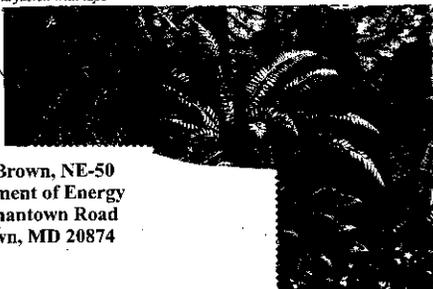
③ BOTH "THE EXPERT PANEL" AND NERAC ARE COMPOSED OF PEOPLE WITH VESTED INTERESTS IN EXPANSION AND PROMULGATION OF THE NUCLEAR INDUSTRY. WHY THEY SHOULD BE TRUSTED TO ESTIMATE "GROWTH RATE OF ISOTOPE USE" OR "FUTURE NEEDS OF THE BIOMEDICAL SCIENCES COMMUNITY" IN ANY WAY OTHER THAN "MORE IS BETTER"? THE FFTF IS LIKE A "HOT ROD" TO THESE "EXPERTS"... THEY DON'T WANT TO SEE THIS THING SHUT DOWN AND SCRAPPED, EVEN IF THAT WERE THE LOGICAL DECISION. THEIR EMOTIONAL INVESTMENT IN THIS THING IS TOO GREAT; SO THEY'LL CONTINUE TO SEARCH FOR A "PURPOSE" TO KEEP IT ALIVE, DESPITE THE POSSIBILITY OF DOING SO WILL MEAN RUNNING AFOUL OF OUR NATIONAL OBLIGATIONS AND GOALS, SUCH AS NON-PROLIFERATION. WITH THE INTRODUCTION OF STIRLING ENGINE TECHNOLOGY BY NASA, THE PU-238 PROJECTED NEEDS ARE GREATLY REDUCED; SO, IN THIS AREA, THE PRESENT NIPES IS OBSOLESCEANT, AT LEAST.

Fold on lines and fasten with tape

HEY!
DID YOU
MAKE MY LITTLE
WITH TRITIUM?
IT'S SO HEAVY THAT
I CAN HARDLY LIFT IT!
WHAT?... YOU ADDED
EXTRA HEARING??
YEAR-MAYBE
THAT'S WHY IT'S
SO HEAVY.
THANKS!



Colette E. Brown, NE-50
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874



1530-1

ADDITIONALLY, THE CHARGE OF THE "EXPERTS" THAT RESEARCH THAT COULD BE TAKING PLACE HAS BEEN LIMITED BY THE SCARCITY AND/OR HIGH PRICE OF CERTAIN ISOTOPES MAY BE TRUE; BUT WHY SHOULD "WE" SUPPORT DABBING IN EXPENSIVE, UNPROVEN TECHNOLOGIES? BIOTECH SEEMS TO FIND SUPPORT IN "TRADITIONAL" WAYS, THESE DAYS - VIA PRIVATE RESEARCH DOLLARS, FROM PHARMACEUTICAL COMPANIES AND "VENTURE CAPITAL" SOURCES. THERE ARE ONLY SO MANY "PUBLIC DOLLARS" TO SPEND (DESPITE THE MANY PROGRAMS); DESPITE REASSURANCES TO THE CONTRARY, NUCLEAR WASTE CLEANUP PROJECTS WILL BE ADVERSELY AFFECTED BY FIRING UP THIS OLD DRAG RACING HOT ROD WHILE SEARCHING FOR A "PUBLIC TRANSPORTATION" JOB DESCRIPTION IN WHICH TO CLOTHE IT. IF FFTF IS RESTARTED AND REDEPLOYED, IT WILL NOT BE "BECAUSE IT'S ECONOMICALLY AND PRACTICALLY FEASIBLE." IT WILL BE BECAUSE OF EMOTIONAL REASONS; AND BOTH NATIONAL PRIDE AND XENOPHOBIA WILL FIGURE PROMINENTLY IN ANY RESTART, ALONG WITH THE CONSIDERABLE POWER OF AGENCY INERTIA - "THIS REACTOR IS POWERED BY BUREAUCRATS."

Response to Commentor No. 1530

requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost.

A May 22, 2000, correspondence from NASA to DOE identified that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

1530-2: DOE notes the commentor's view. In developing a range of reasonable alternatives, DOE examined the capabilities and available capacities of existing and planned accelerators, reactors, and hot cell facilities for meeting DOE's proposed nuclear infrastructure mission requirements. The basis as

Commentor No. 1530: John Browne, Jr. (Cont'd)

Response to Commentor No. 1530

to why specific facilities were eventually dismissed as reasonable alternatives is presented in Volume 1, Section 2.6 of the NI PEIS.

1530-3: DOE notes the commentor's viewpoint.

1530-4: DOE notes the commentor's view. There are numerous DOE hot cell processing facilities located across the United States that could support the proposed nuclear infrastructure mission requirements. Given this general availability, and in order focus the analyses of alternatives on a reasonable range of processing options, DOE only analyzed the most suitable hot cell facilities at candidate DOE irradiation facility locations (i.e., the Oak Ridge Reservation, the Idaho National Engineering and Environmental Laboratory, and the Hanford Site). This range of processing options would not limit the availability or access of isotopes to potential customers.

Commentor No. 1536: Lucile Wyers

Response to Commentor No. 1536

from: Mrs Brown
Draft PEIS Comment Form

9-11-00

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

When I received the 2 vol draft PEIS, I was not first happy thinking that this was about cleaning up hazardous waste at Hanford. But then I was shocked and dismayed to see that instead of the FTF facility was being considered again.

I am protesting for more time against shutting up the FTF. I did attend the Aug 29th, 2000 hearing in Hood River but did not have a chance to speak. He have been living with this dangerous situation at Hanford for too long a time already.

I want DOE to proceed with the clean-up as fast as possible. He narrowly escaped a big disaster about month ago when a grave / spent fission came close to storage area for high level waste.

Peaceful uses for nuclear energy are important but we believe research can go on without starting up the FTF again.

Turn it up - don't make more waste!

1536-1

1536-1: DOE notes the commentor's opposition to Alternative 1, Restart FTF; however, it should be pointed out that some research cannot be done in existing operating thermal reactors (e.g., fusion research, accelerator transmutation of waste, and space reactor technology).

1536-2

1536-2: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

1536-1

1536-2

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Lucile A. Wyers

Organization: Riviera Park of Columbia Gorge Coalition

Home/Organization Address (circle one): _____

2320 Windswept Place

City: Hood River State: OR Zip Code: 97031

Telephone (optional): _____

E-mail (optional): grandmacde@gorge.net

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
Email: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Commentor No. 1537: Mary Nally

September 11, 2000

Mary Nally
417 13th Ave E. #105
Seattle, WA 98102

Colette E. Brown
NE-50, US Dept. of Energy
19901 Germantown Rd.
Germantown, MD 20874

Dear Colette Brown,

I am writing to you about Hanford, the most highly contaminated nuclear site in the western world. I prefer option 5 - "permanently deactivate FFTF with no new missions."

Restarting FFTF would produce new high level radioactive waste streams. Permanently shutting down the FFTF is part of the 1989 Tri-Party Agreement between USDOE, EPA and WA Ecology. Keeping FFTF on hot standby for four years has cost over \$40 million per year, money coming from our tax dollars, already overspent on our ever-swelling military budget.

The Washington State Medical Association, WA Academy of Family Physicians and Physicians for Social Responsibility/National have all passed resolutions opposing the restart of the FFTF. The legal mission of Hanford is clean-up, not production. Please listen to the voice of the people who have been saying over and over, shut down Hanford and clean it up, permanently!

Sincerely,



Mary Nally, registered voter

Response to Commentor No. 1537

- 1537-1:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. DOE also notes the commentor's concerns regarding the existing contamination at Hanford and the cleanup mission. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 1537-2:** As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. High-level radioactive waste would not be generated from merely operating FFTF. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.
- The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.
- 1537-3:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1538: Robert L. Washburn

Response to Commentor No. 1538

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form

I see no reason to build an entire new lab when there is already one in existence at Hanford

1538-1

1538-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Robert L. Washburn

Organization: Engineering consultant (private)

Home Organization Address (circle one): 612 No 38th St

City: Yakima State: WA Zip Code: 98901

Telephone (optional): (509) 453-1396

E-mail (optional): WWWANW@CS.COM

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

Commentor No. 1539: Nancy M. Washburn

Draft PEIS Comment Form

why reinvent the wheel. I am for the Hanford area to produce what is needed for medical use.

1539-1

Response to Commentor No. 1539

1539-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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returning this comment form to the registration desk at the meeting or to the address below
calling toll-free and leaving your comments: 1-877-562-4593
faxing your comments toll-free to: 1-877-562-4592
commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Nancy M. Washburn

Organization: Ret R.N.

Home/Organization Address (circle one): 612 N 38th St

City: Yakima State: Wa Zip Code: 98901

Telephone (optional):

E-mail (optional): n.w.w@cs.com

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



Draft PEIS Comment Form

9-9-00

Dear Ms. Kincaid,

Please restart FFTF for medical isotopes! This historic capability to advance medical sciences cannot be ignored. After decades of spending hundreds of billions of dollars on weapons to destroy the world, it's about time that we use some of those cold war capabilities to improve the lot of humankind!

Sincerely,

David Wiggins

1540-1

1540-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): _____

Organization: _____

Home/Organization Address (circle one): _____

City: _____ State: _____ Zip Code: _____

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Collette E. Brown, NE-50
 U.S. Department of Energy • 19001 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00



Commentor No. 1541: Thomas F. and Dixie R. Hutson

Draft PEIS Comment Form

NUCLEAR INFRASTRUCTURE EIS

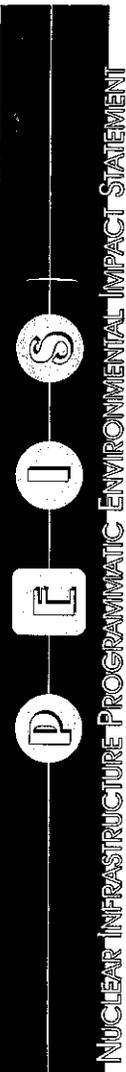
We support the restart of the FFTF Reactor Facility at Hanford to meet the national needs for medical isotopes and other peaceful nuclear materials. The FFTF is the most economical, safe, and environmental friendly method available to meet these needs.

Very truly yours, Thomas F. Hutson Dixie R. Hutson

1541-1

Response to Commentor No. 1541

1541-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.



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calling toll-free and leaving your comments: 1-877-562-4593
faxing your comments toll-free to: 1-877-562-4592
commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): HUTSON, THOMAS F. & DIXIE R.

Organization:

Home Organization Address (circle one): 57 GALAXY LANE

City: RICHLAND State: WA Zip Code: 99352

Telephone (optional):

E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-80 U.S. Department of Energy • 15901 Germantown Road • Germantown, MD 20874



Draft PEIS Comment Form

Coleette E. Brown

I am concerned about the air, water and ground environmental health hazards that have been going on since 1946. Many people I know passed away with Cancer and many problems. My Cousins husband had stomach cancer, his passed away at age 33, he worked at Oak Ridge. My Cousin had prostate cancer and his name he worked as sheet metal worker at Oak Ridge as did a lot of his friends who passed away with Cancer. My Cousin and his family I am sure they would have passed away at Oak Ridge. The whole place needs to be cleaned up. Please bring other residents that at Oak Ridge. I am enclosing a clipping from Today's paper READ IT. I am tired of hearing about all the sick people in Oak Ridge and the ground that part of the death.

1542-1

1542-1: The commentor's concern for environmental health hazards, hazardous waste incineration, and cleanup at the Oak Ridge Reservation are noted. Health effects studies of potential radiological and nonradiological impacts of the Oak Ridge Reservation are described in Section 3.2.9.3 of Volume 1. Potential health impacts on workers and the public that could result from implementation of the nuclear infrastructure alternatives are described in Chapter 4 of Volume 1. Implementation of the alternatives described in Section 2.5 would not be expected to result in significant contamination of air, water, or soil. As discussed in Section 4.3.1.1.13, hazardous waste generated under these alternatives would be shipped offsite to a commercial facility licensed to dispose of hazardous waste. Activities at the High Flux Isotope Reactor and the Radiochemical Engineering Development Facility would not affect cleanup efforts or funding at the Oak Ridge Reservation.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
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- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): *Mildred Serra*

Organization: _____

Home/Organization Address (circle one): _____

City: *Knoxville* State: *Tenn* Zip Code: *37918*

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Coleette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 1543: Michael J. Rudnick

Response to Commentor No. 1543

Draft PEIS Comment Form

I SUPPORT THE SELECTION OF FFTE AS THE PREFERRED ALTERNATIVE TO MEET THE PRESSING UNITED STATES NEEDS FOR RESEARCH AND MEDICAL ISOTOPES

1543-1

1543-1: DOE notes the commentor's support for Alternative 1, Restart FFTE.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Michael J Rudnick

Organization:

Home/Organization Address (circle one):

City: Wilson State: VA Zip Code: 19018

Telephone (optional): (610) 622-9600

E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874 Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 1544: Maurita Bernet

September 11, 2000

Colette Brown
Office of Space & Defense Power Systems
US Dept of Energy
19901 Germantown Rd
Germantown MD 20874

Dear Colette,

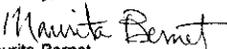
I am writing from our small town of Omak WA where we struggle to unite three distinct cultures (white, Indian, Hispanic) and have economic challenges to go with that. So I write with awareness of the need for jobs and hopes for "security."

The main concern of this letter, though, is the possibility of reopening the Fast Flux Testing Facility at Hanford. I know there are people who need jobs, but I think it's past time to create jobs at the expense of the whole circle of Life. Don't we want to be CLEANING UP our poisonous messes rather than creating still more? I came to this area over 10 years ago & remember hearing the sad stories of cancer -- including on the Colville reservation in this area -- resulting from Hanford's activities over the past half-century plus. And even now we wait news of polluting waters heading for the Columbia river. And on and on.

Please, I beg of you, to use your wonderful human and political powers to STOP all further waste-creation at the Hanford site (or anywhere else, for that matter!) and to put all the needed energies and resources into CLEANING UP what has been and continues to be such a dangerous-to-all-Life situation.

Thank you for your attention to this urgent matter.

Sincerely,


Maurita Bernet
PO Box 3745
Omak WA 98841
509-826-7229

1544-1

Response to Commentor No. 1544

1544-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford and contamination of the Columbia River. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

The Colville Indian Reservation is approximately 320 kilometers (200 miles) north-northwest of the Hanford Site. River borne contamination from the Hanford Site would not affect the Colville Reservation because the Columbia River flows from the Colville Reservation toward the Hanford Site. As discussed in Section 3.4.9.3 of Volume 1, prevailing winds at the Hanford Site blow toward Grant County, Washington and the Colville Reservation from the south (14.2 percent of the time) and south-southwest (11.5 percent of the time) directions. Grant County is adjacent to the Hanford Site. Hence, Grant County would be expected to bear the major burden of wind borne contamination from the Hanford Site. Existing data and studies suggest that cancer mortality rates are not elevated in counties adjacent to the Hanford Site, including Grant County Volume 1, Section 3.9.4.3). If the cancer mortality risk in Grant County is elevated due to the presence of the Hanford Site, the increase in risk, if there is any, was too small to be identified by the study methodology and currently available data. Impacts of airborne contamination from the Hanford Site on the Colville Reservation would be far smaller than the impacts on Grant County. Due to the distance from

Commentor No. 1544: Maurita Bernet (Cont'd)

Response to Commentor No. 1544

the Hanford Site to the Colville Reservation, radiological impacts that would result from implementation of the nuclear infrastructure alternatives would be essentially zero.

Commentor No. 1545: R. B. Pinter

Response to Commentor No. 1545

Draft PEIS Comment Form

We wish to be on record as endorsing the no action option on restarting the FFTF at Hanford, WA. Of course, we note that testimony from the east, far removed from the Columbia river, endorses the restart, but of course these people would suffer no effects of leaks and accidents at Hanford. We are especially concerned about the contractors of atomic and nuclear processes at Hanford, who are interested only in the "bottom line", their profits. They are known, and widely reported here in the press, for their incompetence in storing nuclear waste, with such things as pressure and temperature buildup in containers which are underground for the most part. Well, if they explode, or even leak, the waste will find its way to the ground water supplies and the Columbia river, ruining the environment for all time. We pay taxes to preserve people and salmon, among other species, and have no confidence that the DOE contractors will do likewise, or even care. Do the contractors understand all the chemical, atomic and nuclear reactions involved in the mix of materials they are putting in their storage tanks? They don't, and they won't talk because they are ignorant and they assume that we are also.

Of course the good option, if there must be more plutonium here, is purchase from Russia. For many political purposes this is good. However, we don't endorse the use of nuclear plants on satellites as this creates a possibility of yet more accidents. We endorse the dismantling of US bombs and the re-use of that plutonium. We DO NOT need to make more of this terrible poison of which we have enough already.

Finally, the problem of isotope creation is important for health care and therapies, and purchased plutonium will serve this too.

We are uncertain that future politicians will not be as careful as those in recent years about escalating building of more nuclear weapons. What better tool to give the aggressive and warlike politician than more facilities for producing more plutonium !!! WE wish to see peace and no nuclear pollution, not war.

1545-1

1545-2

1545-3

1545-4

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): _____

Organization: _____

Home/Organization Address (circle one): _____

City: _____ State: _____ Zip Code: _____

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Collette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

1545-1: DOE notes the commentor's support for the No Action Alternative.

1545-2: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford and the risk of contamination to the Columbia River. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

1545-3: The purpose of the NI PEIS is to evaluate the environmental impacts of a range of reasonable alternatives to enhancing DOE's existing nuclear facility infrastructure to support production of isotopes for medical, research, and industrial uses; production of plutonium-238 for use in future NASA space exploration missions; and U.S. nuclear research and development needs for civilian application. The plutonium that would be produced under the proposed action would not be intended for medical applications. Plutonium-238, used to support NASA space missions, is

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Chapter 2—Written Comments and DOE Responses

Commentor No. 1545: R. B. Pinter (Cont'd)

Response to Commentor No. 1545

not weapons grade plutonium (i.e., plutonium-239). Whereas the United States is currently planning for the disposition of tons of surplus plutonium-239 that is not needed to support the U.S. nuclear weapons stockpile, there are only approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems and the plutonium-238 that fuels them for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. Based on NASA guidance to DOE on the potential use of radioisotope powersystems for upcoming space missions, DOE anticipates that the existing plutonium-238 inventory will be exhausted by approximately 2005. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Although research to identify other potential fuel sources to support these space exploration missions has been conducted, no viable alternative to using plutonium-238 has been established. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

As discussed in detail in Chapter 4 of Volume 1 and appendixes H, I, and J of Volume 2 in the Final NI PEIS, potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed action are relatively low. Potential health and safety impacts associated with future launches of spacecraft utilizing plutonium-238 are not within the scope of the NI PEIS analysis, but would be addressed in the specific NEPA documentation prepared by NASA in support of such missions.

Commentor No. 1545: R. B. Pinter (Cont'd)

Response to Commentor No. 1545

1545-4: DOE notes the commentor's interest in controlling the production of nuclear weapons, although issues of nuclear weapons production, dismantlement of weapons, and elimination of weapons systems are beyond the scope of this Nuclear Infrastructure PEIS. Unlike plutonium-239, plutonium-238, is not used in nuclear weapons. The technology that is discussed in the NI PEIS would be used to chemically separate plutonium-238 and neptunium from irradiated targets and not from irradiated or spent nuclear fuel, whereas reprocessing separates weapons grade plutonium-239 from irradiated nuclear fuel. None of the DOE missions described in this PEIS is weapons- or defense-related.

Commentor No. 1546: Claire R. Holmsham

Response to Commentor No. 1546

Draft PEIS Comment Form

I support the selection of FFTF as the preferred alternative to meet the pressing United States needs for research and medical isotopes.

1546-1

1546-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): Claire R. Holmsham

Organization: _____

Home/Organization Address (circle one): 262 N. Ashland Ave.

City: Beacon State: Pa Zip Code: 19018

Telephone (optional): undisclosed - call 610-623-0154

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

I support the selection of FFTF as
the preferred alternative to meet the pressing
U.S. needs for research and medical
isotopes.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): Rona K. Jakra
 Organization: _____
 Home/Organization Address (circle one): 10668 Greenfield Ln.
 City: Royal P. Bk. State: DC Zip Code: 33411
 Telephone (optional): 561-753-8079
 E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 1990 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

1547-1

1547-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 1548: Warren Jones

6219 43rd Ave NE
 Seattle, WA 98115
 September 17, 2000

Colette E. Brown, NE-50
 U.S. Department of Energy
 19901 Germantown Road
 Germantown, MD 20874

Dear Ms Brown:

The mission of Hanford should be cleanup, and only cleanup. Any plan that would generate still more radioactive waste is reckless and irresponsible. I'd like to urge the DOE to adopt alternative #5: shut down the FFTF for good, and get on with cleaning up the mess we already have. We've already had too many missed deadlines and broken promises.

Sincerely,

Warren Jones

Cc: Governor Gary Locke
 Senator Patty Murray
 Senator Slade Gorton

|| 1548-1
 || 1548-2
 || 1548-3
 || 1548-1

Response to Commentor No. 1548

- 1548-1:** DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Public meetings were held on this formal milestone change. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.
- 1548-2:** DOE notes the commentor's concern regarding the generation of radioactive wastes. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.
- 1548-3:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 1549: UFCW Local 367

FROM : ROBERT WILKINSON

FAX NO. : 509 735 4592

Sep. 17 2000 25:15PM P1

To: Colette Brown
c/o DOE

From: UFCW Local 367

Date: 9/17/00

Subject: Support restarting
FFTF for medical
Isotope production

1549-1

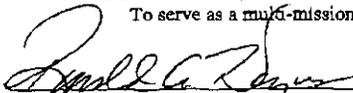
Response to Commentor No. 1549

1549-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1549: UFCW Local No. 367 (Cont'd)**Support of Medical Isotope Production
at the Fast Flux Test Facility**

- Whereas, One in three Americans are touched by cancer, and
- Whereas, The use of medical isotopes in the treatment of cancer and heart disease is showing very encouraging and dramatic results. These new treatments use radioisotopes targeted specifically to the diseased cells and minimize the damage to healthy cells. The cost of medical isotope treatment is often much less than conventional treatments and with less debilitating results; and
- Whereas, Serious concern exists in the scientific and medical professions that the United States does not have the capability to produce enough radioisotopes to meet the rapidly increasing demand, while we depend on foreign supplies as over 90% of the isotopes currently used are imported, and
- Whereas, Private companies that develop new cancer treatments hesitate to invest millions of research dollars up front when the isotopes they want to use may not be reliably available, and
- Whereas, The existing Fast Flux Test Facility (FFTF) can reliably produce a diverse selection and large quantities of high quality isotopes; and
- Whereas, The FFTF is a significant national asset as it is the Department of Energy's newest and most sophisticated nuclear reactor with the potential to play a major role in supporting critical national missions such as medical isotope production for treatments of disease, non-proliferation fuels testing, research associated with the transmutation of nuclear waste, NASA space mission energy needs, and other scientific research; and
- Whereas, The United States has an aging and diminishing reactor inventory for scientific research and testing, while at the same time the United States is experiencing an increasing demand for the production of isotopes for medical and industrial applications; therefore

BE IT RESOLVED that UFCW Local No. 367 supports a restart of the Fast Flux Test Facility
To serve as a multi-mission research and isotope production reactor.


(Signed)

Sept 12, 2000
(Date)

Response to Commentor No. 1549

Commentor No. 1550: Jess C. Gehin

Response to Commentor No. 1550

SEP. 18. 2000 7:53AM N A S NO. 967 P. 1/4

DR. JESS C. GEHIN

8309 Waspepper Ct. • Knoxville, TN 37923
(865) 531-3442 • gehinc@alum.mit.edu

September 18, 2000

To:	From:
Collette Brown U.S. DOE, NE-50 Fax: 1-877-562-4592 Tel: 1-877-562-4593	J. C. Gehin Fax: (865) 574-9619 Tel: (865) 576-5093 E-mail: gehinc@alum.mit.edu
This fax consists of 3 page (excl. cover). In case of a transmission error, please call the number above.	

Subject: Draft Nuclear Infrastructure PEIS Comments

Dear Ms. Brown,

The following pages contain my comments on the Draft PEIS.

Sincerely,

J. C. Gehin

Commentor No. 1550: Jess C. Gehin (Cont'd)

SEP 19 2000 7:55AM NPS

NO. 967 P. 2/4

DR. JESS C. GEHIN

8309 Westpepper Ct. • Knoxville, TN 37923
(865) 531-3442 • gehinjc@atm.mn.edu

September 16, 2000

Colette E. Brown, NE-50
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

Subject: Draft Nuclear Infrastructure PEIS Comments

Dear Ms. Brown:

I have reviewed the Draft Nuclear Infrastructure PEIS and the corresponding cost study and have a few comments to provide that I hope you will find useful. I also attended the August 22, 2000 public hearing in Oak Ridge and appreciate your presentation and discussions.

My comments regarding the Draft PEIS are generally related to the ^{239}Pu production as this is an area that I am both interested in and have studied over the past few years. I work at Oak Ridge National Laboratory in the Nuclear Analysis and Shielding Section and have been involved extensively in design and analysis in the former Advanced Neutron Source project and for the High Flux Isotope Reactor. Recently, I have been studying the use of commercial light-water reactors (CLWR) for the production of ^{239}Pu . I am making these comments on my own behalf but much of my experience is from work performed at ORNL.

First, I would like to provide some general comments about the Draft PEIS and then make a few, more detailed comments on the use of CLWRs for the production of ^{239}Pu . My overall impression of the report is that it is relatively broad and does not provide many details or reference any supporting documents that may provide more details regarding the design decisions presented. However, I do believe that in evaluating the environmental impacts, that precise designs are generally not required. I am a bit surprised that DOE did not rely more on its technical experts in its National Laboratories to provide more input. There are no contributors from any National Laboratories listed in the Chapter 6 List of Preparers.

Now on to some more technical comments. Generally the quality of ^{239}Pu is determined by its contamination with ^{240}Pu . I suspect that there is some requirement on the maximum ^{240}Pu level that is acceptable for use by NASA (^{240}Pu produced at SRS had levels around a few parts per million ^{240}Pu , perhaps after a significant decay time). There is no discussion of the acceptable level of ^{240}Pu and if all of the proposed options would meet this requirement. This potentially could favor options that have the capability to produce large amounts of ^{239}Pu which would allow time for the ^{240}Pu to decay away.

The specifications given for the accelerator designs are not complete. The draft report indicates proton energy levels but does not give either a power level (MW) and/or a beam current. These parameters are what determine the size of the system, and therefore the cost and environmental impacts. These values

Response to Commentor No. 1550

1550-1: DOE notes the commentor's views and observations including those relating to new facility designs. Detailed facility designs are generally not required to support the analysis of environmental impacts in an EIS, as conceded by the commentor, particularly at the programmatic level. The preconceptual design descriptions contained in this NI PEIS are intended to address only such data that is necessary to assess the facility design as to its ability to accomplish the missions and for evaluating the associated environmental impacts. This information includes major design and structural elements, critical operating features and constraints, and projected construction and operation resource requirements. These preconceptual designs draw heavily both from off-the-shelf design configurations obtained from prospective vendors (i.e., for the new research reactor) as well as from design projects that are under development (i.e., the Oak Ridge Spallation Neutron Source for the high energy accelerator). See Appendix E and F for details. Contributors listed in Section 6 (List of Preparers) do include individuals knowledgeable in both the design and operation of the facilities under consideration to include the new research reactor and high- and low energy accelerators. This list of preparers includes individuals who were formally on the staff of the national laboratories and continue to support work at the national laboratories as contractors. In addition the list also includes individuals with extensive backgrounds in the commercial nuclear industry.

1550-2: In irradiating neptunium-237 target material to produce plutonium-238, other plutonium isotopes are also produced as impurities within the target material. These include plutonium-236 and plutonium-239. Of these impurities, plutonium-236 is important because daughter products resulting from radioactive decay of the plutonium-236 give off high-energy gamma rays which are difficult to shield. Plutonium-236 has a half-life of 2.85 years and the decay chain includes daughter products with gamma energies up to 2.6 MeV. Because of this gamma activity, target fabrication and handling can be more difficult and interaction and interference problems may arise with spacecraft electronics and instrumentation over a long time period unless this impurity level is kept quite low. The goal for the plutonium-236 impurity level in the past has been a value less than 2 parts per million. The plutonium-236 impurity level can be minimized through optimal target designs and core location placement.

The plutonium-236 level present at the end of irradiation can be reduced by allowing it to decay over a period of time prior to processing or prior

1550-1

1550-2

1550-3

Commentor No. 1550: Jess C. Gehin (Cont'd)

SEP. 16. 2008 7:54AM N H S

NO. 257 P. 3/4

DR. JESS C. GEHIN

8309 Westpepper Ct. • Knoxville, TN 37923
(865) 531-3442 • gehinc@alum.mit.edu

Page 2 / 3

should be added to both the Draft PEIS and the Cost Report.

Based on what is in the report, I do not understand the logic behind the choice of a TRIGA reactor for the new research reactor concept. There is no information whether the design presented is optimal for the required uses of the reactor. I suspect that it is not. Furthermore, the power level of the reactor is much higher than any existing reactor of its type, and therefore represents a technical risk. On page 2-30 it does state that "Reactor core physics calculations were performed to evaluate three different nuclear fuel designs (described in Appendix E)." Appendix E, however, only discusses the TRIGA design. It seems that the TRIGA reactor was chosen purely on the inherent safety of its zirconium-hydride fuel and the wide-spread use of TRIGAs throughout the world. A better technical justification for the choice of a TRIGA reactor should be given, particularly since three different designs were evaluated.

I have several comments regarding the CLWR production of ^{239}Pu presented in the report. First, the chosen assembly design (15x15) is an old design and has been mostly replaced by 17x17 designs for 18-month cycles. The Draft PEIS claims to have drawn on the tritium production in CLWRs which is being performed in reactors which use a 17x17 assembly design. The production of tritium is based upon placing targets in the burnable absorber rod locations using Tritium Producing Burnable Absorber Rods (TPBARS). This also seems like a logical choice for the production of ^{239}Pu , but the concept presented in the Draft PEIS is much different. In the report it is proposed that fuel pins will be removed from an irradiated assembly and will be replaced with target rods. This is a very difficult and expensive procedure. In my opinion, a better approach would be to use the target rods as burnable absorbers during the first cycle of the assembly, similar to the TPBARS. These burnable absorber rods can be easily withdrawn from the assembly during refueling (much like the standard burnable absorber rods) and there would be very little impact on the reactor operation.

In reading Appendix B.3, I found almost no information on the proposed target design. There are no dimensions, materials, or other specifications. The material requirements for targets in a CLWR are much different than that for the research reactors. Under a program¹ to investigate the production of ^{239}Pu in CLWRs in the 1970's a few test rods were irradiated in the Connecticut Yankee reactor. In this case the target rods consisted of neptunia (NpO_2) dispersed in zirconia (ZrO_2). The chemical process requirements for such a target are much different than the standard targets of Al-NpO₂. The impact of these different processing requirements was not addressed in the report.

Furthermore, the report seems to indicate that five kilograms of ^{239}Pu can be produced per year using only one assembly at the center of the core. I do not believe that you can produce the required amount of ^{239}Pu with only one targeted assembly. Based on the experimental results from the above mentioned program and on the burnable-absorber target designs, about one kilogram can be produced per assembly per year while maintaining reasonably low levels of ^{239}Pu . Therefore, a minimum of five targeted assemblies would be required. Even five assemblies is a relatively small number and therefore CLWRs

¹ M. Boberski, et al., *Final Report on Production of Pu-238 in Commercial Power Reactors: Target Fabricating, Postirradiation Examination, and Plutonium and Neptunium Recovery*, BMI-X-646, Battelle Columbus Laboratories (1975).

Response to Commentor No. 1550

to use in fabricating heat sources. Plutonium-238 can also be blended with existing plutonium-238 stock that has less than 1 part per million plutonium-236 to lower the plutonium-236 concentration. The combination of plutonium-236 decay with blending as necessary would result in a plutonium-238 product that would meet NASA's needs, provided the plutonium-236 level is relatively low at the end of irradiation. The alternative selected to produce plutonium-238 will be required to ensure this impurity requirement is met. As detailed planning for a selected alternative progresses, this could result in the need for target design or facility modifications. Contingencies were added to the cost estimates provided in the Cost Report to cover the cost effects of unforeseen design changes, altered performance requirements, or major schedule delays due to developmental problems.

1550-3: The maximum beam current for the low-energy accelerator (2 milliamperes) is defined in the System Design Basis writeup on page F-8 of the Draft NI PEIS.

The maximum beam current for the high-energy accelerator (72 milliamperes) is defined in Table F-1, Linac Parameters, on page F-17 of the Draft NI PEIS.

The accelerator costs presented in the Cost Report are based on accelerator designs provided in Appendix F.

1550-4: As stated in the EIS Volume 1, Section 2.3.1.6, a preconceptual design of a new research reactor was developed based on the criteria that meets 1) current research reactor designs acceptable to NRC and IAEA, 2) nonproliferation policy (i.e., using low enriched uranium fuel), and 3) DOE missions in producing a) medical and industrial isotopes, and b) plutonium-238 while supporting nuclear energy research and development EIS Section E.2 describes the three fuel designs which were evaluated for the scoping reactor physics calculations and the basis for selecting TRIGA fuel. The TRIGA fuel core provided the largest irradiation volume and highest thermal neutron flux for low enriched uranium-235 in a research reactor. The high thermal neutron flux is desirable for plutonium-238 production and for producing most of the medical and industrial radioisotopes. Although the 50 megawatt power level of the new TRIGA research reactor is larger than the largest currently operating TRIGA reactor power of 16 megawatts, the fuel design is almost identical to the current TRIGA 10 megawatt high power

Commentor No. 1550: Jess C. Gehin (Cont'd)

SEP. 18. 2022 7:54AM T A S

NO. 367 P. 4/4

DR. JESS C. GEHIN8309 Westpepper Ct. • Knoxville, TN 37923
(865) 531-3442 • gehinc@alum.mit.edu

Page 3 / 3

can provide plenty of production capacity. In fact, a large number of targets could be simultaneously irradiated to produce all of the ^{239}Pu to meet future requirements. The material could be stored and the ^{239}Pu would decay away thereby producing very high quality ^{241}Pu . The CLWR concept (and perhaps the FFTF) can provide surplus capacity should future needs require more ^{239}Pu than current plans. The other concepts (HFIR, ATR, new research reactor, and accelerators) would not be able to provide such surge capacity. This additional flexibility should be factored into the decision process.

From the above discussion, it's obvious that I believe that CLWR production of ^{239}Pu is both technically feasible and cost effective. In addition, using CLWRs for ^{239}Pu production allows HFIR and ATR to provide plenty of capacity for medical isotope production. Both of these reactors currently are under-utilized for isotope production. Alternatively, a smaller and less expensive research reactor could be constructed for the sole purpose of medical isotope production. One such example is a Canadian MAPLE design.

My final comment is in regards to the cost analysis report. Unfortunately this report was not available at the time of the public meeting and therefore could not be discussed. The costs presented are not complete and therefore do not provide a fair comparison of the alternatives. The cost analysis does not have any decommissioning costs for any of the alternatives other than for the FFTF, and then only if the FFTF is not chosen for the mission. In many cases, the deactivation costs dominate the overall costs. If the FFTF is chosen, decommissioning costs similar to the \$281 million will be incurred upon shutdown increasing it's total cost significantly over the value given in the Cost Analysis Report. The end result is that the use of FFTF will cost nearly twice as much as utilizing existing reactors, which already have their decommissioning costs covered by other means. Shutdown and decommissioning costs should also be included for the new research reactor and accelerators.

I hope that you find these comments constructive and useful in your revision of the Draft PEIS and in your decision process. If you need further information please do not hesitate to contact me. My work phone number is (865) 576-5093 and e-mail address is gehinc@ornl.gov. I would also like to be added to your mailing list and would like a CR-ROM copy of the Final Nuclear Infrastructure PEIS when it available.

Sincerely,



Jess C. Gehin

Response to Commentor No. 1550

design and the system thermal-hydraulic performance represents a linear extrapolation of existing designs. The power density of the 50 megawatt design is less than or equal to that for existing TRIGA reactor designs. The 50 megawatt TRIGA reactor design has been discussed with General Atomics, the TRIGA reactor design corporation. Appendix E will be modified to incorporate the aforementioned additional technical justification for selecting a TRIGA reactor.

- 1550-5:** Currently operating pressurized water reactor (PWR) commercial light water reactors (CLWR) in the U.S. operate with four different fuel assembly geometries denoted as 14 x 14, 15 x 15, 16 x 16, and 17 x 17. While the newer designs use 16 x 16 and 17 x 17 fuel assemblies, there are 14 operating PWRs in the U.S. that use 15 x 15 fuel assemblies in their core. The CLWR described in the EIS and used for the purpose of evaluating environmental impacts is representative of currently operating PWR CLWRs. Due to its bounding uranium mass, the 15 x 15 fuel assembly has the highest radioisotope source term of all commercial PWR fuel assembly designs. EIS Section 2.2.2.1, Plutonium-238 Production Target Fabrication, states that CLWR targets would have stainless steel or Zircaloy cladding. The PEIS did not presuppose the CLWR target design. The target designs were postulated to a level of detail appropriate to assess the environmental impacts associated with plutonium-238 production, target fabrication and post irradiation target processing. The CLWR target development evaluation assumed the prototype target design or multiple target designs would be irradiated in the CLWR for one fuel cycle. During the second fuel cycle the design or designs would be evaluated, the final design selected, and targets fabricated in production quantities. Production quantities of neptunium-237 targets are inserted into the CLWR for irradiation during the third fuel cycle. Neptunium-237 targets can be placed in numerous CLWR in-core and ex-core locations for the production of plutonium-238. The center fuel assembly in-core location was selected for evaluation in the NI PEIS because it was assumed that this would be the worst case location during postulated beyond design basis accident conditions. Such design and core configuration details would be analyzed if DOE decides to pursue this option for the production of plutonium-238. DOE considers the completion of all CLWR prototype target design testing in a single test cycle or fuel cycle a high risk. The commentor's support of CLWR plutonium-238 production, HFIR and ATR medical isotope production, and the use of a smaller less expensive research reactor such as the Canadian MAPLE design for medical isotope production is noted.

**1550-5
(Cont'd)****1550-6**

Commentor No. 1550: Jess C. Gehin (Cont'd)

Response to Commentor No. 1550

1550-6: The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such an ancillary document need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed this document to about 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P in the Final NI PEIS.

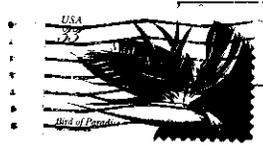
Deactivation of FFTF is not part of implementing Alternative 1, Restart FFTF. Deactivation of FFTF is part of implementing Alternatives 2, 3, 4, and 5 and including the cost of FFTF deactivation in the implementation costs for these alternatives is appropriate. The Cost Report was structured to identify the implementation costs of the various alternatives so the Secretary of Energy would have this information along with other data for consideration.

Decommissioning FFTF, including associated costs and cleanup, is not within the scope of the NI PEIS. Before decommission activities were undertaken, DOE would prepare the appropriate environmental reviews to address the associated environmental impacts. Cost assessments would also be prepared.

DOE remains committed to cleaning up the Hanford Site independent of an ultimate decision on FFTF. The amounts of wastes associated with decommissioning FFTF would be small. The schedule for cleaning up these other wastes would not be affected if FFTF were restarted.

Commentor No. 1551: Marian Grebauier

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U. S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

1674+1207 [Barcode]

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

Hanford still has to clean up the huge mess and contamination it already has created. It still is endangering the Columbia River & the FFTF, thru its process, would be creating more deadly contamination.

Name Marian Grebauier

Address 4579 NE 20 AVE

City, state PORTLAND OR Zip 97211

1551-1
1551-2
1551-3

Response to Commentor No. 1551

1551-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1551-2: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford and the risk of contamination to the Columbia River. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

1551-3: As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected. Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

Commentor No. 1552: Colin Mecey

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

0874+1207 [barcode]

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

NUCLEAR STORAGE HAS NOT BEEN SOLVED.

"IT WILL HURT THE BIRDS AND THE BEE'S".....AND ME!

Name COLIN MCEY

Address 5704 SELZBE

City, state PORTLAND OR Zip 97204

|| 1552-1
|| 1552-2
|| 1552-3

Response to Commentor No. 1552

- 1552-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 1552-2: DOE notes the commentor's concern regarding waste storage. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.
- 1552-3: DOE notes the concerns for potential ecological and human health impacts expressed in this comment. The impacts on ecological resources and human health have been assessed for each alternative in Chapter 4 of the NI PEIS. Specifically for the FFTF Restart Alternative, the impacts on ecological resources are addressed in Section 4.3.1.1.6; human health impacts are addressed in Section 4.3.1.1.9 for normal operations and in Section 4.3.1.1.10 for postulated accidents. All of these impacts are shown to be small. Ecological resources would not be adversely affected and no fatalities would be expected among the general public or Hanford workers.

Commentor No. 1553: Everett Anttila

Hanford Watch
 2285 SE Cypress
 Portland, Oregon 97214



Ms. Colette Brown
 U.S. Department of Energy
 Office of Space and Defense Power Systems
 NE-50
 19901 Germantown Road
 Germantown, Maryland 20874-1290

874+1207 [Barcode]

FOR THE SAKE OF NEW GENERATIONS CHILDREN YOURS OURS & MINE
**Public comment on Nuclear Infrastructure Draft Programmatic
 Environmental Impact Statement (NI PEIS)**

I am opposed to restart of the Fast Flux Test Facility reactor because:
(Not for any reason, not to supply fuel for foreign reactors)
I urge you not to start FFTF; MEDICAL

ISOTOPES ARE PLENTIFOL FROM FOREIGN & OTHER
LOCAL SOURCES. ALSO THE REDUCTION OF NUCLEAR

WEAPONS SHOULD NO LONGER BE DISCUSSED BUT

ACTION AS A POLICY. HANFORD PLEASE NO MORE
NEW PRODUCTION OF ANY NUCLEAR WEAPONS THERE OR ELSEWHERE

Name EVERETT ANTILA *(What is your response)*
PLEASE respond

Address 345 NE 22 AV

City, state PORTLAND, OREGON Zip 97212-2432

1553-1

1553-2

Response to Commentor No. 1553

1553-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, although it should be pointed out that FFTF will not supply fuel to any reactor, either foreign or domestic.

DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings.

The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily Molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. Further, supplies of many research isotopes are not readily available from existing foreign or domestic sources, causing a number of medical research programs to be terminated, deferred, or seriously delayed. As such, reliance on these other sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

1553-2: DOE notes the commentor's interest in controlling the production of nuclear weapons, although issues of nuclear weapons production, dismantlement of weapons, and elimination of weapons systems are beyond the scope of this NI PEIS. The scope of this NI PEIS is limited to analysis of alternatives to fulfill the requirements of the missions

Commentor No. 1553: Everett Antila (Cont'd)

Response to Commentor No. 1553

addressed, which include the production of medical and industrial isotopes, the production of plutonium-238, and nuclear research and development.

The three missions are civilian nuclear energy missions and are not defense-related. Section 1.2. of Volume 1 was revised to clarify the purpose and need of the proposed action.

Commentor No. 1554: Allan Stockman

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

0874+1207

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

*THE FEDERAL GOVERNMENT SHOULD FOCUS ITS ATTENTION
AND LIMITED FUNDS AT CLEANING UP HANFORD
AND NOT CREATING MORE DANGEROUS
NUCLEAR PRODUCTS THAT ARE NOT
NEEDED*

Name Allan Stockman
Address 7079 NE FARWELL AVE
City, state VANCOUVER, WA Zip 98662

1554-1
1554-2
1554-3

Response to Commentor No. 1554

1554-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1554-2: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

1554-3: DOE notes the views expressed regarding the potential use of FFTF for expanding DOE's existing nuclear facility infrastructure. However, the proposed action in the NI PEIS is necessary to meet the Nation's needs; it will not detract from critical Hanford cleanup efforts. As discussed in detail in Chapter 4 of Volume 1 and appendixes H, I, and J of Volume 2 in the Final NI PEIS, potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed action are relatively low. Again, the proposed action would not have an impact on the cleanup missions at the candidate sites.

Commentor No. 1631: Eddie U. McPherson

From: Ed McPherson[SMTP:EDMC@INTEGRITY.COM]
 Sent: Friday, September 15, 2000 1:47:55 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: FFTF, A National/International Asset The World Needs
 Auto forwarded by a Rule

Cancer has divestated the lives of many of our friends and loved ones in our generation. The FFTF has the proven, demonstrated, technological ability to produce a vass array of medical isotopes that can change the quality of life for 100's of 1000's of people around the world. It is a unique facility that can produce the largest volume and the purest forms of medical isotopes of any facility on the face of the planet! The United States has an incredible window of opportunity to be the world leader in helping to alleviating the ravages of cancer and its harsh treatments. There is promising new research that will allow medical isotopes to zero_in on the cancerous tumor and destroy it without the extensive damage to surrounding tissue and organs that is part of conventional treatment.

The USA has the opportunity and moral obligation to improve the quality of life worldwide by supplying desparately needed medical isotopes. Currently, many of the potential uses of these isotopes will never be realized without a facility such as FFTF. We, the most powerful nation on earth, can either stick our heads in the sand or rise to the occasion and take the higher moral ground for the better good. What kind a nation/people do we want to be?

The primary pieces are in place to justify the mission for FFTF to begin producing medical isotopes. The facility exists (which includes an outstanding operating record), the technology is proven, and the need is both desparate and immediate.

Please take advantage of this once_in_a_lifetime opportunity, and restart the FFTF for the production of medical isotopes.

Sincerely,

Eddie U. McPherson
 2304 Raven Court, West Richland, WA 99352
 509_967_3127

Response to Commentor No. 1631**1631-1****1631-1:** DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1632: Nancy W. Fenn

From: nfenn@communityschool.org%internet
[SMTP:NFENN@COMMUNITYSCHOOL.ORG]
Sent: Friday, September 15, 2000 4:11:44 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Cc: governor@governor.state.id.us%internet;
mike.simpson@mail.house.gov%internet;
ask.helen@mail.house.gov%internet
Subject: stop the madness
Auto forwarded by a Rule
September 15, 2000

Ms. Colette Brown
DOE, Office of Space and Defense Power Systems

Dear Ms. Brown,
Your Department's recent proposal to expand the civilian nuclear infrastructure, outlined in the Draft Programmatic Environmental Impact Statement for accomplishing expanded civilian nuclear energy research and development and isotope production mission in the United States, including the role of the Fast Flux Test Facility, raises significant nuclear weapons proliferation and environmental issues.

As a member of the Snake River Alliance I have become aware of the serious nuclear contamination and waste problems at INEEL. INEEL is one of the most contaminated areas in America. The Department's recent estimate on cleaning up our site is \$22 billion and is expected to take 50 years__longer than any other DOE facility. In addition, we have over 360 individual superfund sites within the 890 sq. mile area that comprises INEEL. With this known, the last thing we need is a plan to generate more nuclear waste at a site that needs more waste like the DOE needs security scandals. Out of concern for Idaho's environment, I strongly urge you not to pursue the plutonium_238 production mission outlined in your PEIS.

Response to Commentor No. 1632

1632-1: The commentor's position regarding plutonium-238 production at INEEL is noted. Production of plutonium-238 at one or more of the candidate sites would be conducted in support of NASA's deep space missions (Volume 1, Section 1.2.2, of the NI PEIS). As discussed in Sections 4.3.2.1.13 and 4.4.2.1.13 of the PEIS, selection of the Fluorinel Dissolution Processing Facility and/or the Advanced Test Reactor to support production of plutonium-238 would have no significant impact on the waste management system at INEEL. Use of any of the facilities proposed in this PEIS for the stated missions would not impact cleanup missions at DOE sites.

1632-2: The use of proposed alternative facilities associated with processing of neptunium-237 targets would have no impact on schedules or available funding for high-level radioactive waste programs at either Hanford or INEEL. At INEEL, the tanks would not be used although certain facilities at the Idaho Nuclear Technology Engineering Center (INTEC) would be used to treat the wastes resulting from processing the irradiated targets. These are reliable systems that would process a maximum of 1,050 cubic meters of low-level radioactive waste over the 35-year nuclear infrastructure operational period. The higher activity waste would be treated as a solid form via a stand-alone vitrification system, separate from any tank waste treatment system. At Hanford, the existing high-level radioactive waste facilities would not be used, and as analyzed in the PEIS, no existing or planned high-level radioactive waste facilities would be used to treat the wastes resulting from processing the irradiated targets.

1632-3: Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic

1632-1

Commentor No. 1632: Nancy W. Fenn (Cont'd)

One of the most daunting problems confronting cleanup at major DOE facilities such as Hanford and INEEL, is the solidification of liquid high_level nuclear waste. Your current plan for plutonium_238 production entails the generation of approximately 288,000 additional gallons of this waste over the project's 35 year span. While this is a small portion of Hanford's high level waste, it is approximately one fifth of what we have remaining here in Idaho, which makes it a very significant amount. Previous leakage of this waste at INEEL and Hanford threatens our water supplies. What we certainly don't need is any more of this most highly problematic of waste forms.

Given the certain risks inherent in production of plutonium, the justified need for this material would have to be tremendous, and the PEIS does a poor job of providing ample justification. Beyond the risks involved in production, and the aforementioned resulting waste problem, there is also the issue of an accident occurring upon lift_off or reentry of a space probe carrying this material. The cassini probe, launched in 1997, carried 72 pounds of Pu_238. The potential for an explosion during lift_off or upon an inadvertent reentry during the fly_by phase, gave many in the scientific community pause, including scientists within NASA. According to NASA's own conservative estimate, a burn up upon reentry of the cassini probe could have caused 2,300 cancer fatalities, independent analyses ranged much higher. This potential for a catastrophic release of this extremely toxic material will remain so long as the US government remains committed to the use of plutonium_238. If DOE is to have a role in developing power systems for NASA's instrumentation, it should focus on promising solar technology, an alternative that has been promoted in the European scientific community.

There are also proliferation concerns as it pertains to this plan. A return to production of this isotope, however poorly justified, means a return to the use of aqueous reprocessing at DOE facilities where this technology has been used to extract bomb material for the weapons program. From President Carter to presidents Bush and Clinton, US policy has been to halt reprocessing in this country in order to set a global precedent to curtail the spread of nuclear weapons material_a noble effort in serious need of bolstering through action.

1632-2

1632-3

1632-4

1632-5

Response to Commentor No. 1632

supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed production of plutonium-238 are relatively low and are discussed in detail in Chapter 4 of Volume 1, and Appendixes H, I, and J of Volume 2 in the Final NI PEIS.

1632-4: DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternative energy sources for space missions, although issues such as NASA research priorities are beyond the scope of this PEIS. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. The Cassini fly-by occurred exactly as planned, with no release of nuclear material.

1632-5: It is not true that resumption of plutonium-238 production constitutes a return to reprocessing. The aqueous technique that would be used to separate plutonium consisting of over 80 percent plutonium-238 and neptunium from the irradiated target is similar to the technology that was used in portions of the complex process to extract plutonium-239. However, as discussed in PEIS Sections S.3, 2.2.3 and A.1.4, this technology would be used to chemically separate plutonium-238 and neptunium from irradiated targets and not from irradiated or spent nuclear fuel, whereas reprocessing separates weapons grade plutonium-239 from irradiated nuclear fuel. Plutonium-238 extraction is not reprocessing. Unlike plutonium-239, plutonium-238 is not used in nuclear weapons,

Commentor No. 1632: Nancy W. Fenn (Cont'd)

Indeed, an otherwise lukewarm Nuclear Infrastructure Nonproliferation Impact Assessment conducted by your Office of Arms Control and Nonproliferation questions whether our commitment to nonproliferation isn't weakened by the use of the Fluorinel Dissolution Process Facility within Building 666 at INEEL. INEEL's reprocessing facility is next door to a wet storage unit for Navy spent fuel, which contains a greater than average amount of highly enriched uranium. It was reprocessed from 1953 to 1989 at INEEL for the weapons program. Use of this facility to carry out plutonium-238 extraction, especially considering the dubious need for this isotope, at the very least raises the concern that DOE is not fully committed to ending reprocessing. The international community cannot be expected to trust DOE's civilian mission claim when an agency devoutly committed to development of weapons uses a nuclear weapons technology at a weapons facility.

1632-5
(Cont'd)

Considering all these factors that could adversely affect our environment and commitment to nonproliferation, I strongly urge you to select alternative 5 in the current PEIS. This alternative would allow the Advanced Test Reactor at INEEL to continue producing medical and industrial isotopes for the commercial sector and would not lead to the production of anymore highly radioactive liquid waste at Hanford or INEEL. The main mission at these two facilities has been and should continue to be cleanup of the mess left over from previous nuclear weapons work. Additional waste production would interfere with this already difficult and expensive work. Alternative 5 also calls for the decommissioning of the FFTF reactor at Hanford. FFTF is an aging breeder reactor whose use would be inconsistent with United States policy to discourage use of this technology due to the capability this class of reactors has to produce more plutonium than is consumed. Thank you for the opportunity to comment on this plan.

1632-6

Sincerely,
Nancy W. Fenn

Response to Commentor No. 1632

but rather it would be used as a power and heat source for NASA space missions.

The Nuclear Infrastructure Nonproliferation Impact Assessment, published in September 2000, confirms that extracting plutonium-238 from irradiated targets would not undermine nonproliferation goals. In this report, DOE recognizes that proliferation concerns might be raised related to one of the technical assessment factors, "reduction in attractiveness of material forms," due to the fact that, in the extraction of plutonium-238, the remaining unconverted neptunium, a weapons-useable fissile material used as target material for conversion into plutonium-238, must also be recovered (not produced), purified, and recycled. This is unavoidable (unless the United States elects to neither produce or purchase plutonium-238), and it impacts all PEIS alternatives and options, including the No Action Alternative and Alternative 5: permanently deactivate FFTF with no new missions at U.S. facilities. However, while the fact that concerns might be raised is a valuable input to the record of decision process, it does not constitute an inconsistency with or departure from nonproliferation policy, and plutonium-238 is needed to fulfill our missions. Further, in the event that plutonium-238 production is resumed in the United States, the total separated stocks of neptunium would be reduced over time in an irreversible manner since there is a moratorium on U.S. spent fuel reprocessing. This overall reduction in a weapons-useable material would mitigate the potential concerns related to material attractiveness, and offer an additional method to pursue U.S. nonproliferation goals. DOE's proposed approach in this mission, and its rigorous nonproliferation impact assessment, demonstrate its commitment to nonproliferation policy, domestically and in the international community.

The juxtaposition of Fluorinel Dissolution Process Facility (FDPF) in INEEL Building 666 to wet storage of highly enriched uranium Navy spent nuclear fuel, and its previous mission of reprocessing spent nuclear fuel, were rigorously and objectively evaluated in the Nuclear Infrastructure Nonproliferation Impact Assessment published in September 2000. In no uncertain terms, this report discusses the proliferation concerns raised in the areas of facilitating cost-effective international monitoring and supporting negotiation of a verifiable Fissile Material Cutoff Treaty (FMCT), and outlines what is needed to mitigate these concerns. This is a valuable input to the record of decision process.

Commentor No. 1632: Nancy W. Fenn (Cont'd)

Response to Commentor No. 1632

Most of the concerns and uncertainties surrounding the use of FDPF are associated with its history as a defense programs facility and the resulting lack of transparency that could be afforded in the event that international monitoring becomes desirable under an FMCT. This is a different set of concerns than those expressed in the comment. The fact is, that since it is well known that FDPF has a long history of Navy defense missions, and since the described mission (plutonium-238 extraction) in the PEIS does not involve the production of special fissile material, sufficient transparency could possibly be provided by a managed access regime that would meet the requirements of FMCT verification. If this could be done, the aforementioned concerns would be mitigated.

- 1632-6:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. It should be noted that medical isotopes would continue to be produced at ATR regardless of which alternative is selected in the Record of Decision. The FFTF would produce spent nuclear fuel and low-level radioactive waste, and as discussed throughout Section 4.3 of Volume 1, none of the proposed alternatives would add waste to the high-level waste tanks at Hanford or INEEL. Also, it should be pointed out that while FFTF supported the breeder reactor program, it is not itself a breeder reactor, but rather a fast flux research reactor.

Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Sections 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

Commentor No. 1632: Nancy W. Fenn (Cont'd)

Response to Commentor No. 1632

With respect to cleanup of wastes at Hanford or INEEL, the proposed action and the existing cleanup missions are independent programs and actions related to one will not impact the other. While the cleanup activities at both Hanford and INEEL are high priority to DOE, it should be noted that the cleanup of legacy wastes is beyond the scope of the NI PEIS.

Commentor No. 1633: Maura Zimmerschied

From: BanjoZ@aol.com%internet
[SMTP:BANJOZ@AOL.COM]
Sent: Friday, September 15, 2000 5:46:01 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Fast Flux Test Facility
Auto forwarded by a Rule

I support re_start of the Fast Flux Test Facility at Hanford,
Washington, for production of medical isotopes.

Maura K. Zimmerschied
Richland, WA

|| 1633-1

Response to Commentor No. 1633

1633-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1634: Chris Fuess

From: Chris Fuess[SMTP:FUESSC@ENERGY.WSU.EDU]
 Sent: Friday, September 15, 2000 6:23:26 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Don't restart the Hanford's FFTF Reactor
 Auto forwarded by a Rule

Dear Collette Brown/Secretary Richardson,

Please accept the following as public comments on the Draft Environmental Impact Statement on the Nuclear Infrastructure EIS.

As a citizen of the Pacific Northwest, I am deeply concerned about the United States Department of Energy's proposal to restart Hanford's Fast Flux Test Facility Nuclear Reactor. I wish to have my values incorporated into the formal administrative record and taken into consideration when adopting the final record of decision. I also want you to respond to my concerns before you make your record of decision.

Considering Hanford's overwhelming problems, including the crisis with tank waste treatment, as well as the damage caused by and radiation released from the Hanford wildfire, restarting FFTF is absolutely unacceptable. We must deal with the waste already at Hanford and focus on the clean_up mission. FFTF maintenance has already gobbled up \$100 million in clean_up money and distracted from desperately needed clean_up. Tank wastes are already seeping towards the Columbia River. More wastes must not be added to those tanks. Clean_up must be the only priority. We must save the Columbia River. Also, I object to the fact that you are asking citizens to comment on an incomplete study. You have not told us how you will deal with non_proliferation issues or additional waste from FFTF. Should FFTF be restarted, that decision will be illegal under Federal law and will be overturned! Do the right thing, shut down FFTF now and save the future of the Columbia River!

Sincerely,
 Chris Fuess
 1126 State Ave NE, Olympia, WA, 98506

1634-1

1634-2

1634-3

1634-2

1634-1

1634-4

1634-1

1634-5

Response to Commentor No. 1634

1634-1: DOE notes the commentor's concerns. This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. DOE prepared a separate Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such an ancillary document need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed this document to about 730 interested parties on September 8, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Nuclear Infrastructure Nonproliferation Impact Assessment in Appendix Q in the Final NI PEIS. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

1634-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Hanford cleanup is funded by DOE's Office of the Assistant Secretary for Environmental Management (EM). FFTF funding is currently provided through the Office of Nuclear Energy, Science & Technology (NE). The DOE missions considered in this PEIS would also be funded by the DOE Office of NE, which has no funding connection to Hanford cleanup activities. Therefore, restart of FFTF would not impact current cleanup schedules.

Commentor No. 1634: Chris Fuess (Cont'd)

Response to Commentor No. 1634

The restart of FFTF or any of the other proposed alternative facilities would not have an impact on the cleanup missions at Hanford, INEEL, or ORR . The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and appropriate DOE orders.

In regards to the Hanford wildfire of 2000, the DOE Richland Operations Office, the State of Washington Department of Health, and U.S. Environmental Protection Agency performed environmental monitoring on and around the Site to assess potential radiological impacts. The wildfire did not cause a release of radioactive materials from any Hanford facilities but did result in resuspension of radioactive materials which were already in the environment. The very low levels of radioactive materials that were resuspended were slightly above natural background levels and required several days of analysis to quantify. Information on this event has been made available to the public and can be accessed at <http://www.Hanford.gov/envmon/indes.html>. This site also provides a link to information on the independent offsite air monitoring that was conducted by the U.S. Environmental Protection Agency.

1634-3: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

1634-4: Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities)

Commentor No. 1634: Chris Fuess (Cont'd)

Response to Commentor No. 1634

to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

1634-5: See response to comment 1634-3.

Commentor No. 1635: Dennis F. Nester

From: Dennis F. Nester
 [SMTP:THEROYPROCESS@HOME.COM]
 Sent: Friday, September 15, 2000 6:56:49 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: The Roy Process for transmuting nuclear waste.
 Auto forwarded by a Rule

TO: U.S. Department of Energy
 RE: Plutonium transmutation via the Roy Process.

Dear Sir,
 All high level nuclear waste, including plutonium, can be totally transmuted into non radioactive elements using the Roy Process invention. See web site: <http://members.home.net/theroyprocess>

Plutonium can be transmuted into non radioactive lead producing heat which can be used to make steam and power existing generators at each nuclear power plant were nuclear waste is now stored in cooling ponds. The Roy Process Patent Application contains completed electrodynamic calculations for three isotopes: Pu239, Sr90 and Cs137. All other isotopes treated by the same method.

Dr. Roy estimated cost in 1979 at \$80 Million dollars and take three years to construct the Roy Process pilot treatment plant. Portable units can also be built for on site transmutation.

The Roy Process is available to a company capable of realization who contracts with us.

Sincerely,
 Dennis F. Nester,
 Agent for the Roy Process, theroyprocess@home.com
 (602) 494_9361, 4510 E. Willow Ave
 Phoenix, AZ 85032, U.S.A.

1635-1**Response to Commentor No. 1635**

1635-1: DOE notes the commentor's interest in high-level radioactive waste treatment methods.

Commentor No. 1636: Andrea Hornbein

From: Andrea Hornbein
[SMTP:AHORNBEIN@EARTHLINK.NET]
Sent: Friday, September 15, 2000 7:20:03 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Use of depleted plutonium
Auto forwarded by a Rule

Dear Ms. Brown,

Please count me an American Citizen who is opposed to the use of depleted uranium. From what I understand it is radioactive and in the area's where it has already been highly used there are serious health related concerns.

Thank you,
Andrea Hornbein

1636-1

Response to Commentor No. 1636

1636-1: The commentor's concerns about depleted uranium are noted. Missions described in Section 1.2 of Volume 1 and alternatives described in Section 2.5 do not involve depleted uranium. This NI PEIS provides estimates of human health impacts associated with a range of reasonable alternatives (including restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. Plutonium is one of many substances that have been considered in the analysis of health and safety impacts for this PEIS. Both radiological and chemical impacts were addressed. (See Appendixes H and I of the PEIS.) Plutonium has been identified as the primary contributor to the health impacts associated with the processing of irradiated neptunium targets at any of the proposed processing facilities. The analysis shows that no public or worker latent cancer fatalities would be expected to result from implementation of the alternatives. See, for example, Sections 4.3.1.1.9, 4.3.2.1.9, and 4.3.3.1.9 in Chapter 4 and the Summary Tables in Chapter 2 of Volume 1 of the NI PEIS.

Commentor No. 1637: Ann Tesoro

From: Ann Tesoro[SMTP:ANTESORO@MICRON.NET]
 Sent: Friday, September 15, 2000 7:31:37 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Comment, INEEL
 Auto forwarded by a Rule

September 15, 2000
 Ms. Colette Brown
 DOE, Office of Space and Defense Power Systems

Dear Ms. Brown,
 Your Department's recent proposal to expand the civilian nuclear infrastructure, outlined in the Draft Programmatic Environmental Impact Statement for accomplishing expanded civilian nuclear energy research and development and isotope production mission in the United States, including the role of the Fast Flux Test Facility, raises significant nuclear weapons proliferation and environmental issues.

As a member of the Snake River Alliance I have become aware of the serious nuclear contamination and waste problems at INEEL. INEEL is one of the most contaminated areas in America. The Department's recent estimate on cleaning up our site is \$22 billion and is expected to take 50 years__longer than any other DOE facility. In addition, we have over 360 individual superfund sites within the 890 sq. mile area that comprises INEEL. With this known, the last thing we need is a plan to generate more nuclear waste at a site that needs more waste like the DOE needs security scandals. Out of concern for Idaho's environment, I strongly urge you not to pursue the plutonium_238 production mission outlined in your PEIS.

One of the most daunting problems confronting cleanup at major DOE facilities such as Hanford and INEEL, is the solidification of liquid high_level nuclear waste. Your current plan for plutonium_238 production entails the generation of approximately 288,000 additional gallons of this waste over the project's 35 year span. While this is a small portion of Hanford's high level waste, it is

Response to Commentor No. 1637

- 1637-1:** The commentor's position regarding plutonium-238 production at INEEL is noted. Production of plutonium-238 at one or more of the candidate sites would be conducted in support of NASA's deep space missions Volume 1, Section 1.2.2 of the NI PEIS). As discussed in Sections 4.3.2.1.13 and 4.4.2.1.13 of the EIS, selection of the Fluorinel Dissolution Processing Facility and/or the Advanced Test Reactor to support production of plutonium-238 would have little impact on the waste management system at INEEL. Use of any of the facilities proposed in this PEIS for the stated missions would not impact cleanup missions at DOE sites.
- 1637-2:** The use of proposed alternative facilities associated with processing of neptunium-237 targets would have no impact on schedules or available funding for high-level radioactive waste programs at either Hanford or INEEL. At INEEL, the tanks would not be used although certain facilities at the Idaho Nuclear Technology Engineering Center (INTEC) would be used to treat the wastes resulting from processing the irradiated targets. These are reliable systems that would process a maximum of 1,050 cubic meters of low-level radioactive waste over the 35-year nuclear infrastructure operational period. The higher activity waste would be treated as a solid form via a stand-alone vitrification system, separate from any tank waste treatment system. At Hanford, the existing high level radioactive waste facilities would not be used, and as analyzed in the PEIS, no existing or planned high-level radioactive waste facilities would be used to treat the wastes resulting from processing the irradiated targets.
- 1637-3:** Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic

1637-1

1637-2

Commentor No. 1637: Ann Tesoro (Cont'd)

approximately one fifth of what we have remaining here in Idaho, which makes it a very significant amount. Previous leakage of this waste at INEEL and Hanford threatens our water supplies. What we certainly don't need is any more of this most highly problematic of waste forms.

Given the certain risks inherent in production of plutonium, the justified need for this material would have to be tremendous, and the PEIS does a poor job of providing ample justification. Beyond the risks involved in production, and the aforementioned resulting waste problem, there is also the issue of an accident occurring upon lift_off or reentry of a space probe carrying this material. The cassini probe, launched in 1997, carried 72 pounds of Pu_238. The potential for an explosion during lift_off or upon an inadvertent reentry during the fly_by phase, gave many in the scientific community pause, including scientists within NASA. According to NASA's own conservative estimate, a burn up upon reentry of the cassini probe could have caused 2,300 cancer fatalities, independent analyses ranged much higher. This potential for a catastrophic release of this extremely toxic material will remain so long as the US government remains committed to the use of plutonium_238. If DOE is to have a role in developing power systems for NASA's instrumentation, it should focus on promising solar technology, an alternative that has been promoted in the European scientific community.

There are also proliferation concerns as it pertains to this plan. A return to production of this isotope, however poorly justified, means a return to the use of aqueous reprocessing at DOE facilities where this technology has been used to extract bomb material for the weapons program. From President Carter to presidents Bush and Clinton, US policy has been to halt reprocessing in this country in order to set a global precedent to curtail the spread of nuclear weapons material_a noble effort in serious need of bolstering through action.

Indeed, an otherwise lukewarm Nuclear Infrastructure Nonproliferation Impact Assessment

1637-2
(Cont'd)

1637-3

1637-4

1637-5

Response to Commentor No. 1637

supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed production of plutonium-238 are relatively low and are discussed in detail in Chapter 4 of Volume 1, and Appendixes H, I, and J of Volume 2 in the Final NI PEIS.

1637-4: DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternative energy sources for space missions, although issues such as NASA research priorities are beyond the scope of this PEIS. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. The Cassini fly-by occurred exactly as planned, with no release of nuclear material.

1637-5: It is not true that resumption of plutonium-238 production constitutes a return to reprocessing. The aqueous technique that would be used to separate plutonium consisting of over 80 percent plutonium-238 and neptunium from the irradiated target is similar to the technology that was used in portions of the complex process to extract plutonium-239. However, as discussed in PEIS Sections S.3, 2.2.3 and A.1.4, this technology would be used to chemically separate plutonium-238 and neptunium from irradiated targets and not from irradiated or spent nuclear fuel, whereas reprocessing separates weapons grade plutonium-239 from irradiated nuclear fuel. Plutonium-238 extraction is not reprocessing. Unlike plutonium-239, plutonium-238 is not used in nuclear weapons, but rather it would be used as a power and heat source for NASA space missions.

Commentor No. 1637: Ann Tesoro (Cont'd)

conducted by your Office of Arms Control and Nonproliferation questions whether our commitment to nonproliferation isn't weakened by the use of the Fluorinel Dissolution Process Facility within Building 666 at INEEL. INEEL's reprocessing facility is next door to a wet storage unit for Navy spent fuel, which contains a greater than average amount of highly enriched uranium. It was reprocessed from 1953 to 1989 at INEEL for the weapons program. Use of this facility to carry out plutonium_238 extraction, especially considering the dubious need for this isotope, at the very least raises the concern that DOE is not fully committed to ending reprocessing. The international community cannot be expected to trust DOE's civilian_mission claim when an agency devoutly committed to development of weapons uses a nuclear weapons technology at a weapons facility.

Considering all these factors that could adversely affect our environment and commitment to nonproliferation, I strongly urge you to select alternative 5 in the current PEIS. This alternative would allow the Advanced Test Reactor at INEEL to continue producing medical and industrial isotopes for the commercial sector and would not lead to the production of anymore highly radioactive liquid waste at Hanford or INEEL. The main mission at these two facilities has been and should continue to be cleanup of the mess left over from previous nuclear weapons work. Additional waste production would interfere with this already difficult and expensive work. Alternative 5 also calls for the decommissioning of the FFTF reactor at Hanford. FFTF is an aging breeder reactor whose use would be inconsistent with United States policy to discourage use of this technology due to the capability this class of reactors has to produce more plutonium than is consumed. Thank you for the opportunity to comment on this plan.

Sincerely,

**1637-5
(Cont'd)**

1637-6

Response to Commentor No. 1637

The Nuclear Infrastructure Nonproliferation Impact Assessment, published in September 2000, confirms that extracting plutonium-238 from irradiated targets would not undermine nonproliferation goals. In this report, DOE recognizes that proliferation concerns might be raised related to one of the technical assessment factors, "reduction in attractiveness of material forms," due to the fact that, in the extraction of plutonium-238, the remaining unconverted neptunium, a weapons-useable fissile material used as target material for conversion into plutonium-238, must also be recovered (not produced), purified, and recycled. This is unavoidable (unless the United States elects to neither produce or purchase plutonium-238), and it impacts all PEIS alternatives and options, including the No Action Alternative and Alternative 5: permanently deactivate FFTF with no new missions at U.S. facilities. However, while the fact that concerns might be raised is a valuable input to the record of decision process, it does not constitute an inconsistency with or departure from nonproliferation policy, and plutonium-238 is needed to fulfill our missions. Further, in the event that plutonium-238 production is resumed in the United States, the total separated stocks of neptunium would be reduced over time in an irreversible manner since there is a moratorium on U.S. spent fuel reprocessing. This overall reduction in a weapons useable material would mitigate the potential concerns related to material attractiveness, and offer an additional method to pursue U.S. nonproliferation goals. DOE's proposed approach in this mission, and its rigorous nonproliferation impact assessment, demonstrate its commitment to nonproliferation policy, domestically and in the international community.

The juxtaposition of Fluorinel Dissolution Process Facility (FDPF) in INEEL Building 666 to wet storage of highly enriched uranium Navy spent nuclear fuel, and its previous mission of reprocessing spent nuclear fuel, were rigorously and objectively evaluated in the Nuclear Infrastructure Nonproliferation Impact Assessment published in September 2000. In no uncertain terms, this report discusses the proliferation concerns raised in the areas of facilitating cost-effective international monitoring and supporting negotiation of a verifiable Fissile Material Cutoff Treaty (FMCT), and outlines what is needed to mitigate these concerns. This is a valuable input to the record of decision process.

Most of the concerns and uncertainties surrounding the use of FDPF are associated with its history as a defense programs facility and the resulting lack of transparency that could be afforded in the event that international monitoring becomes desirable under an Fissile Material Cutoff Treaty

Commentor No. 1637: Ann Tesoro (Cont'd)

Response to Commentor No. 1637

(FMCT). This is a different set of concerns than those expressed in the comment. The fact is, that since it is well known that FDPF has a long history of Navy defense missions, and since the described mission (plutonium-238 extraction) in the PEIS does not involve the production of special fissile material, sufficient transparency could possibly be provided by a managed access regime that would meet the requirements of FMCT verification. If this could be done, the aforementioned concerns would be mitigated.

- 1637-6:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. It should be noted that medical isotopes would continue to be produced at ATR regardless of which alternative is selected in the Record of Decision. The FFTF would produce spent nuclear fuel and low-level radioactive waste, and as discussed throughout Section 4.3 of Volume 1, none of the proposed alternatives would add waste to the high-level waste tanks at Hanford or INEEL. Also, it should be pointed out that while FFTF supported the breeder reactor program, it is not itself a breeder reactor, but rather a fast flux research reactor.

Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Sections 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

With respect to cleanup of wastes at Hanford or INEEL, the proposed action and the existing cleanup missions are independent programs and actions related to one will not impact the other. While the cleanup activities

Commentor No. 1637: Ann Tesoro (Cont'd)

Response to Commentor No. 1637

at both Hanford and INEEL are high priority to DOE, it should be noted that the cleanup of legacy wastes is beyond the scope of the NI PEIS.

Commentor No. 1638: Carolyn Hondo

From: hondo[SMTP:HONDO@CYBERHIGHWAY.NET]
 Sent: Friday, September 15, 2000 8:31:44 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: citizen comments on
 Auto forwarded by a Rule
 September 15, 2000

Ms. Colette Brown
 DOE, Office of Space and Defense Power Systems

Dear Ms. Brown,
 Your Department's recent proposal to expand the civilian nuclear infrastructure, outlined in the Draft Programmatic Environmental Impact Statement for accomplishing expanded civilian nuclear energy research and development and isotope production mission in the United States, including the role of the Fast Flux Test Facility, raises significant nuclear weapons proliferation and environmental issues.

As a member of the Snake River Alliance I have become aware of the serious nuclear contamination and waste problems at INEEL. INEEL is one of the most contaminated areas in America. The Department's recent estimate on cleaning up our site is \$22 billion and is expected to take 50 years__longer than any other DOE facility. In addition, we have over 360 individual superfund sites within the 890 sq. mile area that comprises INEEL. With this known, the last thing we need is a plan to generate more nuclear waste at a site that needs more waste like the DOE needs security scandals. Out of concern for Idaho's environment, I strongly urge you not to pursue the plutonium_238 production mission outlined in your PEIS.

One of the most daunting problems confronting cleanup at major DOE facilities such as Hanford and INEEL, is the solidification of liquid high_level nuclear waste. Your current plan for plutonium_238 production entails the generation of approximately 288,000 additional gallons of this waste over the project's 35 year span. While this is a small portion of Hanford's high level

Response to Commentor No. 1638

1638-1: The commentor's position regarding plutonium-238 production at INEEL is noted. Production of plutonium-238 at one or more of the candidate sites would be conducted in support of NASA's deep space missions Volume 1, Section 1.2.2 of the NI PEIS). As discussed in Sections 4.3.2.1.13 and 4.4.2.1.13 of the EIS, selection of the Fluorinel Dissolution Processing Facility and/or the Advanced Test Reactor to support production of plutonium-238 would have no significant impact on the waste management system at INEEL. Use of any of the facilities proposed in this PEIS for the stated missions would not impact cleanup missions at DOE sites.

1638-2: The use of proposed alternative facilities associated with processing of neptunium-237 targets would have no impact on schedules or available funding for high-level radioactive waste programs at either Hanford or INEEL. At INEEL, the tanks would not be used although certain facilities at the Idaho Nuclear Technology Engineering Center (INTEC) would be used to treat the wastes resulting from processing the irradiated targets. These are reliable systems that would process a maximum of 1 050 cubic meters of low-level radioactive waste over the 35-year nuclear infrastructure operational period. The higher activity waste would be treated as a solid form via a stand-alone vitrification system, separate from any tank waste treatment system. At Hanford, the existing high level radioactive waste facilities would not be used, and as analyzed in the PEIS, no existing or planned high-level radioactive waste facilities would be used to treat the wastes resulting from processing the irradiated targets.

1638-3: Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic

1638-1

1638-2

Commentor No. 1638: Carolyn Hondo (Cont'd)

waste, it is approximately one fifth of what we have remaining here in Idaho, which makes it a very significant amount. Previous leakage of this waste at INEEL and Hanford threatens our water supplies. What we certainly don't need is any more of this most highly problematic of waste forms.

Given the certain risks inherent in production of plutonium, the justified need for this material would have to be tremendous, and the PEIS does a poor job of providing ample justification. Beyond the risks involved in production, and the aforementioned resulting waste problem, there is also the issue of an accident occurring upon lift_off or reentry of a space probe carrying this material. The cassini probe, launched in 1997, carried 72 pounds of Pu_238. The potential for an explosion during lift_off or upon an inadvertent reentry during the fly_by phase, gave many in the scientific community pause, including scientists within NASA. According to NASA's own conservative estimate, a burn up upon reentry of the cassini probe could have caused 2,300 cancer fatalities, independent analyses ranged much higher. This potential for a catastrophic release of this extremely toxic material will remain so long as the US government remains committed to the use of plutonium_238. If DOE is to have a role in developing power systems for NASA's instrumentation, it should focus on promising solar technology, an alternative that has been promoted in the European scientific community.

There are also proliferation concerns as it pertains to this plan. A return to production of this isotope, however poorly justified, means a return to the use of aqueous reprocessing at DOE facilities where this technology has been used to extract bomb material for the weapons program. From President Carter to presidents Bush and Clinton, US policy has been to halt reprocessing in this country in order to set a global precedent to curtail the spread of nuclear weapons material_a noble effort in serious need of bolstering through action.

**1638-2
(Cont'd)****1638-3****1638-4****1638-5****Response to Commentor No. 1638**

supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed production of plutonium-238 are relatively low and are discussed in detail in Chapter 4 of Volume 1, and Appendixes H, I, and J of Volume 2 in the Final NI PEIS.

1638-4: DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternative energy sources for space missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. The Cassini fly-by occurred exactly as planned, with no release of nuclear material.

1638-5: The commentor is correct in stating that the aqueous processing technology that would be used to separate plutonium consisting of over 80 percent plutonium-238 and neptunium from the irradiated target is similar to the technology that was used to extract plutonium-239. However, unlike plutonium-239, plutonium-238 is not used in nuclear weapons, but rather it would be used as a power source for NASA space missions. The technology that is discussed in EIS Sections S.3, 2.2.3 and A.1.4 would be used to chemically separate plutonium-238 and neptunium from irradiated targets and not from irradiated or spent nuclear fuel whereas reprocessing separates weapons grade plutonium-239 from irradiated nuclear fuel. As discussed in the separate nonproliferation impact assessment report, use of this technology to produce plutonium-238 from irradiated targets will not create a nonproliferation threat. DOE is committed to full compliance

Commentor No. 1638: Carolyn Hondo (Cont'd)

Indeed, an otherwise lukewarm Nuclear Infrastructure Nonproliferation Impact Assessment conducted by your Office of Arms Control and Nonproliferation questions whether our commitment to nonproliferation isn't weakened by the use of the Fluorinel Dissolution Process Facility within Building 666 at INEEL. INEEL's reprocessing facility is next door to a wet storage unit for Navy spent fuel, which contains a greater than average amount of highly enriched uranium. It was reprocessed from 1953 to 1989 at INEEL for the weapons program. Use of this facility to carry out plutonium_238 extraction, especially considering the dubious need for this isotope, at the very least raises the concern that DOE is not fully committed to ending reprocessing. The international community cannot be expected to trust DOE's civilian_mission claim when an agency devoutly committed to development of weapons uses a nuclear weapons technology at a weapons facility.

Considering all these factors that could adversely affect our environment and commitment to nonproliferation, I strongly urge you to select alternative 5 in the current PEIS. This alternative would allow the Advanced Test Reactor at INEEL to continue producing medical and industrial isotopes for the commercial sector and would not lead to the production of anymore highly radioactive liquid waste at Hanford or INEEL. The main mission at these two facilities has been and should continue to be cleanup of the mess left over from previous nuclear weapons work. Additional waste production would interfere with this already difficult and expensive work. Alternative 5 also calls for the decommissioning of the FFTF reactor at Hanford. FFTF is an aging breeder reactor whose use would be inconsistent with United States policy to discourage use of this technology due to the capability this class of reactors has to produce more plutonium than is consumed. Thank you for the opportunity to comment on this plan.

Sincerely,

Carolyn Hondo
219 Hillcrest Rd.
Burley, Idaho 83318

**1638-5
(Cont'd)**

1638-6

Response to Commentor No. 1638

with and support of the U.S. policy prohibiting reprocessing. The juxtaposition of INEEL Building 666 to wet storage of highly enriched uranium Navy spent nuclear fuel and its previous mission of reprocessing spent nuclear fuel were considered in the separate nonproliferation impact assessment.

1638-6: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. It should be noted that medical isotopes would continue to be produced at ATR regardless of which alternative is selected in the Record of Decision. The FFTF would produce spent nuclear fuel and low-level radioactive waste, and as discussed throughout Section 4.3 of Volume 1, none of the proposed alternatives would add waste to the high-level waste tanks at Hanford or INEEL. Also, it should be pointed out that while FFTF supported the breeder reactor program, it is not itself a breeder reactor, but rather a fast flux research reactor.

With respect to cleanup of wastes at Hanford or INEEL, the proposed action and the existing cleanup missions are independent programs and actions related to one will not impact the other. While the cleanup activities at both Hanford and INEEL are high priority to DOE, it should be noted that the cleanup of legacy wastes is beyond the scope of the NI PEIS.

Commentor No. 1639: Barbara Agnew

From: Barbara Agnew[SMTP:BAS@PDT.NET]
 Sent: Friday, September 15, 2000 11:23:11 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: P_238
 Auto forwarded by a Rule

Dear DOE,

It has come to my attention that your agency is considering reprocessing technologies to produce P_238 for NASA at INEEL. Consider that NASA has made public that it has plutonium sufficient for its space probes. Consider also that reprocessing is a dirty process, which is known to lead to weapons proliferation. The safest, most cost_ effective way to clean_up hazardous waste is to stop producing it. I want to be able to say that the government of my country leads the world in a common_sense approach to stopping nuclear proliferation. Drop this bad idea. Here in southeastern Idaho, we don't want the jobs this idea will create. Thank you.

Sincerely,
 Barbara Agnew, 289 West 400 North, Teton, ID 83452

1639-1**1639-2****1639-3****Response to Commentor No. 1639**

1639-1: The technology that is discussed in the NI PEIS would be used to chemically separate plutonium-238 and neptunium from irradiated targets and not from irradiated or spent nuclear fuel, whereas reprocessing separates weapons grade plutonium-239 from irradiated nuclear fuel. As discussed in the separate nonproliferation impact assessment report, use of this technology to produce plutonium-238 from irradiated targets will not create a nonproliferation threat. DOE is committed to full compliance with and support of the U.S. policy prohibiting reprocessing.

A May 22, 2000, correspondence from NASA to DOE identified that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large RTG be maintained as a backup. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

1639-2: The technology that is discussed in Sections S.3, 2.2.3 and A.1.4 of the NI PEIS would be used to chemically separate plutonium-238 and neptunium from irradiated targets and not from irradiated or spent nuclear fuel whereas reprocessing separates weapons grade plutonium-239 from irradiated nuclear fuel. As discussed in the separate Nuclear Infrastructure Nonproliferation Impact Assessment, published in September, 2000, use of this technology to produce plutonium-238 from irradiated targets will not create a nonproliferation threat. DOE is committed to full compliance with and support of the U.S. policy prohibiting reprocessing.

1639-3: DOE notes the commentor's opposition to those alternatives that would involve INEEL.

Commentor No. 1640: Maurice Horn

From: Maurice Horn[SMTP:MHORNRENTALRES@MCN.NET]
Sent: Friday, September 15, 2000 10:50:45 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Re: Comment letter
Auto forwarded by a Rule
September 15, 2000

Ms. Colette Brown
DOE, Office of Space and Defense Power Systems

Dear Ms. Brown,

Your Department's recent proposal to expand the civilian nuclear infrastructure, outlined in the Draft Programmatic Environmental Impact Statement for accomplishing expanded civilian nuclear energy research and development and isotope production mission in the United States, including the role of the Fast Flux Test Facility, raises significant nuclear weapons proliferation and environmental issues.

As a member of the Snake River Alliance I have become aware of the serious nuclear contamination and waste problems at INEEL. INEEL is one of the most contaminated areas in America. The Department's recent estimate on cleaning up our site is \$22 billion and is expected to take 50 years__longer than any other DOE facility. In addition, we have over 360 individual superfund sites within the 890 sq. mile area that comprises INEEL. With this known, the last thing we need is a plan to generate more nuclear waste at a site that needs more waste like the DOE needs security scandals. Out of concern for Idaho's environment, I strongly urge you not to pursue the plutonium_238 production mission outlined in your PEIS.

One of the most daunting problems confronting cleanup at major DOE facilities such as Hanford and INEEL, is the solidification of liquid high_level nuclear waste. Your current plan for plutonium_238 production entails the generation of approximately 288,000 additional gallons of

Response to Commentor No. 1640

1640-1: The commentor's position regarding plutonium-238 production at INEEL is noted. Production of plutonium-238 at one or more of the candidate sites would be conducted in support of NASA's deep space missions Volume 1, Section 1.2.2 of the NI PEIS). As discussed in Sections 4.3.2.1.13 and 4.4.2.1.13 of the EIS, selection of the Fluorinel Dissolution Processing Facility and/or the Advanced Test Reactor to support production of plutonium-238 would have no significant impact on the waste management system at INEEL. Use of any of the facilities proposed in this PEIS for the stated missions would not impact cleanup missions at DOE sites.

1640-2: The use of proposed alternative facilities associated with processing of neptunium-237 targets would have no impact on schedules or available funding for high-level radioactive waste programs at either Hanford or INEEL. At INEEL, the tanks would not be used although certain facilities at the Idaho Nuclear Technology Engineering Center (INTEC) would be used to treat the wastes resulting from processing the irradiated targets. These are reliable systems that would process a maximum of 1,050 cubic meters of low-level radioactive waste over the 35-year nuclear infrastructure operational period. The higher activity waste would be treated as a solid form via a stand-alone vitrification system, separate from any tank waste treatment system. At Hanford, the existing high level radioactive waste facilities would not be used, and as analyzed in the PEIS, no existing or planned high-level radioactive waste facilities would be used to treat the wastes resulting from processing the irradiated targets.

1640-1 **1640-3:** Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic

Commentor No. 1640: Maurice Horn (Cont'd)

this waste over the project's 35 year span. While this is a small portion of Hanford's high level waste, it is approximately one fifth of what we have remaining here in Idaho, which makes it a very significant amount. Previous leakage of this waste at INEEL and Hanford threatens our water supplies. What we certainly don't need is any more of this most highly problematic of waste forms.

Given the certain risks inherent in production of plutonium, the justified need for this material would have to be tremendous, and the PEIS does a poor job of providing ample justification. Beyond the risks involved in production, and the aforementioned resulting waste problem, there is also the issue of an accident occurring upon lift_off or reentry of a space probe carrying this material. The cassini probe, launched in 1997, carried 72 pounds of Pu_238. The potential for an explosion during lift_off or upon an inadvertent reentry during the fly_by phase, gave many in the scientific community pause, including scientists within NASA. According to NASA's own conservative estimate, a burn up upon reentry of the cassini probe could have caused 2,300 cancer fatalities, independent analyses ranged much higher. This potential for a catastrophic release of this extremely toxic material will remain so long as the US government remains committed to the use of plutonium_238. If DOE is to have a role in developing power systems for NASA's instrumentation, it should focus on promising solar technology, an alternative that has been promoted in the European scientific community.

There are also proliferation concerns as it pertains to this plan. A return to production of this isotope, however poorly justified, means a return to the use of aqueous reprocessing at DOE facilities where this technology has been used to extract bomb material for the weapons program. >From President Carter to presidents Bush and Clinton, US policy has been to halt reprocessing in this country in order to set a global precedent to curtail the spread of nuclear weapons material? a noble effort in serious need of bolstering through action.

**1640-2
(Cont'd)****1640-3****1640-4****1640-5****Response to Commentor No. 1640**

supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed production of plutonium-238 are relatively low and are discussed in detail in Chapter 4 of Volume 1, and Appendixes H, I, and J of Volume 2 in the Final NI PEIS.

1640-4: DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternative energy sources for space missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. The Cassini fly-by occurred exactly as planned, with no release of nuclear material.

1640-5: It is not true that resumption of plutonium-238 production constitutes a return to reprocessing. The aqueous technique that would be used to separate plutonium consisting of over 80 percent plutonium-238 and neptunium from the irradiated target is similar to the technology that was used in portions of the complex process to extract plutonium-239. However, as discussed in PEIS Sections S.3, 2.2.3 and A.1.4, this technology would be used to chemically separate plutonium-238 and neptunium from irradiated targets and not from irradiated or spent nuclear fuel, whereas reprocessing separates weapons grade plutonium-239 from irradiated nuclear fuel. Plutonium-238 extraction is not reprocessing. Unlike plutonium-239, plutonium-238 is not used in nuclear weapons, but rather it would be used as a power and heat source for NASA space missions. The Nuclear Infrastructure Nonproliferation Impact Assessment, published in September 2000, confirms that extracting

Commentor No. 1640: Maurice Horn (Cont'd)

Indeed, an otherwise lukewarm Nuclear Infrastructure Nonproliferation Impact Assessment conducted by your Office of Arms Control and Nonproliferation questions whether our commitment to nonproliferation isn't weakened by the use of the Fluorinel Dissolution Process Facility within Building 666 at INEEL. INEEL's reprocessing facility is next door to a wet storage unit for Navy spent fuel, which contains a greater than average amount of highly enriched uranium. It was reprocessed from 1953 to 1989 at INEEL for the weapons program. Use of this facility to carry out plutonium-238 extraction, especially considering the dubious need for this isotope, at the very least raises the concern that DOE is not fully committed to ending reprocessing. The international community cannot be expected to trust DOE's civilian_mission claim when an agency devoutly committed to development of weapons uses a nuclear weapons technology at a weapons facility.

**1640-5
(Cont'd)**

Considering all these factors that could adversely affect our environment and commitment to nonproliferation, I strongly urge you to select alternative 5 in the current PEIS. This alternative would allow the Advanced Test Reactor at INEEL to continue producing medical and industrial isotopes for the commercial sector and would not lead to the production of anymore highly radioactive liquid waste at Hanford or INEEL. The main mission at these two facilities has been and should continue to be cleanup of the mess left over from previous nuclear weapons work. Additional waste production would interfere with this already difficult and expensive work. Alternative 5 also calls for the decommissioning of the FFTF reactor at Hanford. FFTF is an aging breeder reactor whose use would be inconsistent with United States policy to discourage use of this technology due to the capability this class of reactors has to produce more plutonium than is consumed. Thank you for the opportunity to comment on this plan.

1640-6

Sincerely,

Maurice E. Horn
404 Pondera Ave., Bozeman, Mt 59718_6352, U.S.A.
Phone: 406_586_0886 Email: <mhornrentalres@mcn.net>

Response to Commentor No. 1640

plutonium-238 from irradiated targets would not undermine nonproliferation goals. In this report, DOE recognizes that proliferation concerns might be raised related to one of the technical assessment factors, "reduction in attractiveness of material forms," due to the fact that, in the extraction of plutonium-238, the remaining unconverted neptunium, a weapons-useable fissile material used as target material for conversion into plutonium-238, must also be recovered (not produced), purified, and recycled. This is unavoidable (unless the United States elects to neither produce or purchase plutonium-238), and it impacts all PEIS alternatives and options, including the No Action Alternative and Alternative 5: permanently deactivate FFTF with no new missions at U.S. facilities. However, while the fact that concerns might be raised is a valuable input to the record of decision process, it does not constitute an inconsistency with or departure from nonproliferation policy, and plutonium-238 is needed to fulfill our missions. Further, in the event that plutonium-238 production is resumed in the United States, the total separated stocks of neptunium would be reduced over time in an irreversible manner since there is a moratorium on U.S. spent fuel reprocessing. This overall reduction in a weapons useable material would mitigate the potential concerns related to material attractiveness, and offer an additional method to pursue U.S. nonproliferation goals. DOE's proposed approach in this mission, and its rigorous nonproliferation impact assessment, demonstrate its commitment to nonproliferation policy, domestically and in the international community.

The juxtaposition of Fluorinel Dissolution Process Facility (FDPF) in INEEL Building 666 to wet storage of highly enriched uranium Navy spent nuclear fuel, and its previous mission of reprocessing spent nuclear fuel, were rigorously and objectively evaluated in the Nuclear Infrastructure Nonproliferation Impact Assessment published in September 2000. In no uncertain terms, this report discusses the proliferation concerns raised in the areas of facilitating cost-effective international monitoring and supporting negotiation of a verifiable Fissile Material Cutoff Treaty (FMCT), and outlines what is needed to mitigate these concerns. This is a valuable input to the record of decision process.

Most of the concerns and uncertainties surrounding the use of FDPF are associated with its history as a defense programs facility and the resulting lack of transparency that could be afforded in the event that international monitoring becomes desirable under an FMCT. This is a different set of concerns than those expressed in the comment. The fact is, that since it is

Commentor No. 1640: Maurice Horn (Cont'd)

Response to Commentor No. 1640

well known that FDPF has a long history of Navy defense missions, and since the described mission (plutonium-238 extraction) in the PEIS does not involve the production of special fissile material, sufficient transparency could possibly be provided by a managed access regime that would meet the requirements of FMCT verification. If this could be done, the aforementioned concerns would be mitigated.

- 1640-6:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. It should be noted that medical isotopes would continue to be produced at ATR regardless of which alternative is selected in the Record of Decision. The FFTF would produce spent nuclear fuel and low-level radioactive waste, and as discussed throughout Section 4.3 of Volume 1, none of the proposed alternatives would add waste to the high-level waste tanks at Hanford or INEEL. Also, it should be pointed out that while FFTF supported the breeder reactor program, it is not itself a breeder reactor, but rather a fast flux research reactor.

Management of waste that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1 that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Sections 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

With respect to cleanup of waste at Hanford or INEEL, the proposed action and the existing cleanup missions are independent programs and actions related to one will not impact the other. While the cleanup activities at both Hanford and INEEL are a high priority to DOE, it should be noted that the cleanup of legacy waste is beyond the scope of the NI PEIS.

Commentor No. 1641: Wwdenny@aol.com

From: Wwdenny@aol.com%internet
[SMTP:WWDENNY@AOL.COM]
Sent: Saturday, September 16, 2000 1:43:58 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: NO More Nucler Waste in the Columbia River!
Auto forwarded by a Rule

|| 1641-1

Response to Commentor No. 1641

1641-1: DOE notes the commentor's concerns regarding the migration of contaminants to the Columbia River. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE and are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

All environmental parameters (e.g., air, soil, surface water, groundwater, vegetation, animals, etc.) in and around the Hanford Site are monitored on a set frequency. The information is available to the public in annual monitoring reports. No food or water restrictions are currently in place outside the Hanford Reservation as a result of Hanford activities.

The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Commentor No. 1642: Max Eiden

From: Maxeiden@aol.com%internet
 [SMTP:MAXEIDEN@AOL.COM]
 Sent: Saturday, September 16, 2000 12:36:19 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: comment_ineel
 Auto forwarded by a Rule

Ms.Brown...I am opposed to the doe proposal to produce plutonium at the INEEL site in Idaho. I am infavor of the alternative which would end the production program entirely at the site. I think that is alternative # 5. As you are aware the INEEI is a listed superfund site. There are presently four plumes of contaminated ground water, improperly stored liquid and solid waste, leaking pools of contaminated liquid and many more known and unknown polluting sources at the site. The DOE and the EPA should focus all efforts into cleaning up the site and eliminating further contamination of the aquifer or the site. To allow further activities which will produce more waste before cleanup of the site is irresponsible. The contamination of the aquifer cannot be cleaned up..the damage will be irreparable. Please act responsibly!!!

Max Eiden

1642-1

1642-2

Response to Commentor No. 1642

- 1642-1:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Options 1, 2, 3, 5, 7, 8, and 9 of Alternatives 2, Use Only Existing Operational Facilities, which would involve the production of plutonium-238 at INEEL.
- 1642-2:** The commentor's position regarding cleanup and additional activities at INEEL are noted. Section 3.3.11.1 of Volume 1 discusses the superfund status of INEEL. Implementation of the nuclear infrastructure alternatives at INEEL would not alter DOE's goal to complete remediation of contaminated sites in time to achieve de-listing from the National Priorities List by 2019. DOE's use of and impact on the Snake River Plain aquifer are discussed in Section 3.3.4.2.1.

Commentor No. 1643: Kevin N. Schwinkendorf

From: Kevin N. Schwinkendorf
[SMTP:KEVIN.N.SCHWINKENDORF@WORLDNET.ATT.NET]
Sent: Saturday, September 16, 2000 1:11:13 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Restart of FFTF
Auto forwarded by a Rule

Gentlemen:

I support the restart of the Fast Flux Test Facility located at the Hanford, Washington site. This reactor has the capability to provide much-needed medical isotopes for both diagnosis and treatment of horrible diseases such as cancer. Please be objective and base your decision on technical merit. Thank you.

Dr. Kevin N. Schwinkendorf, PhD, PE
Richland, WA

1643-1

Response to Commentor No. 1643

1643-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1644: Judith L. Gregoire

From: Judith L. Gregoire
[SMTP:SEAROSEBB@OREGONCOAST.COM]
Sent: Saturday, September 16, 2000 3:48:38 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Hanford Test Facility
Auto forwarded by a Rule

Please add my name to those writing to encourage the restart of the Fast Flux Test Facility at Hanford, in Richland, WA. It is much needed, both now and increasingly, in the future.

Thank you.

Judith L. Gregoire
P.O. Box 122
Oceanside, OR 97134

1644-1

Response to Commentor No. 1644

1644-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1645: Greg Galpin

From: Greg Galpin
[SMTP:GREG@MAGNUMELECTRIC.COM]
Sent: Saturday, September 16, 2000 5:11:02 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF restart
Auto forwarded by a Rule

Please restart the FFTF reactor. It is needed for domestic production of medical isotopes, and could also be fitted up to help generate electricity.

Thank you,

Greg Galpin
Magnum Electric
p: (509) 783_7411
f: (509) 735_7666
e: greg@magnumelectric.com

|| 1645-1

|| 1645-2

Response to Commentor No. 1645

1645-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

1645-2: DOE notes the commentor's support for using FFTF to help generate electricity. However, FFTF would not be used for the generation of electrical power under the proposed action. The purpose of the NI PEIS is to evaluate the environmental impacts of a range of reasonable alternatives to maintain and enhance DOE's existing nuclear facility infrastructure to support production of isotopes for medical research, and industrial uses; production of plutonium-238 for use in future NASA space exploration missions; and U.S. nuclear research and development needs for civilian application.

Commentor No. 1646: Harold L. Anderson

From: Harold L Anderson[SMTP:HLA8@JUNO.COM]
 Sent: Saturday, September 16, 2000 7:29:30 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: NI_PEIS Public Input
 Auto forwarded by a Rule

Miss Collette Brown,
 I urge that the preferred Alternative be No. 1 for any combination of the civilian missions. That is, FFTF should be restarted and utilized to its fullest.

I appreciated hearing you state in the Seattle hearing that the 400 MW FFTF would be operated at 100 MW with the possibility of higher power excursions if certain experiments should warrant it, without being limited to 100 MW.

Thank you for all your hard work.

Harold L. Anderson
 1106 Wilson Street
 Richland, WA 99352_2849
 (509) 943_2317

1646-1

Response to Commentor No. 1646

1646-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1647: Andy Savage

From: savage[SMTP:SAVAGE@EASYPNET.CO.UK]
 Sent: Saturday, September 16, 2000 8:10:09 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: PUBLIC COMMENTS ON DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT (PEIS)
 Auto forwarded by a Rule

DoE PLANS FOR EXPANDED PRODUCTION OF PLU_238 FOR FUTURE SPACE MISSIONS

Dear Colette E. Brown,

People in the UK are very concerned that the US seems to be increasing the amount of PU238 in the world. It is not in the interests of the world's people, only of a few scientists, and should therefore not be allowed to go ahead.

Please confirm that you will not be risking our lives, those of the rest of this world's creatures, and of our future generations. You have no right to do this, other than through the abuse of the power given to you by your transient position as the most powerful nation on earth.

This power is yours largely because of your image in the world as the home of freedom and promise, but should people's impression change to seeing you as a threat to their existence, or the well_being of their children, you will not be able to maintain your superiority.

Thanks

Andy Savage.

1647-1

Response to Commentor No. 1647

1647-1: DOE notes the commentor's opposition to enhancing its existing nuclear facility infrastructure to support production of plutonium-238 for use in future NASA space exploration missions.

**Commentor No. 1648: John A. Kitzhaber, Governor,
State of Oregon**

JOHN A. KITZHABER, M.D.
GOVERNOR



August 29, 2000

The Honorable Bill Richardson
Secretary of Energy
Forrestal Building
1000 Independence Avenue SW
Washington D.C. 20585

Dear Secretary Richardson:

The Department of Energy recently issued a draft Environmental Impact Statement that considers restart of Hanford's Fast Flux Test Facility (FFTF) to meet expanded isotope production and nuclear energy research missions. I urge you to reject consideration of the FFTF for these missions and permanently shut down the reactor.

In December 1997, I wrote to Secretary Peña, urging him not to restart the FFTF to produce tritium for the nation's nuclear weapons program. One of my concerns then, as it is now, is that restart of the reactor would complicate the formidable and essential task of cleaning up Hanford's waste. I was pleased when you announced in December 1998 that FFTF would not be restarted to produce tritium.

When I expressed my opposition to use of the FFTF for tritium production, I also indicated I would be willing to consider restart of the reactor to produce medical isotopes if DOE could demonstrate a compelling need for FFTF's use to ensure sufficient supplies of these isotopes. As a physician, I do not want a shortage of isotopes to jeopardize medical research, diagnosis or treatment. If I believed the FFTF were crucial to ensuring a sufficient supply of these isotopes, I would support its restart. However, I am not convinced that is the case.

A subcommittee of DOE's Nuclear Energy Research Advisory Committee says the FFTF would not be an economically viable or dependable source of isotopes for research purposes and that existing reactors in Missouri and Tennessee are better suited for this mission. The draft EIS identifies the same reactor in Tennessee and another in Idaho as having additional capacity available to produce medical isotopes used in diagnosis and treatment. The draft EIS did not consider Canadian sources -- one of America's largest suppliers of isotopes -- where two new reactors are scheduled to go on-line this year solely for the purpose of producing isotopes. It is clear there are sufficient sources available -- without FFTF -- to produce needed medical isotopes.

STATE CAPITOL, SALEM 97310-0370 (503) 378-3111 FAX (503) 378-4863 TTY (503) 378-4859

1648-1

1648-2

1648-3

Response to Commentor No. 1648

- 1648-1:** The commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF With No New Missions, are noted.
- 1648-2:** The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.
- 1648-3:** Section 1.2 of Volume 1 of the Final NI PEIS has been revised to provide additional information on the need to expand domestic medical and plutonium-238 isotope production capabilities. DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual rate of growth of medical isotope use is consistent with the Expert Panel findings.

The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting

**Commentor No. 1648: John A. Kitzhaber, Governor,
State of Oregon (Cont'd)**

The Hon Bill Richardson
August 29, 2000
Page 2

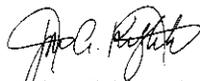
The DOE similarly limited its look at alternatives for producing plutonium 238 for space travel. The draft EIS disregards all international sources and eliminates some domestic alternatives because they would not be able to meet the combined needs of all the proposed missions. Removing these artificial constraints would favor many alternatives better suited than FFTF to meet even the most optimistic projected needs for plutonium 238.

The stated need for advanced nuclear energy research and development – beyond our existing programs – is questionable. New nuclear power plants are not competitive in today's energy market and have little public support. Further, the draft EIS ignores the main obstacle to reinvigorating the U.S. nuclear industry: the lack of institutional capacity to deal with the waste stream.

It is disturbing to me that viable alternatives to the proposed uses for FFTF were disregarded in the draft EIS. The final EIS should be more of an honest assessment of legitimate nuclear-related needs and a comprehensive look at the best methods to meet those needs.

For the past eight years, the consideration of potential new missions for the FFTF has diverted a substantial amount of time and energy from Hanford cleanup and caused a significant drain on DOE's budget. Efforts to justify a new mission for this reactor have all failed. I believe that the FFTF does not have – and will never have – a mission and should be permanently shut down.

Sincerely,



John A. Kitzhaber, M.D.

JAK/NR/sm

**1648-3
(Cont'd)**

1648-4

1648-5

1648-6

Response to Commentor No. 1648

nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other missions.

DOE acknowledges that there are other manufacturers of medical radioisotopes, including the University of Missouri and International Isotopes Incorporated (which has constructed a linear accelerator from assets purchased from the former Superconducting Super Collider Project), and the domestic production capabilities of these facilities have been considered in the development of the NI PEIS. While some existing facilities may possess the capacity to support production of small quantities of research isotopes, NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000, recommends that:

"Plans for acquiring a dedicated radioisotope production reactor should be initiated so that both the cyclotron and reactor radioisotope production facilities will meet the radioisotope needs of the U.S. research community by 2010." The report further states:

"It is important that contingency planning be performed and implemented by Isotope Programs that act to guarantee isotope supplies in the long term. This must include consideration of facility retirement and/or redirection, potentially major changes in the agreements underlying parasitic production, successful consolidation of processing capabilities, and the timing and uncertainties of bringing new, dedicated facilities online." Further, as explained in Section 2.6.1 in Volume 1 of the PEIS, medical isotope production at DOE Facilities in Idaho and Tennessee may be sufficient for short term, but will not be sufficient to meet long term growth projections forecasted by the Expert Panel. Canada supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99). Canada does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. Because of the short half lives of most medical isotopes, purchase from other countries would not be feasible.

***Commentor No. 1648: John A. Kitzhaber, Governor,
State of Oregon (Cont'd)***

Response to Commentor No. 1648

As explained in Section 1.2.2 of Volume 1 of the PEIS, the Russian purchase of plutonium-238 satisfies the near-term responsibility to supply NASA with the necessary fuel for space exploration. However, due to the political and economic climate in Russia and concerns of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. DOE's selection of 5 kg plutonium-238 production per year is based on the uncertainties in the radioisotope power system technology development and requirements for backup units, as well as the variability in the amount needed to meet NASA's power requirements.

1648-4: In January 1997, President Clinton tasked his Committee of Advisors on Science and Technology (PCAST) to evaluate the current national energy research and development portfolio and to provide a strategy that ensures the United States has a program to address the Nation's energy and environmental needs for the next century. In its November 1997 report responding to this request, the PCAST Energy Research and Development Panel determined that restoring a viable nuclear energy option to help meet our future energy needs is important and that a properly focused research and development effort to address the potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) was appropriate. The PCAST panel further recommended that DOE reinvigorate its nuclear energy research and development activities to address these potential barriers. Further information on the need for nuclear energy research and development is provided in Section 1.2.3 of Volume 1.

It is assumed that the commentor is talking about high-level radioactive waste and spent fuel when referring to the lack of institutional capacity to deal with the waste stream from nuclear power plants. The NI PEIS assumes, for the purpose of analysis, that Yucca Mountain, Nevada, would be the final disposal site for DOE's high-level radioactive waste and spent nuclear fuel. DOE has prepared a separate EIS, "Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada" (DOE/EIS-0250D, July 1999), which analyzes the environmental impacts from construction, operation and monitoring, related transportation, and eventual closure of a potential geological repository.

***Commentor No. 1648: John A. Kitzhaber, Governor,
State of Oregon (Cont'd)***

Response to Commentor No. 1648

1648-5: The NI PEIS evaluates the environmental impacts of a range of reasonable alternatives for enhancing DOE's existing nuclear facility infrastructure to support the proposed action. In addition to restarting the FFTF, the NI PEIS also evaluates alternatives that would either employ the use of other existing facilities or rely on the construction of new facilities. Alternative 2, Options 4 and 5, considers the use of commercial light water reactors (CLWRs) as irradiation facilities for plutonium-238 production.

A number of facilities, including those already producing isotopes, were considered but were dismissed from further consideration (see Section 2.6). Among the reasons that some were dismissed was the fact that they lacked sufficient neutron production capacity, were fully dedicated to existing missions, were not capable of steady-state neutron production, had insufficient power to sustain adequate steady-state neutron production, were unable to produce a constant, reliable source of neutrons due to dependency on operating schedules of their primary missions, are under construction with capacity fully dedicated to other planned missions, or have been permanently shut down.

1648-6: See responses to 1648-1 and 1648-2.

Commentor No. 1649: Linda Allan

From: Cohofarms@aol.com%internet [Cohofarms@aol.com]
Sent: Saturday, September 16, 2000 8:27 PM
To: www.Nuclear.infrastructure_PEIS%internet
Subject: Keep FFTF

I urge that we keep FFTF for preferred medical isotopes.

Linda Allan

|| 1649-1

Response to Commentor No. 1649

1649-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1650: Howard D. Lenkersdorfer

From: Duane Lenkersdorfer[SMTP:DLENK@OWT.COM]
Sent: Sunday, September 17, 2000 12:00:01 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Fast Flux Test Facility Restart
Auto forwarded by a Rule

Atten: Colette E. Brown

I would ask the Department of Energy to use the FFTF to produce needed Medical Isotopes for the fight against cancer. It is very important to have such a facility here in the United States. My father died of cancer, I know first hand of the pain and suffering during treatment and of the final stages of this disease.

Sincerely,

Howard D. Lenkersdorfer
1530 Ridgeview Ct.
Richland, Wa. 99352

1650-1

Response to Commentor No. 1650

1650-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1651: Mary A. Davis

From: Bill or Molly
 [SMTP:APPLBLOSSM@EARTHLINK.NET]
 Sent: Sunday, September 17, 2000 11:46:08 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: FFTF Shutdown
 Auto forwarded by a Rule

There are many good reasons why the Fast Flux Test Facility should be shut down but for starters, and probably most important, Hanford is already an extremely contaminated nuclear site. How about addressing the waste that's been accumulated before adding more to it!

Mary A. Davis
 21102 Summit Lane
 Edmonds, WA 98026

1651-1

1651-2

Response to Commentor No. 1651

1651-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

1651-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

Commentor No. 1652: Michael J. Contini

From: Mjcontini@aol.com%internet
[SMTP:MJCONTINI@AOL.COM]
Sent: Sunday, September 17, 2000 3:16:36 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Revised Comments
Auto forwarded by a Rule

Please substitute these revised and more extensive comments for those I turned in at the TriCities PEIS Hearing.

Thankyou,

Michael J. Contini
Mailing Address: 302 Torbett PMB 243, Richland, WA 99352
Residence: 120 Tree Farm Road, Pasco, WA 99301

MICHAEL J. CONTINI, COMMENTS MADE AT THE PEIS SCOPE HEARING.
RESIDENCE: 120 Tree Farm Road, Pasco, WA 99301
Mailing: 302 Torbett PMB 243, Richland, WA 99352

Good evening. I am a resident of Franklin County. I am an electrical engineer employed at FFTF. I would like to thank the Department of Energy for having this meeting in the Tri_Cities. We, the residents of Benton and Franklin Counties, are the most immediate down streamers or down winders from Hanford and the FFTF. I have a daughter and son_in_law who reside in Portland. In 1983, I WAS a cancer patient. It goes with out saying that my family has a lot at stake here. I favor the alternative, which makes use of the FFTF because it can safely supply the most diverse number and quantity of medical isotopes.

The Programmatic EIS needs include the following:

- 1) A complete and categorical lifetime exclusion of any future mission for FFTF involving the production of any WEAPONS MATERIALS such as Plutonium or Tritium. If the DOD wants them, they can go somewhere else.

1652-1

1652-2

Response to Commentor No. 1652

- 1652-1:** DOE notes the commentor's support for Alternative 1, Restart FFTF.
- 1652-2:** DOE notes the commentor's objections to restarting FFTF if it were going to be used for the production of nuclear weapons materials. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

No component of the proposed action is for the purpose of supporting any defense or weapons-related mission. While no defense missions are planned for the FFTF, DOE cannot categorically exclude the possibility of the facility supporting a currently unforeseen future defense need. However, any such support would only occur at the direction of the Secretary of Energy, and would require the preparation of additional NEPA assessment.

Commentor No. 1652: Michael J. Contini (Cont'd)

2) For all alternatives, a section must be included which identifies the plans and activities, which will be put in place to minimize isotope production waste and reactor core waste, therefore minimizing the impact to the environment. A commitment must be made, if the particular alternative is chosen, to include the detailed plans and programs in the authorization basis. For the alternative including FFTF, I suggest that a criterion for authorization must be the creation of a Waste Board. The charter of this board would be to research and supervise the implementation of methods to minimize final quantities of waste to be stored. These would include process improvements, recycling, and finding external uses for the waste products.

1652-3

3) All alternatives must include the impact on the local electrical distribution system. The PEIS must answer the question: Is the infrastructure in place that could supply the necessary electrical power or would it have to be constructed. A further useful comparison would consider the amount of electrical energy required for operation of each facility at full capacity.

1652-4

4) The PEIS does not appear to consider the potential for Actinide or Waste Transmutation for each of the alternatives. How much long_lived waste can be converted to short_lived waste?

1652-5

The Final PEIS must include and address the concerns of all. Those that I have heard can be lumped into the categories of Safety, Waste, and Need. The DOE must not just dismiss any recommendations made by any individual or group.

1652-6

Humans are part of the environment. Therefore, it is right and just to consider the impacts of medical isotope supply limitations to the humans with cancer. Some contend this is a regional issue. WRONG, cancer is a national and international issue, with the availability of treatments being a supply and demand issue. Remember, in a limited supply environment, those who can pay for the travel and the treatment (foreign dictators, social elite, political

Response to Commentor No. 1652

1652-3: DOE notes the commentor's suggestion for a "Waste Board." The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

1652-4: Under both "No Action" and Alternative 5, "Permanently Deactivate FFTF," additional electrical power would not be required or would be very small. Under Alternative 2, "Use Only Existing Operational Facilities," the bounding additional electricity needs at Oak Ridge, INEEL and Hanford are presented in Tables 4-163, 4-167, and 4-171 of the NI PEIS. At ORR and INEEL, the additional electrical consumption would be negligible. At Hanford, the additional electrical consumption would be 55,000 megawatt-hours per year, which represents only 2.2 percent of the total site's electrical capacity. Because of the relatively small electricity needs, a breakdown of need by facility is not warranted.

Under Alternative 3, "Construct New Accelerator(s)," the additional electrical consumption would be approximately 250,000 megawatt-hours per year and under Alternative 4, "Construct New Research Reactor" the additional electrical consumption would be approximately 25,000 megawatt-hours per year. For the accelerator alternative DOE acknowledges that a significant load would be added to the local electrical grid. In the event the Record of Decision selects the accelerator alternative for implementation, subsequent NEPA documentation would assess grid stability and other electrical load assessment criteria in the evaluation of alternative site locations. Included, as necessary, would be detailed electricity needs for each facility. Although implementation of the reactor alternative would require a much smaller amount of additional electricity, similar NEPA documentation would assess electrical grid capabilities for the various alternative sites.

1652-5: Transmutation of transuranic waste and spent nuclear fuel is hypothetically possible, but the technology for accomplishing such transmutation is unproven. If transmutation should be demonstrated as a

Commentor No. 1652: Michael J. Contini (Cont'd)

elite, Hollywood elite, the rich) get the treatments. The rest of us will be left with surgery, chemotherapy and beam radiation treatments, and the well-known consequences of them. Thank you.

08/30/00 Revised Comments at Seattle and Tri Cities

Thank you for this opportunity. My name is Michael Contini. I am a resident of the Tri_Cities area, specifically, Franklin County. I am speaking tonight as a private citizen. I support alternative one, restart of the FFTF for the production of Medical and Commercial Isotopes, Pu 238, and for nuclear research. However, I want a statement in the PEIS that provides a categorical exclusion of using FFTF at anytime for the production of nuclear weapons materials of any kind. It is also my opinion that deferring the EIS for the new reactor or new accelerators is irresponsible. You can define the impacts of the facilities to any environment with the proviso that the specific details would be covered in a subsequent site specific EIS.

I want to now turn my attention to accountability. There is a sign here concerning "2 FFTF employees fired for falsifying work done." I am familiar with this event since I work at FFTF. This event happened and the employees paid the price, they were fired. They were held accountable.

Can we say this about Heart of America NW (HOANW), the Government Accountability Project (GAP), and Columbia River United (CRU)? What accountability exists for them? They can distort, misquote, and take out of context items of great concern. Again, what accountability exists for the watchdogs of Hanford? "Who will watch the watchman" is a quote I have often heard. (Julius Ceaser ??) The above methods used by these organizations to foster public support both verbal and financial are RADICAL and EXTREME.

I now refer to the publication The Environmentalist's Little Green Book. If you want to refer to it, it is available at

1652-1

1652-2

1652-7

1652-8

Response to Commentor No. 1652

viable waste or spent nuclear fuel treatment technology in the future, it could be applied to transuranic waste and spent nuclear fuel generated under the nuclear infrastructure alternatives described in Section 2.5 of Volume 1. Transmutation of nuclear waste and spent nuclear fuel is one example of the type of civilian research that could be conducted with accelerators or nuclear reactors under the mission described in Section 1.2.3 of Volume 1.

- 1652-6: DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and to providing ample opportunity for public comment on those actions. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the environmental impact analysis of DOE's proposed alternatives for meeting mission requirements. In preparing the Final NI PEIS, DOE carefully considered comments received from the public. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.
- 1652-7: DOE notes the commentor's views and concerns regarding the need to prepare subsequent NEPA documentation should either Alternative 3 Construct New Accelerator[s] or Alternative 4 (Construct New Research Reactor) be selected. As a programmatic document, this NI PEIS has a rather broad scope associated with the selection of facilities and site locations for accomplishing expanded civilian nuclear energy research and development and the identified isotope production missions. The CEQ regulations for implementing NEPA (40 CFR 1502.20) encourage agencies to 'tier' their NEPA documentation down from those having a program- or policy-level focus to subsequent and more-detailed documents as a means of eliminating repetitiveness and to provide for a level of analysis appropriate to each level of decisionmaking. This is the approach being employed by DOE herein as a detailed, site-specific analysis of environmental impacts of the accelerator(s) and research reactor options is not necessary at this stage of DOE's decisionmaking process for expanding civilian nuclear infrastructure.
- 1652-8: DOE notes the commentor's views and observations.

Commentor No. 1652: Michael J. Contini (Cont'd)

www.uschamber.com from the US Chamber of Commerce. I quote some of the heroes of the environmental movement.

"We in the Green movement aspire to a cultural model in which the killing of a forest will be considered more contemptible and more criminal than the sale of 6_year_old children to Asian brothels."
Carl Amery, Green Party of West Germany

"To feed a starving child is to exacerbate the world population problem." Lamont Cole, former Yale University professor

"...The only hope for the world is to make sure there is not another United States. We can't let other countries have the same number of cars, the amount of industrialization, we have in the U.S. We have to stop these Third World countries right where they are."
Michael Oppenheimer, senior scientist for the Environmental Defense Fund

"Complex technology of any sort is an assault on human dignity. It would be little short of disastrous for us to discover the source of clean, cheap, abundant energy, because of what we might do with it."
Amory Lovins, Rocky Mountain Institute

"Let's face it. We don't want safe nuclear power plants. We want NO nuclear power plants."
A spokesperson for the Government Accountability Project, The American Spectator, Vol. 18, No. 11, November '85

"Giving society cheap, abundant energy would be the equivalent of giving an idiot child a machine gun."
Dr. Paul Ehrlich, Stanford professor of biology

"The right to have children should be a marketable commodity, bought and traded by individuals but absolutely limited by the state."
Kenneth Boulding, originator of the "Spaceship Earth" concept

"I do not believe that a human being has a right to life...I would rather have medical experiments done on our children than on animals."
PETA (People for the Ethical Treatment of Animals)

**1652-8
(Cont'd)**

Response to Commentor No. 1652

Commentor No. 1652: Michael J. Contini (Cont'd)

"We are not interested in the utility of a particular species, of a free flowing river or ecosystem to mankind. They have intrinsic value, more value _ to me _ than another human being or a billion of them."
David Graber, Biologist with the U.S. National Park Service

"Human beings, as a species, have no more value than slugs."
John Davis, Editor of Earth First! Journal

"The world has cancer, and the cancer is man."
Alan Gregg, former longtime official of the Rockefeller Foundation

These views would be considered RADICAL and EXTREME by most people, who support environmental cleanup and responsibility. Are these the views of HOANW, the GAP and CRU? The methods they use (distortion, misquoting, taking out of context, propagation of unfounded fear) would point to a RADICAL and EXTREME agenda. Will these activists be held accountable for the results and intended consequences of their activities? Who will hold them accountable? Will cancer patients? Will the Department of Energy? Will the Washington State Department of Ecology? Will the residents of Washington and Oregon?

Finally, I am concerned with the environment. I want Hanford cleaned up as safe as possible. However, the small quantity of waste (in comparison to the huge quantities already there) which FFTF will produce (and NOT introduce into the existing mess) for the missions of the PEIS is a small price to pay for the benefits gained. Further, I want the Willamette River cleaned up, thus helping to keep the Columbia River clean. (Refer to the AP article, TriCity Herald August 22, 00) I want the true cause of the high rate of cancer in Hood River County Oregon determined and the causing factors eliminated or at least minimized. I want Puget Sound and Elliot Bay cleaned up. However, I do not support the RADICAL and EXTREME views quoted above, nor the RADICAL, EXTREME and DECEITFUL methods used by HOANW, the GAP, and CRU, all of which lead me to question their agenda and their integrity. Thank you.

**1652-8
(Cont'd)**

Response to Commentor No. 1652

Commentor No. 1653: David Kipping

From: David Kipping[SMTP:KIPPING@MICRON.NET]
Sent: Sunday, September 17, 2000 3:26:05 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Public Comment
Auto forwarded by a Rule

TO: Ms. Collette Brown
Department of Energy, Office of Space and Defense Power
Systems, Germantown, MD

SUBJECT: Nuclear Infrastructure EIS

Attached is my public comment on the Nuclear Infrastructure EIS.
It is in Microsoft Word 97 format.
Thank you,

David Kipping, kipping@micron.net

Response to Commentor No. 1653

Commentor No. 1653: David Kipping (Cont'd)

Comment on the Infrastructure EIS
by David Kipping

I have studied the draft EIS Summary (July 2000) and the Cost Summary (August 2000) in considerable detail. I have not looked at the supplementary and backup material that accompanies the EIS. This statement represents my personal opinions and not that of any organizations with which I am affiliated.

This public comment highlights the points that I consider the most critical. There are many other items of lesser importance that should be mentioned, but I do not have the time to research and document them fully. My conclusion is that this draft EIS is severely flawed and should be rewritten and re_issued as a second draft EIS.

1) The overall purpose of this EIS is very unclear. Is the overall goal to enhance nuclear infrastructure as a fundamentally good thing, or to meet specific production requirements (Pu_238, isotopes, etc.)?

The EIS specifically rejected Canada as a source of isotopes (S_19) because it did not build up infrastructure and, for the same reason, was negative about Russia as a source of Pu_238 (S_6). In other words, the goal seems to be to build up infrastructure, no matter what the cost or need.

On the other hand, allowing Russia to provide Pu_238 (in one of the alternatives) implies that meeting national requirements for critical items is the goal of the EIS. If so, meeting those needs should be done at the minimum cost, even if it means relying on foreign sources. Both Canada and Russia have proven to be reliable sources for over 10 years.

2) This EIS does not adequately substantiate the need for infrastructure expansion.

1653-1

1653-2

Response to Commentor No. 1653

1653-1: DOE notes the commentor's views. Consistent with its mandates under the Atomic Energy Act, DOE is proposing to enhance its nuclear facility infrastructure for the purposes of addressing three primary needs:

1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;

2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and

3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio.

The NI PEIS acknowledges that the United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. As discussed in Section 1.2.1, DOE's intent is to complement commercial sector capabilities to ensure that a reliable supply of isotopes is available in the U.S. to meet future demand, and to encourage the commercial sector to privatize the production of isotopes that have established applications to a level that would support commercial ventures. The NI PEIS also considers the possible purchase of plutonium-238 within the terms of the current contract with Russia to support U.S. needs. To address long-term plutonium-238 needs, a production goal of 2 to 5 kilograms (4.4 to 11 pounds) per year has been analyzed.

1653-2: DOE notes the commentor's views. The NI PEIS evaluates the environmental impacts of a range of reasonable alternatives for enhancing DOE's existing nuclear facility infrastructure to support production of isotopes for medical, research, and industrial uses, production of plutonium-238 for use in future NASA space exploration missions, and U.S. nuclear research and development needs for civilian application.

Commentor No. 1653: David Kipping (Cont'd)

There appear to be four separate objectives that form the basis of DOE's assertion that infrastructure must be expanded:

1. To ensure a supply of medical isotopes to support medical needs,
2. To ensure a supply of isotopes to support various research and development initiatives,
3. To ensure an adequate supply of Pu_238 to support NASA's needs, and
4. To expand the civilian nuclear research capacity and infrastructure.

However, this document does not adequately substantiate the purpose and need for taking action within each of those four objectives. Explanations of current and existing capability and capacity leave the reader with the impression that some or all of the objectives could be achieved through continued operation of existing facilities. For example, it appears that R&D isotope production could be met through continued operation of ATR, HFIR, and commercial reactors, that continued purchases of medical isotopes from Canadian sources would fulfill needs for medical isotopes, and that the U.S. could continue to purchase Pu_238 from the Russians. Because those actions would fall within the intended mission of existing facilities, I am left wondering why NEPA documentation is required.

3) This document presents some alternatives, but not others.

The document presents a mind_boggling array of alternatives with at least 26 permutations of alternatives. The approach seems to be to select parts of several alternatives when the final decision is made (S_11), hence none of the alternatives are necessarily what the final decision will represent.

Unfortunately, it is unclear how these alternatives address DOE's four basic objectives under its purpose and need for action. It

**1653-2
(Cont'd)**

1653-3

Response to Commentor No. 1653

DOE is proposing to enhance its nuclear facility infrastructure because existing sources that provide these capabilities are not expected to reliably meet the projected long-term U.S. needs for expanded nuclear materials production and testing or research and development. Each of the alternatives in the NI PEIS would contribute to fulfilling some of the DOE missions. While HFIR, ATR, and commercial reactors are considered for production of plutonium-238, it is unlikely that reliable, increased production of medical, industrial, and research isotopes to support projected needs could be accomplished at these facilities without disturbing their existing missions. Section 1.2 of Volume 1 has been revised to clarify the purpose and need of the proposed action.

1653-3: Section 2.7.1.2.3 of Volume 1 of the Draft NI PEIS presents a comparison of mission effectiveness among alternatives. This section has been revised in the Final NI PEIS (see Section 2.7.3, Comparison of Mission Effectiveness Among Alternatives) to provide the reader a better understanding of the medical isotopes that can be produced using accelerator technology (Alternative 3) and reactor technology alternatives (Alternatives 1 and 4).

1653-4: The alternatives proposed by the commentor each involve the use of foreign sources of either plutonium-238 or medical isotopes. While the acquisition of plutonium-238 is a possibility under the No Action Alternative, it is the intent of the NI PEIS to analyze the impacts of accomplishing expanded civilian nuclear energy research and development and isotope production missions in the United States. This is consistent with the Nuclear Energy Research Advisory Committee report that found that "There is an urgent sense that the nation must rapidly restore an adequate investment in basic and applied research in nuclear energy if it is to sustain a viable United States capability in the 21st Century."

As noted above, DOE could purchase plutonium-238 from Russia to satisfy its near-term responsibility to supply NASA with the necessary fuel to support future space exploration missions. However, as discussed in Section 1.3.3 of the NI PEIS, the long-term viability of the U.S. maintaining its plutonium-238 inventory through continued purchase of this material beyond the existing contract terms is uncertain.

The United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. See the response to 1653-1, above.

Commentor No. 1653: David Kipping (Cont'd)

appears that some of the alternatives only address a portion of the four objectives. I understand that the "no action" alternative inadequately addresses the four objectives, but I question why other alternatives were considered if they do not meet all four of the objectives. The EIS should more clearly demonstrate how each alternative considered would address the four objectives or offer an explanation as to which of the four objectives would be achieved by each of the alternatives, and which would not.

**1653-3
(Cont'd)**

In addition, it is not clear why the alternatives described were considered and other apparently viable alternatives were not. For example, it seems that one reasonable alternative would be to use HFIR and ATR to produce medical and R&D isotopes and to continue current reliance on Russian sources for PU_238. Another possibility would be to use HFIR and ATR to produce PU_238 and R&D isotopes and to rely on Canadian sources for medical isotopes; this alternative was not evaluated. A third option is to rely on the Russians for Pu_238 and to use HFIR and ATR to do R&D isotopes and rely on Canadians for medical isotopes; this approach was not evaluated either. ATR & HFIR are fully operational; why not use them for production of isotopes? The EIS does not provide clear explanations for why some alternatives were considered and others were not.

1653-4

4) It is unclear whether there is a real need for production of Pu_238

It is not clear whether any Pu_238 will be required in the future. NASA wrote a letter to DOE, dated 22 May 2000, regarding production of Thermoelectric Generators (powered by Pu_238). The letter is a modification to a Memorandum of Understanding from 1991. The key part of the NASA letter is:

1653-5

"As a result of the proposed DSS program changes, NASA Headquarters no longer has an identifiable planned requirement for Small Radioisotope Thermoelectric Generator (SRTG) power

Response to Commentor No. 1653

It should be noted that the first alternative proposed by the commentor is essentially the No Action Alternative (i.e., purchase plutonium-238 from Russia and continue medical and industrial isotope production and nuclear research and development activities at the current operating levels of existing facilities). Other alternatives, in addition to proposing the use of foreign sources of both plutonium-238 and research isotopes, suggest using HFIR and ATR to support research isotope production. However, while these reactors may possess the potential capability or capacity to support research isotope production, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without disturbing the existing missions of these facilities.

1653-5: Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Under the No Action Alternative, DOE would continue to purchase plutonium-238 to meet the space mission needs for the 35-year evaluation period considered in the NI PEIS. However, DOE recognizes that any purchase beyond what is currently available to the United States through the existing contract would likely require negotiation of a new contract and may require additional NEPA review.

The May 22, 2000, correspondence from NASA to DOE identifies that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, SRTG development efforts were stopped in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires one-third less

Commentor No. 1653: David Kipping (Cont'd)

systems. Therefore NASA Headquarters requests that all SRTG development efforts for DSS spacecraft missions be halted. In addition, investigation into the utilization of the ES and Multi_Hundred Watt systems for DSS applications should be stopped."

This letter implies that there is no future need for Pu_238 by NASA beyond current missions for which they already have Pu_238 power supplies. This view is shared by 15 elected officials who publicly stated their opposition to startup of the FFTF. All 15 elected officials may be wrong, but this is a key point.

Public concern for the possibility of re_entry into the atmosphere of a Pu_238 power supply is providing impetus to develop alternative power supplies. The numbers in the EIS for Pu_238 needs appear to be based on historical trends, and not on what NASA really needs. It is essential that the EIS provide incontrovertible proof that, in fact, NASA has a need for Pu_238 for the next 35 years.

5) The need for new infrastructure for production of isotopes has not been demonstrated.

The only justification for new infrastructure is a vague "need" of 7 to 14% a year stated by an unnamed panel convened by DOE (S_3). There does not appear to be any independent assessment by the medical or research community. In order remedy this inadequate explanation of need, the EIS must: include a full explanation of all current and viable sources of each desired medical isotope and R&D isotope. Include clear estimates of the projected demand for and projected shortfall of each isotope over a specified timeframe. Projections should be based on clearly stated assumptions. Demonstrate how each estimate of projected demands, shortfalls, and timeframes has been independently verified. Provide a clear justification for expansion of civilian isotope production capacity and infrastructure and demonstrate how that need has been verified.

**1653-5
(Cont'd)**

1653-6

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plutonium-238 as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000, letter to DOE that large RTGs be maintained as backup. Section 1.2.2 of Volume 1 was revised to clarify plutonium-238 mission needs.

For analysis purposes, the NI PEIS evaluates impacts from facility construction, modification, startup, and 35 years of operation, followed by decommissioning when applicable. The 35-year operating period is based upon the estimated length of time existing DOE irradiation facilities would continue operating if used for accommodating the stated missions. Although future space mission schedules over a long-term planning horizon of 20 to 35 years cannot be specified at this time, DOE anticipates that NASA space exploration missions conducted during this period will continue to require plutonium-238-fueled power systems.

Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed production of plutonium-238 are relatively low and are discussed in detail in Chapter 4 and appendixes H, I, and J in the Final NI PEIS. Potential health and safety impacts associated with future launches of spacecraft utilizing plutonium-238 are not within the scope of the NI PEIS analysis, but would be addressed in the specific NEPA documentation prepared by NASA in support of such missions.

1653-6: DOE notes the commentor's views. DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was

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6) There is no real justification for new or improved facilities for nuclear research. The EIS does not discuss current deficiencies in research facilities and does not project future requirements. The document conflates production needs (Pu_238, isotopes) with more generalized research needs. See Point 1 above.

1653-7

7) Why were not the Office of Science and Technology's needs factored in? The title of the document implies that it covers all possible future needs, yet it states that it does not address any Office of Science and Technology needs (S_1). It makes no sense to exclude OST's needs. The National Environmental Policy Act requires consideration and public disclosure of the full impacts of all related actions during decision making. DOE should make every effort to consider all impacts of related decisions to ensure full compliance with NEPA and to avoid vulnerability to being challenged for segmentation of decision_making.

1653-8

8) The need for new infrastructure for production of Pu_238 has not been demonstrated.

Given that there is a need for Pu_238, the Russians are a reliable and cost_effective source. They have been providing Pu_238 for about 10 years on very favorable cost and delivery terms. Although, it was not mentioned in the EIS, there is no doubt that the Russian Pu_238 will be much less expensive than the costs of restarting and operating irradiation and reprocessing facilities in the US. As mentioned in Point 1 (above), utilizing Russian supplies seems to be discounted.

1653-9

Finally, one of the alternatives for production of Pu_238 (actually Np_237) is to use commercial reactors rather than building or restarting DOE facilities. Reprocessing would still have to be done by DOE to recover the Pu_238.

One of the main arguments for restarting the FFTF is for production of Pu_238. With two other possible sources, both of which are likely to be less expensive, restart of FFTF does not seem like

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revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

For the purposes of analyses in the NI PEIS, a representative set of isotopes was selected on the basis of the recommendations of the Expert Panel, medical market forecasts, reviews of medical literature, and more than 100 types of ongoing clinical trials that use radioisotopes for the treatment of cancer and other diseases. These isotopes, which are comprised of both reactor- and accelerator-produced isotopes, are listed in Chapter 1 of the NI PEIS along with a brief description of their medical and/or industrial applications. These include research isotopes with currently limited availability, such as copper-67, as well as commercial isotopes whose current application is inhibited by lack of availability or high cost, such as palladium-103. However, the absence of any specific isotope from these tables should not be interpreted to mean that it could not be considered for production under the proposed action. DOE expects that the actual isotopes and specific amounts produced as a result of the proposed action would vary from year to year in response to the focus of clinical research and the specific market needs occurring at that time.

1653-7: DOE notes the commentor's views. Clean, safe, reliable nuclear power has a role today and in the future for our national energy security. In recognition of this need, nuclear energy research and development programs have been initiated to address potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) and to ensure that current nuclear power plants can continue to deliver adequate and affordable energy supplies. Because it is unlikely that existing facilities could fully and effectively support these nuclear energy research and development initiatives without disturbing their existing missions, DOE is proposing to enhance its nuclear facility infrastructure to also support these activities. Information on the need for nuclear energy research and development is provided in Section 1.2.3 of Volume 1.

1653-8: The PEIS does not contemplate actions to meet the needs of all future missions of DOE, including those assigned to the Office of Science, which has its own particular set of needs to carry out its important missions. This programmatic EIS will not preclude the Office of Science from making decisions regarding its future activities.

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a reasonable alternative. Another argument for restarting the FFTF is to produce isotopes, since the current operational facilities (ATF and HFIR) will be very busy producing Pu_238. However, if DOE does not need to produce Pu_238 in any of its facilities, then there is enough capacity in existing operational facilities to produce isotopes. Hence, there is no viable mission for FFTF and it should be shut down (Alternative 5).

9) The need for new infrastructure for production of isotopes has not been demonstrated.

Even if there is a need for increased amounts of medical and research isotopes, this document does not present an adequate rationale for developing additional infrastructure. It appears that commercial facilities (existing or projected), Canadian sources, and existing DOE facilities (ATR and HFIR) can meet these needs.

10) No cost information was included in the EIS.

I realize that NEPA does not require inclusion of cost information, however DOE must have thought it was important. The cost information was eventually published a month after the EIS was issued, and obviously had no effect on the EIS. If cost information is to be taken into account, it should be part of the EIS. As a minimum, the comment period should have been extended to allow careful consideration of the cost information supplement.

The cost information states that all of the alternatives except Alternative 5 and "no action" would deactivate the FFTF (the main EIS summary is unclear on this point). The cost estimates for Alternatives 2, 3, 4, and 5 include \$281 million for deactivation of the FFTF. By comparison, restart of the FFTF (Alternative 1) appears to only require \$341 million, thus making restart look more favorable as it is only \$60 million more than deactivation. If deactivation of FFTF at the end of its life is included the comparable cost becomes \$595 million, thus making restart a

**1653-9
(Cont'd)**

1653-2

1653-10

1653-11

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1653-9: DOE notes the commentor's opposition to restarting FFTF for expanding its nuclear facility infrastructure. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost.

The potential production of plutonium-238 using ATR, HFIR, or a commercial reactor was evaluated in the NI PEIS because it would be compatible with the operating requirements of these facilities' existing missions. However, different irradiation requirements are associated with the production of medical, industrial, and research isotopes. While ATR, HFIR, or a commercial reactor may possess the potential capability or capacity to support isotope production, it is unlikely that reliable, increased isotope production to support projected needs could be accomplished without disturbing the existing missions of these facilities.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

1653-10: DOE agrees with the commentor's statement that NEPA does not require the cost of alternatives to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such an ancillary

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much more expensive alternative. DOE should make sure that the two sets of analyses are consistent so the public can make meaningful comparisons based on consideration of both environmental impacts and costs.

I found Figure S_1 on page S_4, very helpful. It allows the reader to understand the very complex decision process. It should be included in the EIS. Similarly Tables S_2 and S_3, summarizing costs should be included in the EIS.

11) No non_proliferation impact information was included in the EIS.

There are two aspects of this EIS that affect the US position on non_proliferation. If the FFTF is restarted, the preferred fuel is highly enriched uranium (HEU) and mixed (plutonium) oxide fuel (MOX). It is against US policy to use HEU (S_13) and the use of MOX fuel is still being debated. I am concerned that the use of HEU as fuel may violate non_proliferation policy and agreements with international governments. If Pu_238 is to be produced, then the Np_237 targets will have to be processed. The technique for doing this is essentially the same as is used for recovering weapons_grade Pu_239 and U_235. In 1992, the Bush administration specifically terminated reprocessing of materials for weapons production. Extracting Pu_238 flies in the face of this national policy.

DOE should provide a clear explanation of how HEU could be used without violation of non_proliferation policy. DOE should consider impacts on non_proliferation policy in the selection of its preferred alternative.

The non_proliferation impact information was eventually published two months after the EIS was issued, and obviously had no effect on the document. Non_proliferation impact information must be taken into account and it must be part of the EIS. As a minimum,

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(Cont'd)**

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document need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed this document to about 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P in the Final NI PEIS.

DOE also notes the commentor's request for extension of the public comment period. The Council on Environmental Quality's (CEQ) "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act" (40 CFR 1506.10(c)) require that a minimum of 45 days be allowed for public comment on the Draft NI PEIS. As stated in the Notice of Availability (65 FR 46443 et seq.), the public comment period began on July 28, 2000 and continued to September 18, 2000. In preparing the Final PEIS, DOE has assessed and considered both oral and written comments received on the Draft PEIS during the public comment period and has responded to these comments in the Final PEIS. Volume 3 of the NI PEIS contains public comments received on the NI PEIS and DOE responses to those comments. Moreover, late comments were considered to the extent practicable.

1653-11: Deactivation of FFTF is not part of implementing Alternative 1, Restart FFTF. Deactivation of FFTF is part of implementing Alternatives 2, 3, 4, and 5 and including the cost of FFTF deactivation in the implementation costs for these alternatives is appropriate. The Cost Report was structured to identify the implementation costs of the various alternatives so the Secretary of Energy would have this information along with other data for consideration.

DOE has provided a summary of the Cost Report in Appendix P in the Final NI PEIS. The summary includes the figure and tables referenced by the commentor.

1653-12: This commentor addresses two primary areas of concern related to proliferation policy: the use of mixed oxide and highly enriched uranium to fuel the FFTF; and, extraction of plutonium-238 which requires separation of neptunium. Regarding proposed FFTF fuels: the use of mixed oxide or highly enriched uranium to fuel the FFTF has been rigorously evaluated in the Nuclear Infrastructure Nonproliferation

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the comment period should have been extended to allow careful consideration of the non_proliferation impact information supplement.

12) The EIS does not deal with High_Level Waste.

In the alternatives that involve processing Np_237 targets to extract Pu_238, there is no mention of the generation of High_Level Waste (HLW). It seems quite unlikely that the wastes that will be generated would not include HLW. If HLW will not be produced, there should be an explanation as to how it will be avoided. The semantic argument that HLW is the product of reprocessing and the we are merely processing Np_237 (and producing low level waste) is unacceptable.

Reprocessing of weapons grade material produces a large quantity of liquid radioactive HLW, and the Pu_238 extraction process is essentially the same. It is estimated that approximately 288,000 gallons of HLW would be generated over 35 years if processing is done at INEEL.

If processing of Np_237 is done at INEEL (CPP_651 & CPP_666) there are many problems:

The facility was shut down in 1989 because it could not meet environmental regulations in place at that time. The costs, timelines, and implications of meeting the current environmental regulations must be documented in the EIS. When the facility was permanently shut down as a result of the ban on reprocessing, it was not fully cleaned up and there are still intermediate products in storage and many contaminated areas. The facility must be cleaned up before it could be used again. The costs, timelines, and implications of this necessary cleanup must be documented in the EIS. There is no place to store the HLW that will be produced. The current INEEL tank farm is aging, leaking, and in the process of being closed. The tanks are well beyond their design life and

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(Cont'd)

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Impact Assessment. This report, published in September, 2000, confirms that the manner in which these fuels would be used, as described in the PEIS, is consistent with nonproliferation policy. In the event that a decision is made to restart FFTF, the first six years of operation would use existing onsite mixed oxide (MOX) fuel. DOE expects that an additional 15-year supply of mixed oxide fuel in Europe, owned by Germany, could be available for FFTF. MOX fuel does not use highly enriched uranium. Further, use of the Hanford MOX fuel would dispose of a significant U.S. stockpile of highly attractive fresh plutonium fuel by conversion to spent fuel through irradiation in FFTF. This represents a safe, low cost, high benefit opportunity to reduce U.S. civilian plutonium without chemical or bulk processing. Use of the German MOX represents a similar advantage with respect to the German stockpile of separated civilian plutonium. During the period of MOX fuel use, in support of U.S. nonproliferation policy directives, DOE's Office of Nonproliferation and National Security would undertake a study under RERTR to consider the technical feasibility of using low enriched uranium to fuel the FFTF. Under this nonproliferation protocol, if use of low enriched uranium fuel is found infeasible in FFTF for meeting assigned missions, policy would allow DOE to subsequently procure highly enriched uranium fuel for use in FFTF. Again, this approach is consistent with U.S. nonproliferation policy. Regarding plutonium-238 extraction: the aqueous processing technology that would be used to separate plutonium consisting of over 80 percent plutonium-238 and neptunium from the irradiated target is similar to the technology that was used in portions of the complex process to extract plutonium-239. However, as discussed in EIS Sections S.3, 2.2.3 and A.1.4, this technology would be used to chemically separate plutonium-238 and neptunium from irradiated targets and not from irradiated or spent nuclear fuel, whereas reprocessing separates weapons-grade plutonium-239 from irradiated nuclear fuel. Plutonium-238 extraction is not reprocessing. Unlike plutonium-239, plutonium-238 is not used in nuclear weapons, but rather it would be used as a power source for NASA space missions.

The Nuclear Infrastructure Nonproliferation Impact Assessment confirms that extracting plutonium-238 from irradiated targets would not create a nonproliferation threat. In this report, DOE recognizes that proliferation concerns might be raised related to one of the technical assessment factors, "reduction in attractiveness of material forms," due to the fact that, in the extraction of plutonium-238, neptunium, a weapons-useable fissile

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are not suitable for storage of new HLW. In all probability, a new sets of tanks will have to be built for the Pu_238 extraction. The EIS must consider the costs, timelines, and implications of constructing new HLW storage facilities at INEEL. There is no method for treating the new HLW that will be produced. The current INEEL tank farm has been emptied of all reprocessing HLW. That HLW was converted to solid form in the New Calciner. The Calciner has been shut down and is in the process of being closed. The EIS must deal with how the new HLW will be processed and where the solid form will be stored.

I do not have enough knowledge to address the problems if processing is done at other facilities, but I am sure that the problems will be similar, if not more severe.

13) The hidden agenda seems to be restart of the FFTF.

Although no preferred alternative was given, it appears that restarting the FFTF is high on the priority list. Aside from the lack of need for producing Pu_238 and isotopes in this reactor, there are other concerns associated with restart:

- Public acceptance and safety concerns.
- Non_proliferation concerns (see Point 11).
- The high cost of restart (see Point 10).
- Jeopardizing the cleanup effort at Hanford.

I cannot produce details on these concerns, but they must be dealt with in the EIS. I am sure that people in Washington state and near Hanford will produce comments on this topic.

An April 2000 report by the Nuclear Energy Research Advisory Committee, an advisory panel created by the Department of Energy, says that the reactor "will not be a viable source of [medical] research radioisotopes" and that production would not be cost effective. Why was this not mentioned in the EIS?

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(Cont'd)**

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material, must also be recovered, purified, and recycled. This is unavoidable (unless the United States elects to neither produce or purchase plutonium-238), and it impacts all NI PEIS alternatives and options, including the No Action Alternative and Alternative 5: permanently deactivate FFTF with no new missions at U.S. facilities. However, while the fact that concerns might be raised is valuable to the Record of Decision process, it does not constitute an inconsistency with or departure from nonproliferation policy, and plutonium-238 is needed to fulfill our missions. Further, in the event that plutonium-238 production is resumed in the United States, the total separated stocks of neptunium would be reduced over time in an irreversible manner since there is a moratorium on U.S. spent fuel reprocessing. This overall reduction in a weapons-useable material would mitigate the potential concerns related to material attractiveness, and offer an additional method to pursue U.S. nonproliferation goals.

DOE is committed to full compliance with and support of the U.S. policy prohibiting reprocessing.

1653-13: The nuclear nonproliferation impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Nuclear Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such an ancillary document needs only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed this documents to more than 730 interested parties on September 8, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Nuclear Nonproliferation Impact Assessment in Appendix Q in the Final NI PEIS.

Also see response 1653-10.

1653-14: The DOE Manual 435.1. Radioactive Waste Management defines high level radioactive waste as the highly radioactive waste material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid material derived from such liquid waste that contains fission products in sufficient concentrations; and other highly radioactive material that is determined,

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14) This EIS is inadequate in responding to the stated needs.

For all of the reasons given above, I conclude that DOE's analysis is inadequate to support rational decision_making. In addition, the document is too flawed for meaningful public review. I understand there is a great rush to issue a Record of Decision before the current administration leaves office. While there may be some political or even technical advantages to this approach and time schedule, this decision is too important to be rushed without considering of all relevant facts and alternatives. Compliance with NEPA must not be jeopardized.

15) This EIS must be completely re_written to address the current deficiencies.

The EIS should be reissued as a revised draft EIS. DOE should add missing information, develop a solid approach to evaluating and comparing the alternatives, and enhance its analysis to support comparison among the myriad alternatives. This second draft must present all the facts and credible alternatives in a fashion that can be digested and understood by the public. It should substantiate the purpose and need for action, describe all impacts that would result from the comparable alternatives, and evaluate the alternatives using consistent criteria. The public should be afforded an opportunity to review a draft EIS that is not severely flawed in order to participate in a meaningful manner in DOE's decision_making process, as intended under NEPA.

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consistent with existing law, to require permanent isolation. DOE has prepared an implementation guide to DOE M 435.1 to assist in implementing the requirements contained in that manual. For this particular requirement, the definition of high-level radioactive waste, the guide is intended to facilitate the classification of indefinite waste as to whether or not they are high-level radioactive waste. It is recognized that the definition of high-level radioactive waste is not precise and is essentially a source-based definition that also alludes to concentrations of a given waste stream. Page II-8 of this guide notes that for the purpose of managing high-level waste under DOE M 435.1-1 [sic], spent nuclear fuel includes spent driver elements and/or irradiated target elements that contain transuranium elements. This statement was included in the guide because the concentrations of long-lived isotopes are likely to be somewhat high during reprocessing and it also meets the source-based definition. As a result of reviewing this guide and to address the comments raised, DOE is considering whether the waste from processing of irradiated neptunium-237 targets should be classified as high-level radioactive waste and not transuranic waste. As a result, the Waste Management sections (i.e., Sections 4.3.1.1.13; 4.3.2.1.13; 4.3.3.1.13; and 4.4.3.1.13) of this NI PEIS have been revised to reflect this different classification from what was assumed in the draft NI PEIS. As discussed in these revised sections, irrespective of how the waste is classified (i.e., transuranic or high-level radioactive waste), the composition and characteristics are the same and the waste management (i.e., treatment and onsite storage) for this NI PEIS would be the same. In addition, even if the waste is managed as high-level radioactive waste it would have no impact on the existing high-level radioactive waste management infrastructure (e.g., high-level waste storage tanks), since the high-activity waste from processing of the targets would be initially stored and vitrified within the processing facility (i.e., FMEF, REDC, or FDPF).

1653-15: The commentor's positions regarding the use of Building CPP-651 and the Fluorinel Dissolution Process Facility to support production of plutonium-238 are noted. If facilities at INEEL were selected for production of plutonium-238, the facilities would not be operated until compliant with DOE's health and safety standards. This PEIS evaluates the environmental effects that would result from implementation of all of the six nuclear infrastructure alternatives. Program schedules are described in Volume 1, Section 2.7.2. Environmental impacts that would result from the use of Building CPP-651 and the Fluorinel Dissolution

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Endnotes:

1 "DRAFT Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility", DOE/EIS_03100, July 2000.

2 Contact information: P.O. Box 3309, Hailey ID; (208)788_0071; email: kipping2micron.net

3 In the interests of full disclosure, I am the President of the Board of Directors of the Snake River Alliance and have been active in that organization since 1993. I am also a member of the INEEL Citizens' Advisory Board, to which I was appointed in May, 2000.

4 "Restart of Reactor Challenged", Seattle Post_Intelligencer, 29 Aug 2000.

5 Due to the lateness of the non_proliferation impact information (I obtained a copy on 15 September) I was not able to study it in any detail.

6 I do not know where this figure came from, but it has been widely circulated. Conversion of Table S_12 (S_60) from cubic meters to gallons yields 693,000 gallons.

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Process Facility are discussed in Chapter 4. Costs of startup and facility modifications for the Fluorinel Dissolution Process Facility are included in the Cost Report.

The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such an ancillary document need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed this document to about 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P in the Final NI PEIS.

1653-16: DOE notes the commentor's concerns regarding Alternative 1, Restart FFTF, including public acceptance, safety, nonproliferation, cost of restart, and Hanford cleanup. The NEPA process provides DOE with an opportunity to fully analyze the potential impacts of its actions on human health and the environment, and all such relevant impacts have been evaluated in compliance with NEPA. Cost and nonproliferation concerns have been addressed above.

DOE policy encourages effective public participation in its decision making process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

Facility safety is of the utmost concern to DOE and is convinced that FFTF is safe to accomplish the stated missions. In the event that FFTF restart is selected in the Record of Decision, complete safety and operational readiness reviews will be performed prior to the restart. The FFTF Safety Analysis Report is routinely reassessed and updated when required to address any changes in plant configuration due to physical modifications or changes in plant operation procedures. The operational readiness review would assess the current updated Safety Analysis

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Report to ensure that the analyses bound the reactor operating envelope for the stated missions. The analyses presented in this NI PEIS reflect the proposed changes to the reactor core (including fuel and irradiation targets) to perform the stated missions.

DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

FFTF restart would not impact the schedule or available funding for existing cleanup activities. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

1653-17: The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost-efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these

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constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

DOE has taken the Expert Panel and NERAC report recommendations under consideration in developing the range of alternatives evaluated in the NI PEIS. These reports were made available to the public at the NI PEIS public information centers and on the Internet at www.nuclear.gov.

1653-18: DOE disagrees with the commentor's characterization of the NI PEIS as flawed. This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR 1500 through 1508 and 10 CFR 1021), respectively. DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow for a fair comparison among the various alternatives and among the candidate sites for the facilities. This was accomplished through review and analysis of site-specific information on the environmental conditions prevailing at ORR, INEEL, and Hanford to include a comprehensive analysis of the associated environmental and health risks of each alternative.

1653-19: The changes which have been made to the NI PEIS in response to public and agency comments as well as a result of DOE's own internal reviews do not warrant reissuance of the NI PEIS as a revised draft. No fundamental factors relating to purpose and need, the alternatives under consideration, or the associated environmental impact evaluations have changed since the Draft NI PEIS was published. As stated in the responses to the commentor's specific concerns, this NI PEIS presents a substantiated purpose and need for agency action, a range of reasonable alternatives for accomplishing the stated missions, as well as an unbiased and thorough analysis of the associated environmental impacts of each alternative.

Commentor No. 1654: Douglas A. Gantt

From: Douglas A. Gantt[SMTP:DGANTT@3_CITIES.COM]
 Sent: Sunday, September 17, 2000 3:51:18 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: NI_PEIS Comments Document _ Attached
 Auto forwarded by a Rule

Please see attached, completed comments document

I am submitting these comments as an interested, private citizen.

The "Draft Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility," DOE/EIS_03100, July 2000 needs to address several issues in more detail as follows:

1. You identify four alternatives and the no action alternative, which address the Department's objectives. It was noted in the public briefing in Richland, Washington that these alternatives are not equal in their capability to satisfy the Department's objectives. Some description of relative capabilities is provided, but it is very limited in nature. Relative production capacity is not addressed. If, for example, two high_energy accelerators are required, rather than one, in order to produce a comparable quantity of isotopes, this needs to be identified in the PEIS and/or cost study.

Recommendation #1: The PEIS should describe the relative capabilities and the relative production capacities of the alternatives to inform not only the decision_makers, but also the public.

2. In the summary you describe a mission to produce isotopes for medical diagnostic and therapeutic purposes. You quote a report from the NERAC Subcommittee for Isotope Research and Production Planning stating that "It is now widely conceded that limited availability of specific radionuclides is a constraint on the progress of research."

1654-1**1654-2****Response to Commentor No. 1654**

1654-1: A comparison of mission effectiveness among alternatives is presented in Volume 1, Section 2.7.1.2.3 of the Draft NI PEIS presents This section has been revised in the Final NI PEIS (see Section 2.7.1.8, "Comparison of Mission Effectiveness Among Alternatives") to provide the reader a better understanding of the medical isotopes that can be produced using accelerator technology (Alternative 3) and reactor technology alternatives (Alternatives 1 and 4). It should be noted that in addition to the No Action alternative, the NI PEIS presents 5 (not 4) alternatives.

1654-2: The purpose of the NI PEIS is to determine the environmental impacts associated with each of the reasonable alternatives identified by DOE. The scope of the PEIS does not include evaluations of potential socioeconomic and public health impacts that would result from a possible shortfall in the supply of isotopes for the research community.

Commentor No. 1654: Douglas A. Gantt (Cont'd)

Recommendation #2: The PEIS must address, in at least qualitative terms, the socioeconomic impacts and the public health impacts of not providing "an adequate supply of isotopes to keep pace with the growing and changing needs of the research community." There is clearly an adverse impact in these areas under the "no action" alternative and under alternatives 2 and 5. This impact is at least national, if not international in scope.

**1654-2
(Cont'd)**

I strongly urge that the DOE move forward to enhance the nuclear research infrastructure and to maintain the U.S. role as a leader in nuclear science. I believe that the FFTF can be safely operated and would provide the greatest flexibility in meeting all mission objectives. Furthermore, the Department would be retaining up to four times the capability described in the current PEIS, in that the FFTF is proposed to only operate at one fourth of its original design power.

1654-3

Response to Commentor No. 1654

1654-3: DOE notes the commentor's support for Alternative 1, Restart FFTF, however, increasing operating power by a factor of four does not increase infrastructure capability by the same factor due to limitations related to core volume.

**Commentor No. 1655: John Commander
Coalition-21**

From: john commander[SMTP:JXC@IDA.NET]
Sent: Sunday, September 17, 2000 6:11:18 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Cc: joblow@srv.net%internet
Subject: Comments on the Nuclear Infrastructure PEIS
Auto forwarded by a Rule

Coalition 21 Comments 09/17/2000

We support all three missions with in the PEIS scope which include:

- * Medical and Industrial Isotope Production
- * Plutonium 238 Production for Space Missions
- * Nuclear Energy Research and Development for Civilian Applications

We support Alternative 2 Option 2 which would provide for the entire scope of work to be accomplished at INEEL.

1655-1

This requires the use of existing infrastructure for the near term, the next ten years.

For the long term, we also support construction of a new Research Reactor. DOE needs to start the planning phase for a new reactor as soon as possible, since the project planning to actual operation will take at least 15 years in todays environment.

1655-2

We agree with the Cost Report for Alternatives which indicates Alternative 2 Option 2 is the most cost effective approach for near term support of the three missions.

1655-1

We disagree with including D&D of FFTF costs as part of this project cost, since that inflates the project cost. D&D costs for FFTF should not be charged to the project, they should be properly charged to the DOE D&D Account.

1655-3

Response to Commentor No. 1655

1655-1: DOE notes the commentor's support for Alternative 2, Use Only Existing Operational Facilities, Option 2, Irradiate at ATR and Process/Store at FDPF/CPP-651.

1655-2: DOE notes the commentor's support for Alternative 4, Construct New Research Reactor.

1655-3: FFTF would be permanently deactivated should a decision be made to select any alternative other than Alternative 1, Restart FFTF. Therefore the Cost Report correctly assigns these costs in the alternative evaluations.

1655-4: CEQ (40 CFR 1500 et seq.) and DOE (10 CFR Part 1021) implementation regulations do not require inclusion of nonproliferation studies in an environmental impact statement. The basic purpose of the NI PEIS is to describe the alternatives under consideration for implementation (Section 2.5 of Volume 1) and the environmental impacts that would occur if these alternatives were implemented (Chapter 4 of Volume 1). Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. The associated nonproliferation report was made available to the public on September 8, 2000. DOE mailed this document to about 730 interested parties, and the report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in public reading rooms.

DOE also notes the commentor's request for extension of the public comment period. The Council on Environmental Quality's (CEQ) "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act" (40 CFR 1506.10(c)) require that a minimum of 45 days be allowed for public comment on the Draft NI PEIS. As stated in the Notice of Availability (65 FR 46443 et seq.), the public comment period began on July 28, 2000 and continued to September 18, 2000. In

Commentor No. 1655: John Commander (Cont'd)

We received the Nuclear Infrastructure Nonproliferation Impact Assessment too late for review and comment. We therefore request an extension in the comment period to allow for our review of that document.

1655-4

In summary, we wish to express our support for the project; and backing for the short term implementation of the ATR and FDPF/ CPP651 facilities. This fits well with the DOE designation of INEEL as the Lead Laboratory for Nuclear Energy Research and Development.

1655-1

Response to Commentor No. 1655

preparing the Final PEIS, DOE has assessed and considered both oral and written comments received on the Draft PEIS during the public comment period and has responded to these comments in the Final PEIS. Volume 3 of the NI PEIS contains public comments received on the NI PEIS and DOE responses to those comments. Moreover, late comments were considered to the extent practicable.

Commentor No. 1656: Paul and Tonya Davis

From: PRTJDAVIS@cs.com%internet
[SMTP:PRTJDAVIS@CS.COM]
Sent: Sunday, September 17, 2000 6:23:11 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Please restart the FFTF!
Auto forwarded by a Rule

Please restart the FFTF!

Thanks,

Paul & Tonya Davis
Kennewick, WA

|| 1656-1

Response to Commentor No. 1656

1656-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1657: National Association of Cancer Patients

From: Nohobson@aol.com%internet [SMTP:NOHOBSON@AOL.COM]
Sent: Sunday, September 17, 2000 6:27:30 PM
To: Lowe, Owen; Magwood, William; Secretary, The; INFRASTRUCTURE_PEIS, NUCLEAR; bmolivar@televar.com%internet
Subject: PEIS comments from National Association of Cancer Patients.
Auto forwarded by a Rule

NACP DOE NI PEIS Statement and NACP Information Request
September 15, 2000

The National Association of Cancer Patients, La Jolla, California, represents over eight million cancer patients in America, one million in California alone. We strongly support the restart of FFTF because it is a unique source of isotopes for the diagnosis and treatment of many kinds of cancer, and in research to discover new, more effective treatments.

The information below is referenced in studies published in medical journals and given at medical conferences, by the National Institutes of Health, the National Cancer Institute, the Centers for Disease Control in Atlanta, Medicare, the Health Care Finance Administration, the American Cancer Society, and by physicians and patients who have written about medical isotope treatments.

Over 1500 cancer patients die daily in this country, equivalent to three fully loaded Boeing 747s crashing to the earth, killing everyone on board. Under age 65, cancer is the leading cause of death. One child is diagnosed with cancer each hour. Nearly one in two males and one in three females will get cancer. "Smart bullet" medical isotope treatments just target cancer cells and are very effective in treating many types of cancers. For example, after other treatments fail, 70% of dying blood cancer patients remain CANCER_FREE five or more years later. Physicians call these results "spectacular." Cancer patient Laura said, "No previous treatment had done

1657-1

Response to Commentor No. 1657

1657-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1657: National Association of Cancer Patients (Cont'd)

anything to reduce my tumors. What I love about this treatment is that it works, it takes the pain away and there?s no side effects."

The NACP asks the DOE to consider medical isotopes availability a national public health issue and include the following in the NI PEIS. Where will these isotopes be produced? Alpha emitters are best to treat blood and other diffuse cancers. Jacqueline Kennedy Onassis and King Hussein of Jordan had non_Hodgkins lymphoma. An NACP member tried but failed to get isotope information to the King. If treated, he had a better than 90% chance at life and remaining America?s staunch ally in the Middle East. He died of multiple organ failure after his second bone marrow transplant. Twenty percent of cancer patients die from treatment complications, not directly from their cancer.

Cancer does not wait. These isotopes have half_lives measured in MINUTES and REQUIRE a domestic supply. Also consider in the PEIS that patients wish to be treated near their homes, and that additional nuclear facilities will be required to supply these short_lived alpha emitters in the quantities necessary to more effectively treat their disease at sites across the country. There will be over 50,000 new non_Hodgkins lymphoma diagnoses this year. The incidence of this disease is increasing. FFTF could efficiently produce alpha emitters. John Stanford, the much loved Seattle School Superintendent, died last year of acute myeloid leukemia. An NACP member informed him of a study at Memorial Sloan Kettering Cancer Center in New York. It took the DOE three years to supply enough alpha emitters to treat eighteen patients there. There was an insufficient supply and John Stanford was not treated. Had there been enough alpha emitters to treat Mr. Stanford, he would have had a 70% chance of being at his desk today helping the children of Seattle. This year, 9,700 patients will be diagnosed with AML. The DOE has agreed to supply enough alpha emitters by 2002 to treat 36 patients in three years, double the previous amount. What will happen to the over 29,000 patients denied this treatment for a lack of isotope supply? This disease is 75% fatal without isotope treatment. This is unacceptable to

1657-2

1657-3

Response to Commentor No. 1657

1657-2: DOE notes the commentor's support for restarting FFTF in order to increase availability of medical isotopes.

1657-3: DOE notes the commentor's viewpoint. A forecast for future demand for medical isotopes and the expected growth rate of medical isotope use during the next 20 years is provided in Section 1.2 of the NI PEIS. The growth projections were adopted by DOE as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual rate of growth of medical isotope use is consistent with the Expert Panel findings.

Commentor No. 1657: National Association of Cancer Patients (Cont'd)

the NACP and cancer patients. The DOE is RESPONSIBLE to produce and deliver isotopes researchers request, yet its budget request for the isotope program in FY2001 is LESS than for FY2000. Dr. Robert Schenter testified on August 31, 2000 that the FFTF efficiently produced research isotopes, in direct contrast to NERAC's statement that the FFTF is not a research production candidate. One of our members spoke with a woman whose father was treated with high specific activity I_131 produced from FFTF. Given less than three months to live with his non_Hodgkins lymphoma, he remains cancer_free and healthy eleven years after his single treatment. When high_specific activity I_131 becomes available, should FFTF be restarted, Dr. Darrell Fisher, a renowned medical physicist, stated that this would be the isotope of choice, as I_131 from Canada currently being used is only about seven percent pure. The DOE should consult with those in the know instead of rely on uninformed statements from others. The NACP asks Secretary Richardson, prior to making his decision on the NI PEIS, to listen to informed proponents of FFTF, including DOE's own employees and especially those working at FFTF, and give them time equal to that he gave Mr. Pollet of Heart of America. This man is an avowed enemy of FFTF restart, and not an informed scientist.

**1657-3
(Cont'd)**

1657-4

1657-5

1657-6

Efficient new medical isotope production facilities for AT LEAST 37 medical isotopes must be considered. The NI PEIS should also consider a public_private partnership possibility when considering how these isotopes might best be produced and distributed. Please note the following. A recent study showed equally effective prostate cancer control from surgery OR Palladium (Pd) seed implants after twelve years. Pd is backordered up to one year. As a result, men are being FORCED into surgery. A retrospective study showed that over half of prostate surgery patients become impotent, must wear a DIAPER for the rest of their lives or BOTH.

Jerry Petasnick, MD, president of the National Society of Radiologists, said, "Our organization represents over 30,000 practicing radiologists? it is difficult to conduct clinical studies with

Response to Commentor No. 1657

- 1657-4:** DOE notes the commentor's views. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.
- 1657-5:** For the purposes of analyses in the NI PEIS, a representative set of isotopes was selected on the basis of the recommendations of the Expert Panel, medical market forecasts, reviews of medical literature, and more than 100 types of ongoing clinical trials that use radioisotopes for the treatment of cancer and other diseases. These 37 isotopes, which are comprised of both reactor- and accelerator- produced isotopes, are listed in Chapter 1, Volume 1 of the NI PEIS along with a brief description of their medical and/or industrial applications. These include research isotopes with currently limited availability, such as copper-67, as well as commercial isotopes whose current application is inhibited by lack of availability or high cost, such as palladium-103. However, the absence of any specific isotope from these tables does not mean that it could not be considered for production under the proposed action. DOE expects that the actual isotopes and specific amounts produced as a result of the proposed action would vary from year to year in response to the focus of clinical research and the specific market needs occurring at that time.
- 1657-6:** DOE currently has business relationships with private companies related to the production of radioisotopes. If FFTF would be restarted, DOE would pursue business arrangements with private companies in order to offset the cost of isotope production.

Commentor No. 1657: National Association of Cancer Patients (Cont'd)

even very small numbers of patients. Research is being hampered or removed from consideration by a lack of these isotopes. Medical isotopes are often the only effective way to properly diagnose and treat serious disease. It is crucial that we have access to a wide variety of isotopes, including those with high specific activity, appropriate to diagnose, prevent and treat heart disease, cancer, arthritis, and, more recently, infectious disease."

Please listen to physicians who are asking the DOE to supply the isotopes they need to treat their patients. Dr. Carl Mansfield, Thomas Jefferson University Hospital, Philadelphia after a ten year palladium implant BREAST cancer study said, "These implants mean that a patient can KEEP a breast and still have the SAME chances of survival?" President Clinton's mother died of breast cancer.

A reactor, the FFTF is necessary to produce the quantity and quality of isotopes needed to treat patients and save lives. S. De Nardo, MD, at the University of California at Davis, was provided a cyclotron to produce Cu_67. This cyclotron is so inefficient at producing this isotope that even small numbers of study patients are not being accommodated. This isotope has a natural affinity for both prostate and breast cancer, just as iodine has a natural affinity for the thyroid. FFTF could produce large quantities of this isotope and many others. Nearly 360,000 Americans will be diagnosed in 2000 with breast and prostate cancer. Isotope backorders and inadequate supplies of isotopes for study protocols are killing cancer patients. Again, please listen to physicians who are telling the DOE that they do not have the isotopes they need to treat even small numbers of study patients. The NACP predicts a public outcry once these facts become known.

The NACP asks the DOE to consider the Balanced Budget Act of 1997 and include WITHIN in the PEIS a cost_benefit analysis of radioisotope therapy versus older, often less_effective treatments, based on published study statistics. The NACP vigorously disagrees with the DOE statement given at the recent scoping hearings in

1657-7

Response to Commentor No. 1657

- 1657-7:** DOE notes the commentor's views on the costs and benefits of the proposed production of medical radioisotopes. The estimated costs of the range of reasonable alternatives are presented in the Cost Report, summarized in Appendix P of the Final NI PEIS. However, the Cost Report is not a cost-benefit analysis. While it is reasonable to believe that the benefits of medical isotopes are substantial, the purpose of this NI PEIS is to describe the nuclear infrastructure missions (Section 1.2 of Volume 1), a range of reasonable alternatives for satisfying the mission requirements (Section 2.5 of Volume 1), and the environmental impacts that would result from implementation of the alternatives. According to 40 CFR Section 1502.23, if a cost-benefit analysis exists, it must be reported and summarized in the NI PEIS.

Commentor No. 1657: National Association of Cancer Patients (Cont'd)

Washington that there is insufficient data to perform this analysis. This data absolutely exists ? no one from the DOE has made an effort to seek out these figures. The NACP also disagrees with the Frost and Sullivan report that the yearly projected increase in demand for medical isotopes will range between 7 and 14%. The volume increase for 1999 was actually 19%. And it is impossible to predict the huge demand that will result from research breakthroughs in the future. Remember, there was no demand for computers until the computer chip was invented, no demand for antibiotics until penicillin was discovered! The demand came after the discovery!

Eighty percent of cancer patients should benefit from isotope therapy. Over six million cancer patients alive today might benefit from isotope treatments. Over half might be saved. Isotopes given to cancer patients either alone or with other treatments enhance their effectiveness, avoid repeat surgery, chemotherapy and other treatment and followup ? related costs. A six year study showed the death rate from ovarian cancer is 10% with smart bullets, 86% without this treatment. Comedienne Gilda Radner and, more recently, Academy_Award winning actress Madeline Kahn both died of ovarian cancer. It cost an average of \$15,000 in 1993 to care for one dying cancer patient. Over 550,000 Americans will die of cancer this year. It cost over \$600,000 to treat King Hussein. The typical cost for more effectively treating blood cancer with "smart bullets" is less than \$10,000 per patient. Cost savings from treating blood cancer patients alone could easily exceed TEN BILLION dollars per year. Projected savings to Medicare and Medicaid might more than pay for hundreds of DOE programs, with money left over to supply the elderly prescription drugs and health insurance for over 40 million Americans who have none. Include in the NI PEIS a projected estimate of increased tax revenues to the U.S. Treasury as patients like Laura return to work.

Waste minimization. Consider waste minimization in the NI PEIS from the medical community's point of view. Cancer patients produce an enormous volume of hazardous waste that requires

1657-7
(Cont'd)

1657-8

1657-9

1657-10

Response to Commentor No. 1657

1657-8: DOE notes the commentor's concerns. DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

1657-9: See response to Comment 1657-7.

1657-10: Medical wastes are regulated by the U.S. Environmental Protection Agency and authorized State agencies. DOE does not have purview over these wastes or the waste generators. The analysis requested by the commentor is out of scope of the NI PEIS.

Commentor No. 1657: National Association of Cancer Patients (Cont'd)

special handling at high cost. Estimate sharply reduced waste volumes with more efficient medical isotope therapy. There are over 14 million diagnostic tests per year performed in this country that require medical isotopes. Patients are being spared from more costly invasive procedures with this expanding technology for both diagnosis and treatment of disease. In many states, this waste is now being stored in 55 gallon barrels in medical facilities and medical companies under stairwells, in hallways, on loading bays, and in parking lots. This is a health hazard. The DOE should acknowledge this very real situation in the NI PEIS, and work with Congress to address this serious public health issue post haste. Nationally, current hazardous cancer waste volumes are MUCH higher than those generated from the operation of the DOE facilities of Alternate 1 listed in the PEIS.

**1657-10
(Cont'd)**

The NACP asks the DOE to address ALL these points in the PEIS. The NACP asks everyone _ PLEASE, do not play politics on the backs of cancer patients.

Response to Commentor No. 1657

Commentor No. 1658: RosenOn@aol.com

From: RosenOn@aol.com%internet
[SMTP:ROSENON@AOL.COM]
Sent: Sunday, September 17, 2000 8:10:18 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF
Auto forwarded by a Rule

please re_start the FFTF

|| 1658-1

Response to Commentor No. 1658

1658-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1659: Reverend Merepeace-MsMere

From: Reverend MsMere[SMTP:MERPEACE@RMCI.NET]
 Sent: Sunday, September 17, 2000 9:12:04 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Produce potatoes not plutonium
 Auto forwarded by a Rule

September 13, 2000

Ms. Colette Brown
 DOE, Office of Space and Defense Power Systems

Dear Ms. Brown,
 Your Department's recent proposal to expand the civilian nuclear infrastructure, outlined in the Draft Programmatic Environmental Impact Statement for accomplishing expanded civilian nuclear energy research and development and isotope production mission in the United States, including the role of the Fast Flux Test Facility, raises significant nuclear weapons proliferation and environmental issues.

As a member of the Snake River Alliance I have become aware of the serious nuclear contamination and waste problems at INEEL. INEEL is one of the most contaminated areas in America. The Department's recent estimate on cleaning up our site is \$22 billion and is expected to take 50 years__longer than any other DOE facility. In addition, we have over 360 individual superfund sites within the 890 sq. mile area that comprises INEEL. With this known, the last thing we need is a plan to generate more nuclear waste at a site that needs more waste like the DOE needs security scandals. Out of concern for Idaho's environment, I strongly urge you not to pursue the plutonium_238 production mission outlined in your PEIS.

One of the most daunting problems confronting cleanup at major DOE facilities such as Hanford and INEEL, is the solidification of liquid high_level nuclear waste. Your current plan for plutonium_238 production entails the generation of approximately 288,000 additional gallons of this waste over the project's 35 year span.

1659-1

1659-2

Response to Commentor No. 1659

- 1659-1:** The commentor's position regarding plutonium-238 production at INEEL is noted. Production of plutonium-238 at one or more of the candidate sites would be conducted in support of NASA's deep space missions Volume 1, Section 1.2.2 of the NI PEIS). As discussed in Sections 4.3.2.1.13 and 4.4.2.1.13 of the PEIS, selection of the Fluorinel Dissolution Processing Facility and/or the Advanced Test Reactor to support production of plutonium-238 would have no significant impact on the waste management system at INEEL. Use of any of the facilities proposed in this PEIS for the stated missions would not impact cleanup missions at DOE sites.
- 1659-2:** The use of proposed alternative facilities associated with processing of neptunium-237 targets would have no impact on schedules or available funding for high-level radioactive waste programs at either Hanford or INEEL. At INEEL, the tanks would not be used although certain facilities at the Idaho Nuclear Technology Engineering Center (INTEC) would be used to treat the wastes resulting from processing the irradiated targets. These are reliable systems that would process a maximum of 1,050 cubic meters of low-level radioactive waste over the 35-year nuclear infrastructure operational period. The higher activity waste would be treated as a solid form via a stand-alone vitrification system, separate from any tank waste treatment system. At Hanford, the existing high level radioactive waste facilities would not be used, and as analyzed in the PEIS, no existing or planned high-level radioactive waste facilities would be used to treat the wastes resulting from processing the irradiated targets.
- 1659-3:** Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic

**Commentor No. 1659: Reverend Merepeace-MsMere
(Cont'd)**

While this is a small portion of Hanford's high level waste, it is approximately one fifth of what we have remaining here in Idaho, which makes it a very significant amount. Previous leakage of this waste at INEEL and Hanford threatens our water supplies. What we certainly don't need is any more of this most highly problematic of waste forms.

1659-2

Given the certain risks inherent in production of plutonium, the justified need for this material would have to be tremendous, and the PEIS does a poor job of providing ample justification. Beyond the risks involved in production, and the aforementioned resulting waste problem, there is also the issue of an accident occurring upon lift_off or reentry of a space probe carrying this material. The cassini probe, launched in 1997, carried 72 pounds of Pu_238. The potential for an explosion during lift_off or upon an inadvertent reentry during the fly_by phase, gave many in the scientific community pause, including scientists within NASA. According to NASA's own conservative estimate, a burn up upon reentry of the cassini probe could have caused 2,300 cancer fatalities, independent analyses ranged much higher. This potential for a catastrophic release of this extremely toxic material will remain so long as the US government remains committed to the use of plutonium_238. If DOE is to have a role in developing power systems for NASA's instrumentation, it should focus on promising solar technology, an alternative that has been promoted in the European scientific community.

1659-3

There are also proliferation concerns as it pertains to this plan. A return to production of this isotope, however poorly justified, means a return to the use of aqueous reprocessing at DOE facilities where this technology has been used to extract bomb material for the weapons program. From President Carter to presidents Bush and Clinton, US policy has been to halt reprocessing in this country in order to set a global precedent to curtail the spread of nuclear weapons material? a noble effort in serious need of bolstering through action.

1659-4

1659-5

Response to Commentor No. 1659

supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed production of plutonium-238 are relatively low and are discussed in detail in Chapter 4 of Volume 1, and Appendixes H, I, and J of Volume 2 in the Final NI PEIS.

1659-4: DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternative energy sources for space missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. The Cassini fly-by occurred exactly as planned, with no release of nuclear material.

1659-5: It is not true that resumption of plutonium-238 production constitutes a return to reprocessing. The aqueous technique that would be used to separate plutonium consisting of over 80 percent plutonium-238 and neptunium from the irradiated target is similar to the technology that was used in portions of the complex process to extract plutonium-239. However, as discussed in PEIS Sections S.3, 2.2.3 and A.1.4, this technology would be used to chemically separate plutonium-238 and neptunium from irradiated targets and not from irradiated or spent nuclear fuel, whereas reprocessing separates weapons grade plutonium-239 from irradiated nuclear fuel. Plutonium-238 extraction is not reprocessing. Unlike plutonium-239, plutonium-238 is not used in nuclear weapons, but rather it would be used as a power and heat source for NASA space missions.

**Commentor No. 1659: Reverend Merepeace-MsMere
(Cont'd)**

Indeed, an otherwise lukewarm Nuclear Infrastructure Nonproliferation Impact Assessment conducted by your Office of Arms Control and Nonproliferation questions whether our commitment to nonproliferation isn't weakened by the use of the Fluorinel Dissolution Process Facility within Building 666 at INEEL. INEEL's reprocessing facility is next door to a wet storage unit for Navy spent fuel, which contains a greater than average amount of highly enriched uranium. It was reprocessed from 1953 to 1989 at INEEL for the weapons program. Use of this facility to carry out plutonium_238 extraction, especially considering the dubious need for this isotope, at the very least raises the concern that DOE is not fully committed to ending reprocessing. The international community cannot be expected to trust DOE's civilian_mission claim when an agency devoutly committed to development of weapons uses a nuclear weapons technology at a weapons facility.

Considering all these factors that could adversely affect our environment and commitment to nonproliferation, I strongly urge you to select alternative 5 in the current PEIS. This alternative would allow the Advanced Test Reactor at INEEL to continue producing medical and industrial isotopes for the commercial sector and would not lead to the production of anymore highly radioactive liquid waste at Hanford or INEEL. The main mission at these two facilities has been and should continue to be cleanup of the mess left over from previous nuclear weapons work. Additional waste production would interfere with this already difficult and expensive work. Alternative 5 also calls for the decommissioning of the FFTF reactor at Hanford. FFTF is an aging breeder reactor whose use would be inconsistent with United States policy to discourage use of this technology due to the capability this class of reactors has to produce more plutonium than is consumed. Thank you for the opportunity to comment on this plan.

Sincerely,

Reverend Merepeace_MsMere
1609 Lemp Street
Boise, Idaho 83702

**1659-5
(Cont'd)**

1659-6

Response to Commentor No. 1659

The Nuclear Infrastructure Nonproliferation Impact Assessment, published in September 2000, confirms that extracting plutonium-238 from irradiated targets would not undermine nonproliferation goals. In this report, DOE recognizes that proliferation concerns might be raised related to one of the technical assessment factors, "reduction in attractiveness of material forms," due to the fact that, in the extraction of plutonium-238, the remaining unconverted neptunium, a weapons-useable fissile material used as target material for conversion into plutonium-238, must also be recovered (not produced), purified, and recycled. This is unavoidable (unless the United States elects to neither produce or purchase plutonium-238), and it impacts all PEIS alternatives and options, including the No Action Alternative and Alternative 5: permanently deactivate FFTF with no new missions at U.S. facilities. However, while the fact that concerns might be raised is a valuable input to the record of decision process, it does not constitute an inconsistency with or departure from nonproliferation policy, and plutonium-238 is needed to fulfill our missions. Further, in the event that plutonium-238 production is resumed in the United States, the total separated stocks of neptunium would be reduced over time in an irreversible manner since there is a moratorium on U.S. spent fuel reprocessing. This overall reduction in a weapons useable material would mitigate the potential concerns related to material attractiveness, and offer an additional method to pursue U.S. nonproliferation goals. DOE's proposed approach in this mission, and its rigorous nonproliferation impact assessment, demonstrate its commitment to nonproliferation policy, domestically and in the international community.

The juxtaposition of Fluorinel Dissolution Process Facility (FDPF) in INEEL Building 666 to wet storage of highly enriched uranium Navy spent nuclear fuel, and its previous mission of reprocessing spent nuclear fuel, were rigorously and objectively evaluated in the Nuclear Infrastructure Nonproliferation Impact Assessment published in September 2000. In no uncertain terms, this report discusses the proliferation concerns raised in the areas of facilitating cost-effective international monitoring and supporting negotiation of a verifiable FMCT, and outlines what is needed to mitigate these concerns. This is a valuable input to the record of decision process.

Most of the concerns and uncertainties surrounding the use of FDPF are associated with its history as a defense programs facility and the resulting lack of transparency that could be afforded in the event that international monitoring becomes desirable under an FMCT. This is a different set of concerns than those expressed in the comment. The fact is, that since it is

***Commentor No. 1659: Reverend Merepeace-MsMere
(Cont'd)***

Response to Commentor No. 1659

well known that FDFP has a long history of Navy defense missions, and since the described mission (plutonium-238 extraction) in the PEIS does not involve the production of special fissile material, sufficient transparency could possibly be provided by a managed access regime that would meet the requirements of FMCT verification. If this could be done, the aforementioned concerns would be mitigated.

1659-6: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. It should be noted that medical isotopes would continue to be produced at ATR regardless of which alternative is selected in the Record of Decision. The FFTF would produce spent nuclear fuel and low-level radioactive waste, and as discussed throughout Section 4.3 of Volume 1, none of the proposed alternatives would add waste to the high-level waste tanks at Hanford or INEEL. Also, it should be pointed out that while FFTF supported the breeder reactor program, it is not itself a breeder reactor, but rather a fast flux research reactor.

Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

With respect to cleanup of wastes at Hanford or INEEL, the proposed action and the existing cleanup missions are independent programs and actions related to one will not impact the other. While the cleanup activities at both Hanford and INEEL are high priority to DOE, it should be noted that the cleanup of legacy wastes is beyond the scope of the NI PEIS.

Commentor No. 1660: Laurie Smith

FFrom: Laurie Smith
[SMTP:TOUREASYLOVER@HOTMAIL.COM]
Sent: Sunday, September 17, 2000 9:48:08 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF Nuclear Reactor at Hanford
Auto forwarded by a Rule

I oppose the restart of the FFTF Nuclear Reactor at Hanford!!!!
Please, please, please.... do NOT restart this reactor!

Laurie Smith
Aloha, Oregon

1660-1

Response to Commentor No. 1660

1660-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1661: Al Mialkovsky

From: Lazy Boy[SMTP:ALMIA@CDSNET.NET]
Sent: Sunday, September 17, 2000 10:26:56 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Nuclear Reactor at Hanford
Auto forwarded by a Rule

I oppose the restart of the nuclear reactor at Hanford. We don't need to leak any radioactive waste into the Columbia river. It might be nice to consider our needs over "cheap" energy.

Al Mialkovsky

|| **1661-1**

|| **1661-2**

Response to Commentor No. 1661

1661-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1661-2: FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Energy production and its cost are not within the scope of the NI PEIS.

Commentor No. 1662: James Thomas

From: James Thomas
 [SMTP:JIM.THOMAS@MINDSPRING.COM]
 Sent: Sunday, September 17, 2000 10:33:00 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: FFTF EIS Comments
 Auto forwarded by a Rule

Dear DOE,

The following are my comments concerning the proposed restart of Hanford's Fast Flux Test Facility (FFTF). I have been involved in many aspects of Hanford issues since 1984. Based upon this experience and my study of FFTF, I can only conclude that the only option for FFTF should be Option 5: "permanently deactivate FFTF with no new missions."

My reasons for permanently shutting down FFTF are as follows:

1. FFTF is dangerous to operate.
2. FFTF is wasteful. There is no place to permanently dispose of its waste and its operation is not cost effective.
3. The isotopes FFTF would produce are not needed and would be too expensive. Because of this, the Washington State Medical Association, WA Academy of Family Physicians and Physicians for Social Responsibility/National have all passed resolutions opposing the restart of the FFTF.
4. Closure of FFTF is part of the 1989 Tri_Party Agreement.

In short, shut FFTF down and get on with Hanford cleanup. The money saved by shutting down FFTF should be transferred to placing the K Basins fuel into dry cask storage.

Sincerely,
 Jim Thomas
 4317 S.W. Hinds Street
 Seattle, WA 98116

1662-1

1662-2

1662-3

1662-4

1662-5

1662-1

1662-6

Response to Commentor No. 1662

- 1662-1:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 1662-2:** FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.
- 1662-3:** As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.
- The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.
- While cost could be an important factor in the ultimate Record of Decision, the purpose of this and other EISs is to address the environmental consequences of the alternatives for the proposed action. Cost issues associated with the restart of FFTF are beyond the scope of the NI PEIS.
- 1662-4:** DOE notes the commentor's opposition to the restart of FFTF and the concern that additional medical isotopes that would be produced by FFTF are not needed. DOE acknowledges the difficulty in reliably predicting isotopic needs for future uses in research and medicine. Therefore, DOE has sought independent analysis of trends in the use of medical radioisotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it has established

Commentor No. 1662: James Thomas (Cont'd)

Response to Commentor No. 1662

two expert committees. The first, a thirteen-member Expert Panel convened in 1998 to forecast future demand for medical isotopes, included academicians from leading medical universities and schools of public health, and professional affiliations ranging from the National Cancer Institute to manufacturers of radiopharmaceuticals. The second consists of a subcommittee of DOE's Nuclear Energy Research Advisory Committee (NERAC), established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. The members of this Subcommittee were selected based upon their expertise and experience in the production, processing, distribution, and application of stable and radioactive isotopes in the biological and physical sciences, and in medicine. The members included basic and clinical scientists, administrators, and users of isotopes from academia, industry, and the federal government.

In 1998, the Expert Panel estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

1662-5: DOE notes the commentor's opposition to Alternative 1, FFTF Restart, and concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site.

DOE-RL, EPA, and Ecology agreed to a change in this agreement to place the milestones for FFTF's permanent deactivation in abeyance until the

Commentor No. 1662: James Thomas (Cont'd)

Response to Commentor No. 1662

DOE reaches a decision on FFTF's future. Public meetings were held on this formal milestone change. The NI PEIS missions would not have an impact on Hanford cleanup activities.

1662-6: The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As described in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Hanford K Basin issues are not within the scope of this PEIS, as none of the alternatives considered would add to these waste volumes. However, removal of K Basin spent fuel is scheduled to begin prior to the end of 2000.

Commentor No. 1663: Amy Evans

From: Maevans5@cs.com%internet
[SMTP:MAEVANS5@CS.COM]
Sent: Sunday, September 17, 2000 11:16:05 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Re_start FFTF
Auto forwarded by a Rule

A well_organized group of anti_nuclear activists shouldn't be dictating Department of Energy policy. You know what's right for our country _ we need to restart the Fast Flux Test Facility, not only for valuable medical isotopes, but also for research on new technologies in nuclear power. More and more people in this country are becoming aware of the medical isotope issues and in the coming months and years they will cry out that a travesty has occurred if DOE does not fulfill its responsibility to the American people in this area.

I don't think you should count input on the PEIS that is based on false information. I've seen groups like Heart of America get their people to respond to this issue based on complete untruths. Why should you consider a request to shut down FFTF because it will add to high_level waste in leaking tanks or take away from clean_up? It's not true, and in fact if those people were given the facts they might even be for FFTF. These groups should not "get their way" with the government by spreading lies. Stand up to them.

Amy Evans
Kennewick, WA

Response to Commentor No. 1663

1663-1

1663-1: It is DOE policy to encourage public input on matters of regional, national and international importance as part of its commitment to facilitate a public participation process that is open and unbiased. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

1663-2

1663-2: DOE notes the commentor's support for Alternative 1, Restart FFTF.

1663-1

Commentor No. 1664: Martin Evans

From: Maevans5@cs.com%internet
[SMTP:MAEVANS5@CS.COM]
Sent: Sunday, September 17, 2000 11:16:52 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Re_start FFTF
Auto forwarded by a Rule

Re_starting the FFTF should be the preferred alternative in the nuclear infrastructure EIS.

Martin Evans
Kennewick, WA

1664-1**Response to Commentor No. 1664**

1664-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1665: Betty Davenport

From: Les (038) Betty Davenport
[SMTP:DAVENPOR@OWT.COM]
Sent: Sunday, September 17, 2000 11:19:21 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF
Auto forwarded by a Rule

I support the restart of FFTF for the production of medical isotopes primarily, and pu238 for NASA. The research being done with medical isotopes is so important to all humanity that it is unconscionable to not go ahead with it due to the fears of those who don't respect science.

Betty Davenport
1922 Mahan
Richland, WA 99352

1665-1

Response to Commentor No. 1665

1665-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1666: Roxanna Nematollahi

From: rzn@aracnet.com%internet
 [SMTP:RZN@ARACNET.COM]
 Sent: Sunday, September 17, 2000 11:24:57 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Cc: Secretary, The; president@whitehouse.gov%internet;
 vice.president@whitehouse.gov%internet
 Subject: Comments _ Nuclear Infrastructure PEIS
 Auto forwarded by a Rule

Collette E. Brown, NE_50
 US Department of Energy, 19901 Germantown Rd
 Germantown, MD 20874

Re: Comments on the Nuclear Infrastructure PEIS

I urge the DOE to adopt Alternative 5 to permanently deactivate the Fast Flux Test Facility (FFTF). The DOE has demonstrated no compelling reason to justify restart of this antiquated facility. Restart of the FFTF would be too expensive economically and ecologically. The U.S. already has established sources for medical isotopes and Plutonium 238. Medical isotopes for diagnosis and treatment can be produced at existing facilities in Tennessee and Idaho, as well as two new reactors in Canada. NASA has not projected a demand for Plutonium 238 beyond what it is already acquiring. Furthermore, considering the current state of Russia's economy, it seems to be in the United States' defense interest to purchase as much of Russia's Plutonium as possible to avoid its sale to unstable political powers.

No one has ever determined a safe way to dispose of nuclear waste. Nuclear plants cause more problems than they solve. The DOE must stop searching for a mission for this outdated facility and focus on the cleanup of Hanford. The Columbia River area is a unique and ecologically sensitive area. The lives and livelihoods of many depend on a rapid and thorough cleanup. Stop wasting time and money __ permanently deactivate the FFTF.

Roxanna Nematollahi
 PO Box 80131, Portland, OR 97280

Response to Commentor No. 1666

- 1666-1:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 1666-2:** The United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. Further, supplies of many research isotopes are not readily available from existing foreign or domestic sources, causing a number of medical research programs to be terminated, deferred, or seriously delayed. While some existing DOE reactors may possess the potential capability or capacity to support research isotope production, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without disturbing the existing missions of these facilities. As such, reliance on these other sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Although research to identify other potential fuel sources to support these space exploration missions has been conducted, no viable alternative to using plutonium-238 has been established. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's

Commentor No. 1666: Roxanna Nematollahi (Cont'd)

Response to Commentor No. 1666

preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

1666-3: DOE notes the commentor's concern regarding waste disposal. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

1666-4: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford and the risk of contamination to the Columbia River. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Commentor No. 1667: a.snodgrass@mciworld.com

From: a.snodgrass
[SMTP:A.SNODGRASS@MCIWORLD.COM]
Sent: Sunday, September 17, 2000 11:40:11 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: To Whom It May Concern re: FFTF
Auto forwarded by a Rule

please re_start the FFTF

|| 1667-1

Response to Commentor No. 1667

1667-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1668: Cliff Wells

From: Cliff Wells[SMTP:CLIFF.WELLS@VISTO.COM]
Sent: Monday, September 18, 2000 12:15:37 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Cc: ruthy@wpsr.org%internet
Subject: PLEASE SHUT DOWN THE FFTF
Auto forwarded by a Rule

I understand we have until September 8th to submit our opinions on the Fast Flux Test Reactor In Hanford.

I am a "Downwinder" who was raised in Eastern Washington for the first years of my life, and I have registered with the State of Washington.

The Cold War is over in the rest of the world, it is time we ended it here too. For over 55 years we have been messing with nuclear energy at Hanford Washington, and for much of that time, we have not known what we were doing. It has only been afterward that we have found that we made a lot of mistakes. I believe that continuing to make nuclear waste while it leaks into the Columbia River and is incredibly irresponsible. We should shut down the FFTF and start a clean up of Hanford now. It may be too late, but that is no excuse to keep putting it off. We can get a better handle on damage control if we start now and stop making it worse.

I understand that there are claims that they make Medical Isotopes there, but I have heard nothing about where or how or IF they are used. I know though that the Physicians for Social Responsibility, the Washington State Medical Association, Washington Academy of Family Physicians have all passed resolutions opposing the restart of this reactor. I learned a long time ago that Doctors orders are not to be trifled with. When will our country stop and listen to what's best for us, and listen?

The Chernobyl reactor is going to be shut down soon. Is it our goal to surpass that disaster with one right in our back yard? The stories I hear about tanks with chemicals that nobody can identify and the

Response to Commentor No. 1668

1668-1: DOE notes the commentor's concerns regarding the high level waste tanks and migration of contaminants to the Columbia River. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE and are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

In regards to the commentor's concern with Columbia River, all environmental parameters (e.g., air, soil, surface water, groundwater, vegetation, animals, etc.) in and around the Hanford Site are monitored on a set frequency. The information is available to the public in annual monitoring reports. No food or water restrictions are currently in place outside the Hanford Reservation as a result of Hanford activities.

More specific to the DOE missions in this NI PEIS, DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

The environmental impacts associated with operation of the FFTF are addressed in Section 4.3 of Volume 1 of the NI PEIS. The impacts are shown to be small. These impacts specifically include the risks to human health during normal operations and associated with postulated accidents. Over the 35-year operational period no fatalities would be expected among workers or in the general public in the vicinity of Hanford or at distant locations. For perspective, the radiation dose the average American receives from natural sources is about 300 mrem each year. Based on the same 35 year time period used above, approximately 2,600 latent cancer fatalities would be expected among the same population as a result of this natural (non-Hanford related) radiation exposure. Additionally, FFTF is approximately 4.5 miles from the Columbia River.

1668-1

1668-2

1668-1

1668-3

1668-1

Commentor No. 1668: Cliff Wells (Cont'd)

leaks slowly going to our Columbia River sound like the makings of a disaster to top all disasters. Do we have to have an explosion or loss of life before we take this disaster seriously? I hope we can get some people with common sense involved here and start cleaning up after our last 55 years before we make another 55 years of mess for our Great Grandchildren to worry about.

I know there have been law suits over the safety of employees at Hanford. Is that still part of the operating expenses? Is it acceptable if a few Washingtonians are exposed to this so we can provide isotopes for people elsewhere? How long is it going to be before we can produce medical isotopes safely, and without risking the health of the people who live down wind and down stream from our old fashioned factories?

I hope you will consider the volume of letters and emails you get, and give me the the consideration I gave in writing this letter. If you can justify starting the FFTF, maybe you could try to convince me. If you can't, maybe you should reconsider what the citizens of this country really want, and not what you can push on them. Maybe cleanup is in the future of Hanford, THEN we can consider new projects. Maybe if it is not so dangerous to work there, we will be able to attract workers who can do a better job. I think we are probably drawing a lot of people who don't appreciate the danger and they are only making it worse.

Thank you for your consideration.

Cliff Wells
Post Office Box 126
Lynnwood, WA 98046_0126

**1668-1
(Cont'd)**

1668-4

1668-1

Response to Commentor No. 1668

There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

1668-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

1668-3: For nearly 50 years, DOE's use of its unique technologies and capabilities to develop isotopes for civilian purposes has enabled the widespread application of medical isotopes seen today. While its market share is a small fraction of total world isotope production, DOE remains the key provider for a large number of isotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially experimental, these isotopes are not generally purchased in large-enough quantities to make their production financially attractive to private industry. When in operation, FFTF participated in supporting DOE's medical isotope production program. Table C-1 of Volume 2 presents a list of isotopes that could be produced at FFTF. FFTF has produced some of these isotopes in the past and a brief

Commentor No. 1668: Cliff Wells (Cont'd)

Response to Commentor No. 1668

description of the isotope medical and/or industrial application is presented in Table 1-1 of Volume 1.

1668-4: Consistent with its mandates under the Atomic Energy Act, DOE is proposing enhancement of its nuclear facility infrastructure for the purposes of addressing three primary needs:

1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;

2) to support future NASA space exploration missions by reestablishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long term, assured supply; and

3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Purpose and need are discussed in Chapter 1 of Volume 1.

DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and to providing ample opportunity for public comment on those actions. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

Commentor No. 1669: The Trapp Family

From: The Trapp Family
 [SMTP:THETRAPPS@HOME.COM]
 Sent: Monday, September 18, 2000 1:02:56 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: More Plutonium?
 Auto forwarded by a Rule

Hmmm. I've come to the conclusion that there is no planning other than "the immediate"0, at the cost of future generations that you will not be part our own. But, one that we will provide insurmountable challenges in ability to try to contain the additional waste that will come from the restart of FFTF. Incredible!!!

Lenny Trapp.

In Reference to:

Department of Energy consideration to approve the restart of the FFTF (Fast Flux Testing Facility) Nuclear Reactor at Hanford .. Primary reason: to produce Plutonium 238 for the space program but NASA has stated that this is not necessary. Secondary purpose: necessary to create medical isotopes, but Department of Energy has stated this is not necessary.

1669-1

1669-2

1669-3

Response to Commentor No. 1669

- 1669-1:** Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.
- 1669-2:** DOE notes the commentor's concern about NASA's need for plutonium-238 for space missions. A May 22, 2000, correspondence from NASA to DOE identified that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.
- 1669-3:** DOE has sought independent analysis of trends in the use of medical radioisotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it has established two expert committees. The first, a thirteen-member Expert Panel

Commentor No. 1669: The Trapp Family (Cont'd)

Response to Commentor No. 1669

convened in 1998 to forecast future demand for medical isotopes, included academicians from leading medical universities and schools of public health, and professional affiliations ranging from the National Cancer Institute to manufacturers of radiopharmaceuticals. The second consists of a subcommittee of DOE's Nuclear Energy Research Advisory Committee (NERAC), established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. The members of this Subcommittee were selected based upon their expertise and experience in the production, processing, distribution, and application of stable and radioactive isotopes in the biological and physical sciences, and in medicine. The members included basic and clinical scientists, administrators, and users of isotopes from academia, industry, and the federal government.

In 1998, the Expert Panel estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the

Commentor No. 1669: The Trapp Family (Cont'd)

Response to Commentor No. 1669

DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

Commentor No. 1670: G. Parameswaran

From: Gopalakrishnan Parameswaran
[SMTP:SHIVANP@JUNO.COM]
Sent: Monday, September 18, 2000 1:35:17 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Re: Comments on the restart of Fast Flux Test Facility (FFTF) in Hanford.
Auto forwarded by a Rule

From: G.Parameswaran
1521, Bellevue Ave, # 205, Seattle, WA_98122.

To: Ms. Colette E. Brown, NE_50
U.S. Department of Energy, 19901 Germantown Road
Germantown, MD_ 20874.

Dear Miss Brown,

I am firmly opposed to the restart of FFTF, that is proposed in the recent Nuclear Infrastructure Programmatic Environmental Impact Statement (NI_PEIS). I would like to clearly explain why and how I reached this conclusion. I would also like to thank the DOE for giving me the opportunity to comment on this important matter.

After reading the NI_PEIS, one can reasonably infer that the DOE appears to be leaning illogically towards Action Alternative 1(AA1) ie the "Restart FFTF" alternative over all other alternatives. This is extremely disturbing, because of the fact that, this choice would pose the highest public health risks according to your NI_PEIS. I am basing my conclusions on the bar graphs of the NI_PEIS in pages S_48, S_49, S_51 and S_52. The diagrams in S_48 & 49 that summarize "Expected Latent Cancer Fatalities" due to (a) radiological accidents at sites (b) radiological transportation accidents and (c) risks due to incident free transportation, clearly display the high level of risk to public health, involved in proceeding with AA1 . From the bar graphs in page S_51 & 52 similar conclusions can be reached regarding collision and emission fatalities from the various transportation parameters. The choice is inescapable. Only AA5, that "Permanently deactivates the FFTF

1670-1

1670-2

1670-3

1670-4

1670-5

Response to Commentor No. 1670

1670-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

1670-2: In accordance with NEPA and CEQ regulations, this NI PEIS analyzes a range of reasonable alternatives for accomplishing the DOE missions which include the production of medical and industrial isotopes, the production of plutonium-238 for NASA space missions, and nuclear research and development. Alternatives 1, 2, 3, and 4 are reasonable alternatives for accomplishing these missions. Each of the four alternatives mentioned can meet either parts or all of the requirements of the DOE missions and, therefore, each is worthy of consideration. No final decisions have been made with regard to the facilities and locations evaluated to fulfill the requirements of these missions. However, in accordance with Council on Environmental Quality regulations (40 CFR 1502.14(e)), DOE has identified its preferred alternative in Volume 1, Section 2.8 of the Final NI PEIS and included a discussion of DOE's reasons for selecting it. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

1670-3: The facilities considered in the NI PEIS can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Sections 4.2-4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from implementation of the alternatives, including normal operations and a spectrum of accidents that include severe accidents. The environmental analysis showed that while there are differences in risks among the alternatives, the radiological and nonradiological risks are small for all the alternatives.

1670-4: While there are differences in risks among the alternatives, risks that would result from radiological accidents and transportation are small for all the nuclear infrastructure alternatives. Figures shown in the Summary and in Section 2.7.1 of Volume 1 show that the risk of an additional fatality as a result of implementing any alternative is small.

Transportation impacts are not the only factor considered in the selection of an alternative. Accordingly, DOE has identified its preferred alternative in Section 2.8 of Volume 1 and includes a discussion of DOE's reasons for selecting it. DOE's Record of Decision for the NI PEIS will be based on a

Commentor No. 1670: G. Parameswaran (Cont'd)

with no new missions" seems to provide the safest and cleanest route to travel from a public health standpoint. This would help the DOE reorient itself firmly in the direction of its core mission in Hanford, which is one of cleanup of all the nuclear wastes in the site. Moreover, the AA5 would help the DOE recover around \$30 million per annum, which is currently used to keep the FFTF in a "hot standby".

I would like to add further that the primary goals of the DOE ie the (1) production of isotopes for medical and industrial uses (2) the production of Plutonium_238 for NASA and (3) other nuclear research for civilian uses are in no way jeopardized in abandoning the "Restart FFTF" alternative.

In April of 2000, the DOE's chosen panel of experts the " Nuclear Energy Research Advisory Committee" or NERAC, recommended that "the FFTF will not be a viable source of research isotopes". These research isotopes can be generated in a cost effective manner in the accelerators of various universities and research institutions. The added benefit would be one of less nuclear waste in the production process. This committee further states that DOE should not be in the business of producing either medical or industrial isotopes(violation of their mandate), that can and are currently produced by the commercial industry, at great benefit to the US taxpayer. Moreover, the Washington State Medical Association and Physicians for Social Responsibility have stated that medical isotopes are readily available from Canada and other non_DOE sources. How can DOE justify the cost of restarting the FFTF at a cost of over \$423 million, when research isotopes can be produced using accelerators at \$106 million?

The second major reason in proposing "Restart FFTF" in this NI_PEIS is to supply the National Aeronautics and Space Administration (NASA) with Ptutonium_238 for power generation in space reactors. Whereas NASA has unequivocally stated on May 22nd of 2000 that : "NASA has no longer an identifiable planned requirement for Small Radioisotope Thermoelectric

1670-5
(Cont'd)

1670-6

1670-7

1670-8

Response to Commentor No. 1670

number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

1670-5: See response to comment 1670-1.

1670-6: The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

DOE's production and sale of isotopes fall into two categories – "commercial" and "research". "Commercial" isotopes are those that are produced in large, bulk quantities and sold to pharmaceutical companies or distributors, or to equipment or sealed source manufacturers. Examples of commercial radioisotopes produced by DOE include strontium-82 and germanium-68 for medical applications, and iridium-192 and californium-252 for industrial applications. DOE only produces commercial isotopes when there is no U.S. private sector capability or when foreign sources do not have the capacity to meet U.S. needs reliably. In contrast, "research" radioisotopes are typically produced and sold in small quantities in response to specialty orders from researchers preparing experiments in the field of medicine, with small quantities of these radioisotopes also purchased by industrial researchers. Small quantity production of research

Commentor No. 1670: G. Parameswaran (Cont'd)

Generator(STRG) power systems.", the DOE manages to insist to the contrary. Notwithstanding the fact, that there is always a significant risk to the entire global populace in sending nuclear powered space probes ; these stated goals by the DOE makes no sense either scientifically or economically.

**1670-8
(Cont'd)**

These significant findings seems to have mysteriously eluded the DOE in their compilation of the preferred alternatives in the NI_PEIS. I would like to add further, that AA2, AA3 & AA4 are ugly alternatives merely added to beautify AA1 the "Restart FFTF" alternative and merit no serious consideration. The inescapable conclusion is that, to propose restarting of the FFTF, just for civilian nuclear research no longer holds any validity .

1670-2

This letter cannot finish without mentioning the negative impacts to the environment that would result in the "Restart FFTF" alternative. Hanford by all independent estimates has a rather poor record of confining the nuclear wastes it already possesses. There are credible reports that indicate 68 of the 177 High_Level Nuclear Waste tanks are leaking. These wastes might have already polluted the ground water and may be proceeding towards the Columbia river. The untold damages that could accrue to the recently declared "Hanford Reach National Monument" are staggering. This 195,000 acre shrub_steppe ecosystem is the last free flowing non tidal stretch of the Columbia river, that is home to the spawning of at least 80% of fall Chinook Salmon. The "Hanford Reach" is one of the keystones to recovery Salmonid species in the recently declared Endangered Species Act listing. To add more nuclear waste to the Hanford complex , as the "Restart FFTF" would do would be clearly counter productive.

1670-9

1670-10

1670-9

I would like to conclude this letter by stating that "Restart FFTF" AA1 option is a Pandora's box, that must not be opened, because it would have extremely negative impacts on public health and environment of the Pacific NW. I hope the DOE would give thoughtful consideration to my comments.

1670-11

Yours truly,
G.Parameswaran.

Response to Commentor No. 1670

isotopes is not financially attractive to private-sector producers and is generally not undertaken. DOE attempts to provide all research radioisotopes that are requested, subject to production capability, inventory, and financial constraints. As successful application of a specific research isotope is established, the production and sales of that radioisotope may shift from research to commercial status. In recent years, over 95 percent of DOE's sales of radioisotopes by dollar volume were commercial, and 5 percent have been for research.

The United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

The generation of wastes from the production of medical isotopes, which are small in comparison to the candidate sites' current generation rates, are discussed for each alternative in Chapter 4, Volume 1 of the NI PEIS. The additional waste generated would only have a small impact on the management of wastes at the candidate sites.

1670-7: The commentor is comparing the cost of the low-energy accelerator, a element of Alternative 3, Construct New Accelerator(s), with the FFTF. The low-energy accelerator's only mission is to produce a select set of medical isotopes. The FFTF can produce a diverse set of medical and industrial isotopes, plus meet the requirements of the plutonium-238 production mission, and the nuclear energy research and development mission. DOE considers all three missions of equal importance.

1670-8: DOE notes the commentor's concern about NASA's need for plutonium 238 for space missions. The May 22, 2000, correspondence from NASA to DOE identifies that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the

Commentor No. 1670: G. Parameswaran (Cont'd)

Response to Commentor No. 1670

suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

The risk of space missions is out of the scope of the NI PEIS. NASA, however, undergoes a National Environmental Policy Act (NEPA) process for each launch. This includes public participation during which the public may participate in NASA decisions concerning space missions.

1670-9: Evaluations performed in Chapter 4 of the PEIS demonstrate that the restart and operation of FFTF would have a very small impact on public safety and the environment. FFTF restart would not impact the schedule or available funding for existing cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram funds designated for Hanford cleanup, regardless of the alternative(s) selected. As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

Commentor No. 1670: G. Parameswaran (Cont'd)

Response to Commentor No. 1670

1670-10: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

Hanford tank waste issues are not within the scope of this PEIS, as none of the alternatives considered would add to these waste volumes. Nearly all of the lands included within the proposed Hanford Reach National Monument have been remediated and turned over to the U.S. Fish and Wildlife Service by DOE. DOE has every intention of protecting this area.

1670-11: DOE notes the concern expressed in the comment on potential health and environmental impacts of restarting FFTF. The environmental impacts associated with operation of the FFTF and support facilities at Hanford during normal operations and from postulated accidents are presented and discussed in Section 4.3 of the NI PEIS. All impacts to human health and to ecological resources would be small in the immediate area of the Hanford site and negligible at all distant locations.

Commentor No. 1671: Dennis Orren

From: Dennis Orren[SMTP:DORREN@3_CITIES.COM]
Sent: Monday, September 18, 2000 1:39:18 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF
Auto forwarded by a Rule

This is the right facility at the right time for this purpose.
Please re_start the FFTF.

Dennis

|| 1671-1

Response to Commentor No. 1671

1671-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1672: R. K. Greenwell

From: R. K. (Ken) Greenwell[SMTP:KNJGREEN@OWT.COM]
Sent: Monday, September 18, 2000 1:46:53 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Comments on NI PEIS (DOE / EIS_ 0310D)
Auto forwarded by a Rule
September 17, 2000

The purpose of this message is to provide comments on the Nuclear Infrastructure Programmatic Environmental Impact Statement (NI PEIS) which includes the role of the Fast Flux Test Facility (DOE / EIS _0310D).

1) First, I support the expanded DOE nuclear missions as I believe these are very important to the U.S. and it's credibility in dealing with peaceful nuclear issues in the world, and in maintaining a leadership role.

1672-1

1672-1: DOE notes the commentor's support of DOE's proposed expanded nuclear infrastructure to meet the missions addressed in the NI PEIS.

2) I have reviewed the NI PEIS quite extensively. Although I know there is some discussion in various sections of the document that specifies limitations for some of the alternatives in meeting all of the expanded mission requirements, the document still gives an overall impression that Alternatives 1 through 4 could all equally meet all expanded mission requirements. I believe that the public needs to fully and clearly understand that all alternatives are not meeting the same requirements. Those that are performing less of the total mission would be expected to have less environmental impact as they are delivering less. I believe that, as a minimum, a section needs to be added to the document to provide a clear comparison of what is being provided and, equally important, what is not being provided by each alternative regarding the enhanced DOE missions. This should be provided in it's entirety in at least one place to provide a clear, easy to read basis for comparison. It is desirable that this be included both in the Summary and in the main text of the document.

1672-2

1672-2: A comparison of mission effectiveness among alternatives is presented in Volume 1, Section 2.7.1.2.3 of the Draft NI PEIS. This section has been revised in the Final NI PEIS (see Section 2.7.1.8, "Comparison of Mission Effectiveness Among Alternatives") to provide the reader a better understanding of the medical isotopes that can be produced using accelerator technology (Alternative 3) and reactor technology alternatives (Alternatives 1 and 4).

Commentor No. 1672: R. K. Greenwell (Cont'd)

3) Based on a detailed review of the descriptions for Alternatives 3 and 4 (New Accelerators and New Research Reactor), it appears that much more work is needed to define these alternatives before they could meet any significant portion of the expanded missions. For example, a proton accelerating cyclotron is not practical for efficiently producing therapeutic isotopes that require neutron irradiation. Such a cyclotron, while useful and needed for many research activities, is not used to produce much neutron irradiation damage data in materials for use in future reactor applications. It appears that no consideration is given to medical isotope production, nor provisions for any significant nuclear research and development with the high energy accelerator. Similarly, there is no evidence , based on the description given for the new research reactor, that any significant provisions have been made for performing any advanced nuclear research and development activities much beyond what could be performed on existing university reactors. Finally, based on detailed technical considerations, it does not appear that either the high energy accelerator nor the new reactor , as currently described in the NI PEIS document, could produce Plutonium_238 at the purity level required for NASA applications. Based on these technical considerations, it does not seem that Alternatives 3 and 4 could meet much of the expanded mission requirements without major additional study, cost, and increased potential for delay. It does not seem wise to abandon existing, operable facilities such as the Fast Flux Test Facility to pursue somewhat developmental projects outlined in Alternatives 3 and 4 which appear to need so much additional work.

4) For a number of years now, there have been many new energy research and development projects that have been started, have proceeded either into the design stage or, in many cases, well along into the construction stage, only to be canceled. Projects have ranged from the Clinch River Breeder Reactor Program to the Superconducting Super Collider, to the Fusion Materials Irradiation Test Facility, to the Advanced Neutron Source (most recent

1672-3**1672-4****Response to Commentor No. 1672**

1672-3: The commentor is correct in his observation that the high-energy accelerator was designed for the production of plutonium-238 and that the low-energy accelerator can not perform neutron irradiation. However as stated in Volume 1, Section 2.3.1.5.2, the design of the high-energy accelerator presented in the PEIS focused on supporting the plutonium 238 production mission, but the design could be refined and expanded to perform additional missions such as the production of a select set of medical and industrial isotopes. The low-energy accelerator was configured primarily for the production of a spectrum of proton enriched medical and industrial isotopes. The modified high-energy accelerator and low-energy accelerator could jointly produce a broad spectrum of medical and industrial isotopes.

DOE acknowledges that the flexibility of the new research reactor to meet the diverse nuclear research and development mission requirement is limited by the low-enriched uranium core and the low operating temperature of the reactor. The cost and schedule estimates for Alternative 3 and 4, presented in the Cost Report, reflect the uncertainties and risks due to the design maturity of these alternatives. Alternatives 3 and 4 reference designs presented in the NI PEIS were developed in sufficient detail to enable an analysis of environmental impacts associated with their construction and operation. If DOE selected either of these alternatives, it would prepare conceptual, preliminary, and detailed designs and optimize the facility design to accomplish the stated missions.

1672-4: DOE notes the commentor's support for Alternative 2, Use Only Existing Operational Facilities) and Alternative 1, Restart FFTF.

1672-5: See response to comment 1672-4.

Commentor No. 1672: R. K. Greenwell (Cont'd)

research reactor facility proposed to be built only to be canceled after significant study and expense), along with numerous other large and small projects. This process continues today with threats of cancellation of projects such as the multi-billion dollar National Ignition Facility. Such a record of experience, regardless of the reasons for cancellation, does not provide confidence that proposed replacement facilities to enhance the nuclear infrastructure will actually be completed in a timely manner. This is a particularly important issue when there is a possibility that existing infrastructure will be irreversibly destroyed before new facilities, such as the proposed new accelerators or a new research reactor, are developed, proven and available. For this reason, I believe that the U.S. should continue to use what is available and paid for, including the FFTF, to perform the enhanced missions until there is certainty that better alternatives are available, or until it is demonstrated that anything else is even needed.

**1672-4
(Cont'd)**

Based on the above items, I urge the Department of Energy to restart the FFTF and use it to produce medical and industrial isotopes, to produce Plutonium ₂₃₈ for the space program, and to perform needed nuclear research and development work in many areas. The FFTF has either done these type things in the past or it has clearly been demonstrated that it could do most of these missions based on numerous, documented studies and tests. This valuable national asset should not be allowed to remain in standby any longer with a growing need for additional high quality irradiation and test services.

1672-5

Sincerely,

R.K. Greenwell
515 W 20th Ave.
Kennewick, WA 99337
Ph (509) 586_6047
e_mail__knjgreen@owt.com

Response to Commentor No. 1672

Commentor No. 1673: Lee McFadden

From: Lee McFadden[SMTP:EEL1456@HOTMAIL.COM]
Sent: Monday, September 18, 2000 1:54:56 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: support for FFTF
Auto forwarded by a Rule

The government should support cancer research. Isotopes are extremely useful and research is just in its infancy. I have read the PEIS and other documents. FFTF is the only logical choice for isotope research and production. If it is not used for any other mission, FFTF use is still justified. The other options don't come close. The only reason I can see that FFTF is not producing isotopes right now is partison politics. Make the correct technical and humanitariun decision. Restart FFTF for medical isotopes.

1673-1**Response to Commentor No. 1673**

1673-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1674: mcfadden@email.msn.com

From: 73mcfadden[SMTP:73MCFADDEN@EMAIL.MSN.COM]
Sent: Monday, September 18, 2000 2:05:35 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Restart FFTF
Auto forwarded by a Rule

I have read the PEIS and other documents. The government should support cancer research. Isotopes are extremely useful. Research is just in its infancy. The savings in lives and quality of life can be phenominal. FFTF is the only logical choice for isotope research and production. If it is not used for any other mission, FFTF use is still justified. The other options don't come close. The only reason I can see that FFTF is not producing isotopes right now is partison politics. It is absurd to ask that it be self supporting. No other government facilities or programs are, most of which have little real benefit for the taxpayers. If it must be shown self supporting, show the profit that will be made by reductions in the costs of medical treatment and thus Medicare. Make the correct technical and humanitariun decision. Restart FFTF for medical isotopes.

1674-1

Response to Commentor No. 1674

1674-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1675: Cain Allen

From: CAllen999@aol.com%internet
 [SMTP:CALLEN999@AOL.COM]
 Sent: Monday, September 18, 2000 2:36:31 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: PEIS comments
 Auto forwarded by a Rule

Dear Sirs:

I would like to submit my comments on the draft programmatic environmental impact statement for accomplishing expanded civilian nuclear energy research and development and isotope production missions. I would like to express my firm opposition to restarting the Fast Flux Test Facility on the Hanford Nuclear Reservation. A restart of the FFTF, which has already siphoned hundreds of millions of dollars away from the clean_up effort, would create more waste, much of which, regardless of the Department of Energy's protestations, would be added to the present waste burden at Hanford. I would like to remind the Department of Energy that THERE IS NO PERMANENT SOLUTION TO HIGH_LEVEL RADIOACTIVE WASTES. We cannot just assume that we'll bury it in the desert and forget about it. I'm not sure there will ever be a satisfactory solution to the problem of nuclear waste, but I do know that the first step in dealing with the problem is simple: don't create any more waste! This obvious fact alone should persuade anyone of sound mind that restarting the FFTF is out of the question. In addition, restarting the FFTF would create unnecessary hazards associated with importing MOX fuel from Germany. Furthermore, the FMEF, presently a clean facility, would be contaminated, adding to the already onerous clean_up burden at Hanford.

I believe the EIS is biased and should be completely rewritten. Plutonium production should be totally severed from isotope production in the environmental impact statement and cost estimate. They are two separate issues. FFTF decommissioning costs should be subtracted from all of the alternatives. It will have to be decommissioned someday regardless of which alternative is chosen,

1675-1

1675-2

1675-3

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1675-5

1675-6

Response to Commentor No. 1675

1675-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1675-2: As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected. As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. High-level radioactive waste would not be generated from merely operating FFTF. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

1675-3: Alternative 1 does postulate that DOE might decide at some point to import mixed oxide fuel from Europe to fuel FFTF. At this time, however, DOE has not proposed to import this fuel through any specific port. If DOE ultimately decides to import fuel from Europe, it would perform a separate NEPA analysis to select a port. This review would address all relevant potential impacts of overseas and inland water transportation, shipboard fires, package handling, land transportation, as well as safeguards and security associated with the import of SNR-300 mixed oxide fuel through a variety of specific candidate ports on the east and west coasts. It would consider all public comments, including local resolutions, concerning the desirability of bringing mixed oxide fuel into the proposed alternative ports.

In the event that DOE decides to enhance its nuclear infrastructure, it would not expose any population to high, unacceptable risks under any alternative. Any transportation activities that would be conducted by DOE would comply with U.S. Nuclear Regulatory Commission and U.S. Department of Transportation regulations. Associated transatlantic

Commentor No. 1675: Cain Allen (Cont'd)

but the bias of the EIS is made clear by the fact that it includes decommissioning costs in all of the alternatives EXCEPT FFTF restart! Furthermore, the FFTF cost estimate does not include waste management costs, a serious and highly suspect oversight. The benefits estimations are also shaky at best, based as they are on suspect market predictions.

**1675-6
(Cont'd)**

Medical isotopes can be obtained from presently existing facilities. There is no reason whatsoever to restart the FFTF to produce them. As for NASA, they have no business launching plutonium into our atmosphere. Restarting a nuclear reactor at a site that is already the most contaminated in the Western Hemisphere to provide NASA with plutonium borders on insanity.

1675-7

The mission at Hanford is clean_up, plain and simple. The Department of Energy needs to understand that. The glory days are over_it's time to pick up the pieces. Don't even think about restarting the FFTF!

1675-8

1675-9

1675-1

I appreciate this chance to comment.

Yours sincerely,

Cain Allen
Portland, OR

Response to Commentor No. 1675

shipment would comply with International Atomic Energy Agency requirements. In Section J.6.2, DOE reviewed the potential maximum impacts from the marine transportation of mixed oxide fuel from Europe to a representative military port, Charleston, South Carolina, and overland transportation to Hanford. Also in that section, a bounding analysis demonstrates that the maximum potential radiological risks to the surrounding public from mixed oxide fuel shipments would be extremely small (e.g., less than 1 chance in a trillion for a latent cancer fatality per shipment from severe accidents at docks and in channels and less than 1 chance in 50 billion for a latent cancer fatality per shipment from overland highway accidents).

1675-4: The commentor's position on the impact of FMEF operations on the Hanford cleanup is noted. Implementation of nuclear infrastructure alternatives (described in Section 2.5 of Volume 1) that would use FMEF for target fabrication/processing would not be expected to significantly affect cleanup efforts at the Hanford Site. Implementation of the Alternatives 1 through 4 would impact the schedule or available funding for Hanford cleanup (See Section N.3.2 of Appendix N).

1675-5: This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS. Further, DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives. DOE made every effort to obtain, analyze, and disclose all required information to make a decision on expanding nuclear infrastructure. As a programmatic document, this NI PEIS has a rather broad scope associated with the selection of facilities and site locations for accomplishing expanded civilian nuclear energy research and development and the identified isotope production missions. Based on the alternatives presented in this NI PEIS, the Record of Decision can implement one or more alternatives, or a combination of elements from one or more alternatives. For example, the Record of Decision could elect to meet the needs of the isotope production missions with a combination of reactors and accelerators. Each of the facilities discussed in the NI PEIS will be evaluated and judged on a case- by-case as to its ability to meet one or more of the stated mission requirements.

Commentor No. 1675: Cain Allen (Cont'd)

Response to Commentor No. 1675

The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS.

- 1675-6:** DOE assumes that the commentor is referring to deactivation, not decommission. Decommission costs were not included for any alternative. Deactivation of FFTF is not part of implementing Alternative 1, Restart FFTF. Deactivation of FFTF is part of implementing Alternatives 2, 3, 4, and 5 and including the cost of FFTF deactivation in the implementation costs for these alternatives is appropriate. The Cost Report was structured to identify the implementation costs of the various alternatives so the Secretary of Energy would have this information along with other data for consideration.

As noted by the commentor, waste management costs were not presented in the Cost Report. Wastes would be generated by all alternatives including Alternative 1, Restart FFTF, which makes these costs not a particularly useful discriminator among the alternatives considered. Also, the ultimate disposition of some of these wastes in terms of acceptable waste form, disposal site (onsite or offsite commercial), etc. have yet to be determined. This adds an additional uncertainty to any attempt to quantify waste costs, thus, making any estimates highly presumptive and speculative at best.

DOE has sought independent analysis of trends in the use of medical radioisotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert committees. In 1998, an Expert Panel convened to forecast future demand for medical isotopes estimated that the expected growth rate of medical isotope use during the next 20 years will range between 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by DOE's Nuclear Energy Research Advisory Committee (NERAC), established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. The growth projections were also adopted by DOE as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings.

Commentor No. 1675: Cain Allen (Cont'd)

Response to Commentor No. 1675

- 1675-7:** While some existing DOE facilities may possess the potential capability or capacity to support research isotope production, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without disturbing the existing missions of these facilities. Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term (less than 5 years).
- 1675-8:** DOE notes the commentor's concern for NASA's use of nuclear materials for space missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. DOE also notes the commentor's opposition to the restart of FFTF. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram funds designated for Hanford cleanup, regardless of the alternative(s) selected.
- 1675-9:** DOE notes the commentor's concerns regarding the existing cleanup mission. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Commentor No. 1676: Jonathan Lahr

From: lorax@aracnet.com%internet
 [SMTP:LORAX@ARACNET.COM]
 Sent: Monday, September 18, 2000 2:37:44 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Cc: Secretary, The; president@Whitehouse.GOV%internet;
 vice.president@Whitehouse.GOV%internet
 Subject: Comments on Nuclear Infrastructure PEIS (FFTF)
 Auto forwarded by a Rule

Colette E. Brown, NE_50
 U.S. Department of Energy
 Office of Nuclear Energy, Science and Technology
 19901 Germantown Road, Room A_270
 Germantown, MD 20874

After reviewing the "Nuclear Infrastructure Programmatic Environmental Impact Statement" and related DOE documents, I urge you to adopt Alternative 5 to permanently deactivate FFTF. The DOE's own NERAC Subcommittee for Isotope Research and Production Planning concluded in its Final Report (April 2000) that "the FFTF will not be a viable source of research radioisotopes." Furthermore, NASA has indicated to the DOE that it no longer needs plutonium for planned space missions. Finally, the DOE has thus far failed to clean up the nuclear waste that is already leaking from the Hanford nuclear facility.

The creation of nuclear waste is in itself unconscionably irresponsible, since it remains extremely dangerous to all life forms for millennia. To resume production of nuclear waste at the Hanford facility which is currently leaking nuclear waste into groundwater is unthinkable.

Therefore, the responsible course of action is to permanently shut down Hanford and clean up the nuclear waste at Hanford which the DOE agreed to do in the Hanford Clean_Up agreement.

Regards,
 Jonathan Lahr
 P.O.B. 80131, Portland, Oregon 97280

1676-1**1676-2****1676-3****1676-4****1676-1****1676-4****Response to Commentor No. 1676**

- 1676-1:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 1676-2:** The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.
- 1676-3:** DOE notes the commentor's concern about NASA's need for plutonium-238 for space missions. The May 22, 2000, correspondence from NASA to DOE identifies that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup. Section 1.2.2 of Volume 1 was revised to further

Commentor No. 1676: Jonathan Lahr (Cont'd)

Response to Commentor No. 1676

clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

- 1676-4:** DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

Commentor No. 1677: Lynn Sims

From: Lynn Sims[SMTP:DWOC@TELEPORT.COM]
 Sent: Monday, September 18, 2000 4:29:46 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: DPEIS comment
 Auto forwarded by a Rule

Comment DPEIS for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the US, Including the Role of the Fast Flux Test Facility

Thank you for the opportunity to comment.

The FFTF is a reactor in search of a mission. For years we have had hearing and from the first ominous rumblings of the idea of restarting FFTF, the project has been plagued with controversy and unsavory manipulations, first by Advanced Nuclear and Medical Systems. These folks wanted to "focus all immediate planning and PR efforts on 'humanitarian mission' of FFTF, DO NOT MENTION ANY PROPOSALS FOR INCREASING REACTOR ACTIVITY OR FUTURE BREEDER REACTOR, etc. The undeniable worthiness of the humanitarian mission must be highlighted and exploited to the maximum sensitivity of our society." It is not yet proven essential that we need these isotopes from FFTF rather than buying them from Canada or using other facilities. However the proponents have succeeded in embroiling everyone in an emotional debate over cancer treatment. I am not opposed to medical isotopes, but I am opposed to using FFTF.

Pu 238 can be purchased now from Russia to supply adequate amounts,.

The third mission to support civilian nuclear energy research and development activities, new nuclear fuel forms and new reactor designs seems to be the crux of the matter and most disturbing. Nuclear energy is expensive and risky and produces long lived radioactive waste. We have no satisfactory plan for the waste we already have. To promote producing more is unacceptable.

1677-1

1677-2

1677-3

1677-4

Response to Commentor No. 1677

1677-1: DOE notes the commentor's views. The United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs. While some existing DOE facilities may possess the potential capability or capacity to support research isotope production, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without disturbing the existing missions of these facilities. Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions (basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term (less than 5 years).

FFTF is not a breeder reactor.

1677-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

1677-3: DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

1677-4: DOE notes the commentor's opposition to nuclear energy and the expansion of nuclear research. Clean, safe, reliable nuclear power has a role

Commentor No. 1677: Lynn Sims (Cont'd)

The waste disposal issue for FFTF is not adequately addressed and the waste which would be produced by any "advanced fuels" is not addressed AT ALL. We propose burdening future generations with lethal waste, and that is WRONG. Instead of expanding nuclear research, it should be alternate energies that are researched and expanded. Contrary to the NERAC chairman's opinion, THERE IS NO urgent sense that the nation must rapidly restore investment ...if it is to sustain a viable US capability in the 21st century. We do NOT need to invest more (too much has been spent already and too much damage already done!), we have to choose a better path altogether!! The premise for this mission for the FFTF is built upon sand and not reality.

1677-5

We will tolerate NO MORE waste producing operations at Hanford. Our city councils have said so, our State Legislators have said so, our Governor has said so, the people have said so. We are adamantly and unalterably OPPOSED to more waste production at Hanford. We are even more so opposed to the use of HEU or MOX fuels.

1677-5

1677-6

The EIS is inadequate in addressing the need for isotope, Pu 238 or research missions, the waste disposal issue, the fuel transport issues, the condition of the fuel stored to use, the real long term cost issues, the risks of not meeting current earthquake requirements and the costs of upgrades, the proliferation issues of promoting more nuclear commerce, or the values of the people in the region.

1677-7
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We want all attention to focus on the major dilemmas of the tank wastes and K Basins and the mission of clean up. We do not want more bad decisionmaking, like those that led us to this terrible situation at Hanford. The only choice is Alternative # 5. Shut down FFTF.

1677-13

1677-14

Lynn Sims
3959 NE 42
Portland OR 97213

Response to Commentor No. 1677

today and in the future for our national energy security. In recognition of this need, nuclear energy research and development programs have been initiated to address potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) and to ensure that current nuclear power plants can continue to deliver adequate and affordable energy supplies. Because it is unlikely that existing facilities could fully and effectively support these nuclear energy research and development initiatives without disturbing their existing missions, DOE is proposing to enhance its nuclear facility infrastructure to also support these activities. Information on the need for nuclear energy research and development is provided in Section 1.2.3 of Volume 1.

1677-5: FFTF restart would not impact the schedule or available funding for existing cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram funds designated for Hanford cleanup, regardless of the alternative(s) selected. As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

As stated in Section 4.3.4.1.14 of the NI PEIS, "...the waste generation would not be affected by the type of fuel used (i.e., mixed oxide or highly enriched uranium)..."

1677-6: The commentor's opposition to the use of MOX and HEU fuels is noted. As stated in section 4.3.1.1.4 of the NI PEIS, "the spent [FFTF] nuclear fuel would be packaged in acceptable containers and shipped to a geologic repository for ultimate disposal." The NI PEIS assumes, for the

Commentor No. 1677: Lynn Sims (Cont'd)

Response to Commentor No. 1677

purposes of analysis, that Yucca Mountain, Nevada, would be the final disposal site for DOE's high-level radioactive waste and spent nuclear fuel. As directed by the U.S. Congress through the Nuclear Waste Policy Act, as amended, Yucca Mountain is designated, and is currently being characterized, as the candidate site for constructing a geologic repository for disposal of high-level radioactive waste and spent nuclear fuel. DOE has prepared a separate EIS, "Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada" (DOE/EIS-0250D, July 1999), which analyzes the environmental impacts from construction, operation and monitoring, related transportation, and eventual closure of a potential geological repository. Based on the categorization of DOE fuel types provided in Appendix A of the EIS, the spent oxide based fuels from FFTF are expected to be disposable in their current form.

1677-7: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining

Commentor No. 1677: Lynn Sims (Cont'd)

Response to Commentor No. 1677

the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Although research to identify other potential fuel sources to support these space exploration missions has been conducted, no viable alternative to using plutonium-238 has been established. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

In January 1997, President Clinton tasked his Committee of Advisors on Science and Technology (PCAST) to evaluate the current national energy research and development portfolio and to provide a strategy that ensures the United States has a program to address the Nation's energy and environmental needs for the next century. In its November 1997 report responding to this request, the PCAST Energy Research and Development Panel determined that restoring a viable nuclear energy option to help meet our future energy needs is important and that a properly focused research and development effort to address the potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) was appropriate. The PCAST panel further recommended that DOE reinvigorate its nuclear energy research and development activities to address these potential barriers. Section 1.2.3 provides information on the nuclear energy research and development mission.

1677-8: Alternative 1 does postulate that DOE might decide at some point to import mixed oxide fuel from Europe to fuel FFTF. At this time, however, DOE has not proposed to import this fuel through any specific port. If DOE ultimately decides to import fuel from Europe, it would perform a separate NEPA analysis to select a port. This review would address all relevant potential impacts of overseas and inland water transportation, shipboard fires, package handling, land transportation, as well as safeguards and security associated with the import of SNR-300 mixed oxide fuel through a variety of specific candidate ports on the east and west coasts. It would consider all public comments, including local

Commentor No. 1677: Lynn Sims (Cont'd)

Response to Commentor No. 1677

resolutions, concerning the desirability of bringing mixed oxide fuel into the proposed alternative ports.

In the event that DOE decides to enhance its nuclear infrastructure, it would not expose any population to high, unacceptable risks under any alternative. Any transportation activities that would be conducted by DOE would comply with U.S. Nuclear Regulatory Commission and U.S. Department of Transportation regulations. Associated transatlantic shipment would comply with International Atomic Energy Agency requirements. In Section J.6.2, DOE reviewed the potential maximum impacts from the marine transportation of mixed oxide fuel from Europe to a representative military port, Charleston, South Carolina, and overland transportation to Hanford. Also in that section, a bounding analysis demonstrates that the maximum potential radiological risks to the surrounding public from mixed oxide fuel shipments would be extremely small (e.g., less than 1 chance in a trillion for a latent cancer fatality per shipment from severe accidents at docks and in channels and less than 1 chance in 50 billion for a latent cancer fatality per shipment from overland highway accidents).

- 1677-9:** As stated in Section D.5 of Appendix D of the NI PEIS, “the FFTF core configuration would have to meet the nuclear safety requirements and limitations defined in the Final Safety Analysis Report and the Technical Specifications.” This applies to both irradiated reactor fuel that is being retained in sodium storage vessels and any new reactor fuel that would be used at FFTF. All nuclear fuel is subject to rigorous quality control and inspections prior to its use in the FFTF reactor core.
- 1677-10:** The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such an ancillary document need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed this document to about 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P in the Final NI PEIS.

Commentor No. 1677: Lynn Sims (Cont'd)

Response to Commentor No. 1677

- 1677-11:** FFTF and fabrication/processing facilities at the Hanford Site can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.2-4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from implementation of the alternatives, including normal operations and a spectrum of accidents that included severe accidents. The spectrum of accidents reviewed included both design basis and beyond-design basis seismic events. The environmental analysis showed that radiological and nonradiological risks associated with each of the alternatives is small. In addition, prior to restarting FFTF, a revised safety analysis report and probabilistic risk assessment which address the potential consequences of a variety of events, including earthquakes would be prepared.
- 1677-12:** The technology that is discussed in Sections S.3, 2.2.3 and A.1.4 of the NI PEIS would be used to chemically separate plutonium-238 and neptunium from irradiated targets and not from irradiated or spent nuclear fuel whereas reprocessing separates weapons grade plutonium 239 from irradiated nuclear fuel. As discussed in the separate Nuclear Infrastructure Nonproliferation Impact Assessment, published in September, 2000, use of this technology to produce plutonium-238 from irradiated targets will not create a nonproliferation threat. DOE is committed to full compliance with and support of the U.S. policy prohibiting reprocessing.
- 1677-13:** DOE notes the commentor's concerns regarding tank wastes and storage of defense mission (non-FFTF) spent nuclear fuel in K Basins. Although not within the scope of this NI PEIS, these activities are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As discussed in Appendix N, section N.3.2 of the NI PEIS, the DOE missions in this NI PEIS would not be in conflict with the land use plan or the Tri-Party Agreement. Additionally, DOE will not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.
- 1677-14:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 1678: Russell D. Hoffman

From: Russell D. Hoffman
 [SMTP:RHOFFMAN@ANIMATEDSOFTWARE.COM]
 Sent: Monday, September 18, 2000 6:19:25 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Cc: president@whitehouse.gov%internet; Dianne Feinstein,
 Senator (CA, D); Barbara Boxer, Senator (CA, D)
 Subject: Additional information regarding Draft PEIS
 Auto forwarded by a Rule

To: Colette E. Brown,
 U.S. Department of Energy, NE_50,
 19901 Germantown Road, Germantown, MD 20874_1290
 Nuclear.Infrastructure_PEIS@hq.doe.gov

Re: DoE PLANS FOR EXPANDED PRODUCTION OF PLU_238
 FOR FUTURE SPACE MISSIONS, specifically, solicited comments
 based on the DRAFT Programmatic Environmental Impact
 Statement for Accomplishing Expanded Civilian Nuclear
 Energy Research and Development and Isotope Production
 Missions in the United States, Including the Role of the Fast Flux
 Test Facility, DOE/EIS_0310D, July, 2000

From: Russell D. Hoffman
 P.O. Box 1936
 Carlsbad California USA 92018
 rhoffman@animatedsoftware.com
 Date: September 18th, 2000

Dear Ms Brown,

Attached are two items I wish to add to my submission regarding
 Draft PEIS , which also includes two prior emails, one on
 September 9th, 2000, and one on September 15th, 2000. Please
 contact me if you have not received both of those submissions,
 and/or to acknowledge receipt of this additional material. Thank
 you in advance.

1678-1

Response to Commentor No. 1678

1678-1: DOE notes the commentor's objection to the production of plutonium-238. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. None of the DOE missions stated in the NI PEIS are defense- or weapons-related.

DOE also notes the commentor's concern about safe operations at nuclear sites. The health and safety of workers and the public is a priority of the nuclear infrastructure program. The three DOE reactors considered for the program; FFTF, HFIR, and ATR; have operated safely and successfully for many years. (ATR has been in operation since 1967, HFIR since 1966, and FFTF operated from 1980 until it was shutdown for refueling in 1992. FFTF has been in standby status since then.) Safety analyses for HFIR and ATR have recently been revised, in 1998 and 1999 respectively, to reflect operational changes and to upgrade the facility accident analysis. Should a decision be made to restart FFTF, the status and condition of all safety systems will be assessed and appropriate actions taken, as necessary, prior to startup to assure safe operation. Commercial nuclear power reactors have also been considered as an alternative for target irradiation. Every commercial reactor is subject to oversight by the Nuclear Regulatory Commission, which uses a combination of safety standards, licensing, and inspection to insure that power plants are built and operated within acceptable safety limits. In the United States, commercial nuclear power plants have operated successfully since 1959 without having adversely affected the health and safety of the public.

Commentor No. 1678: Russell D. Hoffman (Cont'd)

The first item you should have already received from the original author, a gentleman from England whom I have communicated often with, about these matters.

The second item I have included is a news report about an incident at a Russian nuclear facility. It was sent to me by another person with whom I have exchanged many emails about these subjects, an American living in Japan.

The relevance of the second attachment should be obvious to you, but to make it clear, let me first say that I do realize that our technology is ever so slightly different from Russian technology ___ in fact, for all I know righty isn't tighty and lefty isn't loosy in Russia ___ but the fact is, they are undoubtedly trying just as hard as our own fellows are, NOT to have a meltdown. But they've already had at least one (Chernobyl) and it appears they came mighty close to having one last week. (And they lost an nuclear sub last month, too). Sure, their "professionalism" might have saved the day this time, but the incident is clearly being described as a seriously close call.

We should take the Russian's misfortune to heart. Our nuclear industry may be very good at "spin" and propaganda, but they are also human just like the Russians, and they have made mistakes and will continue to make mistakes. Some of the mistakes will be catastrophic unless we shut down and clean up NOW. I'm not saying there are no benefits to nuclear technology, but 99.9% of the nuclear technology we have is useless and all of it is dangerous.

The reasons presented by DOE in the Draft PEIS for wanting to expand their plutonium RTG production facilities are not the real reasons the Government wants the technology, and the dangers are far greater than the United States Government is willing to admit.

Sincerely,

Russell D. Hoffman
Concerned Citizen/Activist, Carlsbad, CA

1678-1
(Cont'd)

Response to Commentor No. 1678

Commentor No. 1678: Russell D. Hoffman (Cont'd)

Attachment #1 of 2:

Date: Sun, 17 Sep 2000 01:09:45 +0100
 From: savage <savage@easynet.co.uk>
 Organization: http://www.eco_action.org/
 X_Mailer: Mozilla 4.7 (Macintosh; I; PPC)
 X_Accept-Language: en
 To: Nuclear.Infrastructure_PEIS@hq.doe.gov
 Subject: PUBLIC COMMENTS ON DRAFT PROGRAMMATIC
 ENVIRONMENTAL IMPACT STATEMENT (PEIS)

DoE PLANS FOR EXPANDED PRODUCTION OF
 PLU_238 FOR FUTURE SPACE MISSIONS

Dear Colette E. Brown,

People in the UK are very concerned that the US seems to be increasing the amount of PU238 in the world. It is not in the interests of the world's people, only of a few scientists, and should therefore not be allowed to go ahead.

Please confirm that you will not be risking our lives, those of the rest of this world's creatures, and of our future generations. You have no right to do this, other than through the abuse of the power given to you by your transient position as the most powerful nation on earth.

This power is yours largely because of your image in the world as the home of freedom and promise, but should people's impression change to seeing you as a threat to their existence, or the well_being of their children, you will not be able to maintain your superiority.

Thanks

Andy Savage.

Response to Commentor No. 1678

Commentor No. 1678: Russell D. Hoffman (Cont'd)

Attachment #2 of 2:

X_Sender: rwilcox@po.interlink.or.jp
Date: Mon, 18 Sep 2000 08:57:44 +0900
To: "Russell D. Hoffman" <rhoffman@animatedsoftware.com>
From: Richard Wilcox <rwilcox@interlink.or.jp>
Subject: nuke news
Published on Sunday, September 17, 2000 in the Observer of
London Nuclear Disaster Averted
Russian power plant workers praised for 'heroic' operation to cool
reactors by Amelia Gentleman in Moscow

A nuclear catastrophe _ triggered by a fault in Russia's ageing
electrical grid _ was averted last week thanks to a 'heroic'
emergency operation by power station workers.

Details of how one of Russia's main nuclear plants and the
country's largest plutonium_processing centre came close to
disaster emerged slowly, prompting new alarm in a country still
reeling from a string of disasters.

Nuclear experts said 'courageous' workers at the Beloyarsk power
station and the Mayak reprocessing plant had managed to prevent
a Chernobyl_style accident. Environmental campaigners warned
that the crumbling state of Russia's infrastructure meant such close
escapes could be expected with growing frequency.

Preliminary investigations showed that a short circuit in the
regional electricity system caused a sudden blackout in three
nuclear reactors in the Urals. Its cause remains unclear, although
it has been widely attributed to a fault in the poorly maintained
network.

Unexpected power cuts at nuclear plants, which are designed to
work ceaselessly, pose a severe risk. There was controversy
yesterday over whether built_in emergency electricity systems took

Response to Commentor No. 1678

Commentor No. 1678: Russell D. Hoffman (Cont'd)

manually. Residents may have heard steam spurting suddenly from the cooling plant, as pressure in the system mounted.

One of the immediate results of the shutdown at Beloyarsk was a power failure at the nearby Mayak processing plant in the Chelyabinsk region, where two reactors were in operation.

The potential consequences of malfunction at the vast, high_security Mayak plant are no less alarming. Scientists there take spent nuclear fuel from all over the former Soviet Union and convert it into weapons_grade plutonium and high_level waste. The site is estimated to contain 120 million curies of radioactive waste _ much of it held in liquid form in vast tanks _ including seven times the amount of strontium_90 and caesium_137 that was released in Chernobyl.

Mayak was without power for 45 minutes and the reactors were automatically shut down. The head of the plant, Vitaliy Sadovnikov, told a local newspaper that this was the worst blackout the station had faced and it was only his staff's 'near_military discipline' which prevented a serious accident.

He said the back_up electricity provider, designed to cool down the reactors in the event of such an emergency, had only been started up 30 minutes after the plant was brought to a halt.

But yesterday Bulat Nigmatulin, a Deputy Minister at Minatom, said these reports were lies. 'This unpleasant situation came about because for the first time there was a breakdown in the local energy system,' he said.

'The atomic installations at Beloyarsk and Mayak are protected against this kind of accident, and on this occasion everything went exactly according to plan, with on_site emergency electricity sources starting up immediately.'

Response to Commentor No. 1678

Commentor No. 1678: Russell D. Hoffman (Cont'd)

He said 30-minute delays would have led to explosions in the reactors.

Officials at both plants report there was no radiation contamination as a result of the emergency shutdowns. Environmental activists in the region continue to test the site, but are so far satisfied that this is the case.

Although a crisis was averted, analysts agree that both mishaps are sobering examples of the ease with which a disaster could be sparked.

'The fact that the grid was down for 45 minutes is extremely alarming, because it means that control was temporarily lost in these crucial nuclear installations,' said Tobias Muenchmeyer, atomic energy expert with Greenpeace.

Some commentators linked the initial power cut to the campaign by Russia's electricity monopoly to cut off those customers with outstanding debts. They speculated that by suddenly switching off one area of the grid, Unified Energy Systems might have precipitated the short circuit. UES officials deny this, and a government commission has been set up to investigate.

State officials are eager to promote atomic energy as a means of heating and powering their vast country. A strategy document published by Minatom in May advocated that Russia should radically increase its nuclear capacity over the next 20 years, building up to 24 new reactors.

Independent experts affirm that over the past five years the number of emergency shutdowns in Russian reactors has dropped fourfold, and over the past two years financing of safety monitoring has increased. But the memory of the Chernobyl disaster 14 years ago remains uncomfortably fresh.

Response to Commentor No. 1678

Commentor No. 1679: Bette Simpson

From: Bette Simpson [mailto:gadsook@yahoo.com]
 Sent: Monday, September 18, 2000 2:00 AM
 To: Brown, Colette
 Cc: The.Secretary@hq.doe.gov.gov%internet
 Subject: NIPEIS

Dear Mr. Secretary,
 Dear Ms. Brown,

I am writing to you Mr. Secretary to express my dismay that the people that work for you never seem to tell you what the people have to say.

I attended the meeting here in Richland on the Nuclear Infrastructure PEIS. It was well attended and here in my home town a lot of people _ the usual crowd _ turned out to yell and holler for their share of the pork. But many more like me ain't willing to say nothin for fear we would be run out a town.

They say they are for isotopes. But I gotta tell ya _they aren't. Sure they believe they are. But that don't mean nothin. If they was really for isotopes to cure cancer, they would run screaming from the reactor here.

It was born in a nuclear wet dream and cost more money than I care to think about. Sure, it has done some good _ when it was running. But not very much.

And if they get their way, it will cost us a bucket load more. I am afraid it will cost so much that it will price us right out of the isotope business.

If you want to do some good _ its time to say enough. Shut down the Fast Flux Test Facility forever.

But what really made me made was when Ms. Brown came and told us that we got to comment on the EIS _ but that we don't git to

1679-1

1679-2

1679-3

1679-4

Response to Commentor No. 1679

- 1679-1:** DOE notes the commentor's views regarding the Richland, Washington public hearing. It is DOE policy to encourage public input on matters of regional, national and international importance as part of its commitment to facilitate a public participation process that is open and unbiased. DOE is aware that there is a considerable difference of public opinion regarding the alternatives evaluated in this NI PEIS to accomplish the DOE missions, including direct support as well as opposition to Alternative 1, Restart FFTF. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the environmental impact analysis of DOE's proposed alternatives for meeting the mission requirements, and gave equal consideration to all comments, regardless of how or where they were received. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.
- 1679-2:** DOE notes the commentor's concern about the cost of operating FFTF. This concern, and other issues are addressed in a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. DOE mailed this document to about 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Volume 2, Appendix P.
- 1679-3:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 1679-4:** In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the environmental impact analysis of DOE's proposed alternatives for meeting mission requirements. In preparing the Final NI PEIS, DOE carefully considered comments received from the public. The costs and nuclear nonproliferation impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such ancillary documents need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE

Commentor No. 1679: Bette Simpson (Cont'd)

comment on nothing else. Just who does she think she is? Where does she think she gets her paycheck from anyway?

1679-4 (Cont'd)

Near as I could tell, Ms. Brown tried to sell us a bill a goods. The EIS don't say squat about how much plutonium NASA needs. It just claims they need a lot and goes on from there. And she don't say nothin about what the infernal CIA and them other spies want. If you ask me its a coverup.

1679-5

They don't want the reactor to save people from cancer. They want it for spy stuff. That's the truth of it.

1679-4

And then to tell us we can't comment on the costs or the nonproliferation things. Lady where do you get off? If they made mistakes in there, it could mean doing things that cause huge damage to the environment. But no _ we don't get no say in that.

1679-5

Well I gonna make my say. We got enough bombs and we got enough reactors. Use what you got until you show you need more instead a just makin excuses to run more reactors. We don't need em.

1679-3

Mr. Secretary, I hope you shut this thing down for good. And thats all I gots to say.

Bette

Response to Commentor No. 1679

mailed these documents to more than 730 interested parties on August 24 and September 8, 2000, respectively. Both reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided summaries of the Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment in Appendixes P and Q, respectively, in the Final NI PEIS.

1679-5: DOE has no hidden agenda for weapons research or use of FFTF for classified missions. The only missions being considered are those analyzed in the NI PEIS, which are the production of isotopes for medical research, and industrial uses; plutonium production for future NASA space exploration missions; and U.S. nuclear research and development needs for civilian application.

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Although research to identify other potential fuel sources to support these space exploration missions has been conducted, no viable alternative to using plutonium-238 has been established. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions be lost. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Commentor No. 1680: Elan Banehama

From: Elan Banehama[SMTP:ELAN@HRTA.UMASS.EDU]
 Sent: Monday, September 18, 2000 8:16:09 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: COMMENTS ON DOE PLANS FOR EXPANDED
 PRODUCTION OF PLU_238 FOR FUTURE SPACE MISSIONS
 Auto forwarded by a Rule

Colette E. Brown
 U.S. Department of Energy

Dear Colette E. Brown,

I would like to offer these comments, concerns, objections to the
 DOE's PLANS FOR EXPANDED PRODUCTION OF PLU_238
 FOR FUTURE SPACE MISSIONS

__NASA is not doing enough to develop environmentally benign
 power sources for space missions. European Space Agency (ESA)
 has now developed high_efficiency solar cells for deep space
 missions.

1680-1

__The plutonium production/fabrication process for space nuclear
 power missions has recently led to several worker contamination
 accidents. An expansion of production will only worsen this
 problem.

1680-2

__Expanding the number of launches of nuclear powered space
 devices from Cape Canaveral on rockets with 10% failure rates will
 only increase the possibility of a deadly mishap.

1680-3

__The massive cost of expanded production of plu_238 can not be
 justified at a time when DOE admits it needs over \$300 billion to
 clean_up existing problems at DOE facilities.

1680-4

Thank you,

Elan Banehama
 77 Grove Ave., Leeds, MA 01053, 413.586.7701 voice

Response to Commentor No. 1680

- 1680-1:** DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternative energy sources for space missions, although issues such as NASA research priorities are beyond the scope of this PEIS. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch.
- 1680-2:** Plutonium-238 processing facilities can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Sections 4.2-4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from plutonium-238 processing, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that the radiological and nonradiological risks associated with plutonium-238 processing would be small.
- 1680-3:** DOE notes the commentor's concern for NASA's use of nuclear materials for space missions, although issues such as NASA research priorities are beyond the scope of this PEIS. issues such as NASA research priorities are beyond the scope of this PEIS. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch.
- 1680-4:** DOE notes the commentor's opinion and concern about funding available for cleanup at DOE facilities.

Commentor No. 1681: David and Karen Pappel

From: Karen Pappel[SMTP:KPAPPEL@USWEST.NET]
Sent: Monday, September 18, 2000 8:32:12 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: I oppose the restart of the FFTF Nuclear Reactor at Hanford!
Auto forwarded by a Rule

Please do not do it!

David & Karen Pappel
Eugene, OR

1681-1

Response to Commentor No. 1681

1681-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1682: Jerrilynn Schroeder

From: Jerrilynn Schroeder
[SMTP:RFC_822:JERRILYNN_SCHROEDER@PARKROSE.
K12.OR.US]
Sent: Monday, September 18, 2000 10:11:22 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Oppose
Auto forwarded by a Rule

I oppose the restart of FFTF Nuclear Reactor at Hanford.

|| 1682-1

Response to Commentor No. 1682

1682-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1683: Molly Dwyer

From: Molly Dwyer
[SMTP:MOLLY_DWYER@PARKROSE.K12.OR.US]
Sent: Monday, September 18, 2000 10:38:22 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: restart of FFTF reactor at Hanford
Auto forwarded by a Rule

I vehemently oppose the restart of the FFTF reactor at Hanford. Environmental and human health concerns should come first!!!

1683-1

Response to Commentor No. 1683

1683-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1684: Wm David Millard

From: Millard, W David
[SMTP:DAVE.MILLARD@PNL.GOV]
Sent: Monday, September 18, 2000 10:41:32 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Please support keeping FFTF running
Auto forwarded by a Rule

I believe that FFTF can contribute significantly to our country's, and the world's, medical industry.
Please keep FFTF open

Wm David Millard
Situation Planning & Response
PNNL __ Pacific Northwest National Laboratory
ph: 509_375_2947 email: dave.millard@pnl.gov

1684-1**Response to Commentor No. 1684**

1684-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1685: Gale S. F. Voyles

From: Gale Voyles[SMTP:GVOYLES@BNFLINC.COM]
Sent: Monday, September 18, 2000 10:51:40 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Cc: gsfvoyles@hotmail.com%internet;
mlee@mato.com%internet
Subject: FFTF Restart
Auto forwarded by a Rule

The restart of the Fast Flux Test Facility for the medical isotope mission and to support the PU 238 mission is vitally important to the United States. The medical isotope production process will allow further development of isotopes for medical and research needs. Let us not be dependant on foreign sources for our medical isotope needs.

Put FFTF back in to production of isotopes.

Gale S. F. Voyles
gsfvoyles@hotmail.com

1685-1

Response to Commentor No. 1685

1685-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1686: Brett Shepherd

From: Brett
 Shepherd[SMTP:BSHEPHERD@GOCAI.COM]
 Sent: Monday, September 18, 2000 11:06:41 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Stop creating nuclear materials
 Auto forwarded by a Rule

nuclear.infrastructure_peis@hq.doe.gov

Ms. Colette Brown
 DOE, Office of Space and Defense Power Systems

Dear Ms. Brown,

Until we create proper disposal methods for nuclear materials, please stop creating it. Pretty simple concept, eh?
 Please stop creating nuclear material at the INEEL.

Brett Shepherd
 Network Engineer
 Computer Arts, Inc.
 bshepherd@gocai.com

1686-1

Response to Commentor No. 1686

1686-1: The commentor's position regarding creation of nuclear waste at INEEL is noted.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. The waste minimization program for INEEL is described in Section 3.3.11.8 of Volume 1. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and appropriate DOE orders.

Commentor No. 1687: Arthur Doucette

From: ADoucette@Atl.carreker.com%internet
[SMTP:ADOUCETTE@ATL.CARREKER.COM]
Sent: Monday, September 18, 2000 12:21:23 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Re_establishing production capability for Pu_238
Auto forwarded by a Rule

Re: Use of Pu_238 for space based power supplies:

I am totally against this for many reasons:

Considering what happened to the Mars Polar Lander it is obvious that NASA's "one in a million" chance of the spacecraft impacting earth was grossly overstated. What if the day after Cassini crashed into the earth, impacting Manhattan, we all got to read in the papers the next day: "OOPS, the contractor was working in Lbs. and JPL was using Kilos". Prior to the Polar Lander, I'm sure no one would have believed such a inconceivably silly mistake could occur.

Since NASA must agree that the odds were really not one in a million but with just one more data point added by the ill fated Polar Lander more like one in a thousand then one must also agree that NASA's extrapolation of potential risk which was partly based on this estimate was also understated and that at least some of the concerns of those opposed to the launch/flyby turned out to be well founded.

I do not believe that anyone, including NASA or DOE, could or has accurately simulated the forces exerted on a non_aerodynamic 6 ton spacecraft entering the atmosphere at 42,500 MPH. I don't believe we have the technical ability to accelerate an object even a fraction of the size and shape of Cassini to over 62,000 feet/sec. on the earth's surface! As far as the forces involved, to put it in perspective, Casinni's weight is almost the same as our Apollo Command module. Apollo's re_entry speed was only about 1/2 of Casinni's potential re_entry speed. The Apollo re_entry had to

1687-1

Response to Commentor No. 1687

1687-1: DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternatives energy sources for space missions, although issues such as NASA's research priorities are outside the scope of this NI PEIS. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. The Cassini fly-by occurred as planned with no release of nuclear materials.

Plutonium-238, plutonium-239, and plutonium-240 decay with emission of an alpha-particle to uranium-234, uranium-235, and uranium-236, respectively. Plutonium-241 decays with emission of an electron to americium-241. The half-lives of plutonium-238 and americium-241 are approximately 88 years and 432 years, respectively. Plutonium-238 has a much higher specific activity (number of curies per gram) than americium-241. The specific activity of plutonium-238 is approximately 5 times larger than the specific activity of americium-241. Inhalation and ingestion dose coefficients for plutonium-238 and americium-241 differ by ten percent or less.

Commentor No. 1687: Arthur Doucette (Cont'd)

be precisely flown to within a degree or so in order to keep the approach angle shallow enough that the energy of re_entry was dissipated over sufficient time to keep the shield temperatures down to a manageable 5,000 degrees F. Apollo gave up over 86,000 KiloWatts of energy during it's controlled approach, Casinni could have easily arrived at the earth's surface with that much energy or more still left. On a perpendicular trajectory it would traverse the atmosphere in a little over 10 seconds and hardly slow down at all. Does the DOE realize the destructive force of a 6 ton object moving at this speed impacting almost anywhere? What about in a densely populated area? To claim that the RTG's could withstand an impact into the earth's surface at these speeds and potential temperatures and remain intact was and is preposterous.

Given that NASA agrees that there was a risk and that the argument is really about the level of risk, where is the justification that there is anything we will learn from Saturn or the other outer planets that warrants taking this risk? Is NASA just assuming it is worth the risk when they support these deep space probes using plutonium? We have sent many deep space probes with RTG's, can NASA name just one life which has been saved or even extended a short while because of what we have learned? Could NASA list just one improvement to mankind that has come from what we have learned from ANY of our deep space probes? Can NASA point to any potential improvement to mankind that couldn't be achieved without a RTG powered space probe?

NASA believes that "Other than plutonium generators, there is no practical source of electrical power for spacecraft that go to the outer planets." Has NASA considered that maybe we shouldn't explore them until we can develop a SAFE and practical source of electrical power for deep space travel? Is it not possible that if we spent the same 3 Billion in research to develop such a safe and practical source of power that the research could also have many practical benefits to those of us back on earth? In the article by Dick Thompson (Time) he writes on this issue: "What will be lost if Cassini is canceled? As Galileo's spectacular images of Jupiter and

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(Cont'd)

Response to Commentor No. 1687

Commentor No. 1687: Arthur Doucette (Cont'd)

its moons showed last spring, an extended visit is really the only way to study a distant planet. Saturn's rings are perhaps the most mysterious and magnificent objects in the solar system. Its moon Titan has its own atmosphere, filled with organic chemicals; scientists suspect it's just the sort of place life could have gained a foothold. Pulling the plug on Cassini now, when we're on the verge of exploring such a place, would be a missed opportunity of astronomical proportions." While this is stirring prose there is really nothing of substance alluded to, no actual benefits to be gained. The fact is Space exploration is direct science not applied science. Any benefit we get from this is coincidental and with Space Science, any coincidental benefits are most likely to be gained only after extremely long spans of time. Therefor delaying the probes for a decade or so, until they can be made safely has no negative impact on anyone and the chance of discovering something coincidentally valuable while developing the required safe power systems is equally great so in reality, nothing is lost. Any money spent on Direct Science is a gamble and we never know the odds.

I'm particularly not in favor of using the earth for gravity assists to the outer planets and certainly not when they are carry plutonium 238 power supplies. Several key issues are risk Vs reward and potential terminal damage to public support for space exploration. I'm sure that if Cassini had hit the earth or atmosphere, that future use of RTG's on space probes would become problematic and that deep space research in general might be significantly curtailed. I believe this would be true regardless of the measured health impact of the plutonium on board. What was the probability of Cassini hitting the earth? Certainly not high, but then not as low as NASA was saying either. The final trajectory towards the earth was planned such that in almost every failure mode of the final course correction, the failure would result in Cassini missing the earth by a wider margin then planned. The danger was in navigation errors prior to the final burn which is exactly what caused MPL to impact on Mars. When they did the final burn for the MPL it was not where they thought it was because of previous navigation errors caused by

**1687-1
(Cont'd)**

Response to Commentor No. 1687

Commentor No. 1687: Arthur Doucette (Cont'd)

improper calculation of the spacecraft's weight. The other dangers include loss of communication with the spacecraft due to mechanical damage: antenna not unfolding, micrometer impact or the not uncommon unexplained failure. Because of the path the spacecraft needed in order to use Earth as a gravity assist then failures of this type could leave Cassini in a near Earth orbit, i.e. if it didn't get all of the three specific gravity assists it needed it would never get the energy needed to accelerate to Jupiter for its final assist to Saturn. If it got stuck in a near Earth orbit then given time its likely hood of impacting the Earth go way above the likelihood of the final course correction causing a problem. The plutonium on board would remain a problem for thousands of years.

The second area I am in disagreement with NASA is on the toxicity of plutonium. Specifically plutonium 238 which comprised 71% of the plutonium on Cassini. (13% P239, 2% P240) _ an important point is that plutonium decays into americium and it has its own set of problems, in fact decayed plutonium is considered more dangerous then the starting material. I have included several references from respected sources, none from fringe scientists or others with their own agendas.

The first is from the Univ. of Penn. on the health risk of Plutonium based on its form:

On the other hand, plutonium inside the body is highly toxic. Solid plutonium metal is neither easily dispersed nor easily inhaled or absorbed into the body. But if plutonium metal is exposed to air to any degree, it slowly oxidizes to plutonium oxide (PuO₂), which is a powdery, much more ispersible substance. Depending on the particle size, plutonium_239 oxide may lodge deep in the alveoli of the lung where it has a biological half_life of 500 days, and alpha particles from the oxide can cause cancer. Also, fractions of the inhaled plutonium oxide can slowly dissolve, enter the bloodstream, and end up primarily in bone or liver.

**1687-1
(Cont'd)**

Response to Commentor No. 1687

Commentor No. 1687: Arthur Doucette (Cont'd)

Plutonium oxide is weakly soluble in water. If it is ingested in food or water, only a small fraction (4 parts per 10,000) is absorbed into the gastrointestinal tract. However, it may take just a few millionths of a gram to cause cancer over time. In animals, small doses induce cancer, especially in lung and bone.

Plutonium's Risk to Human Health Depends On Its Form

Last Revision Date: Thursday, 26_Aug_1999 23:27:58 EDT

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The point of this article is that the most dangerous form of Pu is the oxide which is what Cassini's fuel consisted of.

The next is from the DOE funded Amarillo Natl. Research Center (ANRC) which basically says extremely small particles of Pu inhaled will cause cancer:

The main danger from plutonium comes from inhalation. If inhaled, plutonium can become stuck in the tissues of the lungs (if the particles are smaller than one micron _ .00004 inches _ in diameter). Although the radioactivity of plutonium is not high, the radiation would be concentrated in a single place, and because the plutonium would be in direct contact with sensitive tissue, the alpha particles could damage the lungs, this damage would typically show up as cancer after a period of years.

ANRC The U.S. Department of Energy and the State of Texas formed the Amarillo National Research Center (ANRC) to conduct scientific and technical research, advise decision makers, and provide information on nuclear weapons materials and related environment, safety, health and non_proliferation issues.

The next is from the Lawrence Livermore National Laboratory in a very well written study on the toxicity of plutonium. This section deals with determining the risk factors, the appendix is the supporting calculations:

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Commentor No. 1687: Arthur Doucette (Cont'd)

The total effective dose equivalent defined in Limits for the Intake of Radionuclides by Workers, International Commission on Radiological Protection (ICRP) Publication 30 (Pergamon Press, Cambridge, UK, 1979), is a weighted sum of organ dose equivalents multiplied by appropriate risk weighting factors. [10] These values are based on effects observed at relatively high exposures. The usual (and conservative) assumption is that the risk of getting cancer at lower exposures is linearly related to the exposure. This risk would be in addition to the natural incidence rate of fatal cancer, which is approximately 20% for the United States population. Thus, if an individual inhaled 0.0008 milligrams of plutonium, that individual's risk of developing fatal cancer as a result of this exposure would be increased from 20% to 21%. If each of 10 individuals inhaled 0.0008 milligrams of plutonium, the probability that one of them would get cancer would be 10%, since each individual has a 1% risk. That is, the probability of a cancer appearing in an exposed population depends simply on the amount of plutonium collectively inhaled. For each 0.08 milligrams of plutonium inhaled by the exposed population (regardless of the size of the population), one additional fatal cancer would be expected to occur.

Appendix A. Risk and Dose Vs Plutonium Intake

The cancer risk associated with the inhalation or ingestion of a given amount of plutonium can be determined as the product of three quantities: (1) the activity (activity is measured in curies) of plutonium per milligram, (2) the dose (measured in rem) delivered per unit of plutonium activity taken in, and (3) the risk of cancer per unit dose of radiation delivered to the body by that plutonium. The calculations below follow that pattern.

For inhalation, we have $.08 \text{ millicurie/mg} \times 3.1 \times 10^5 \text{ rem/millicurie} \times 5 \times 10^{-4} \text{ Cancer/rem} = 12 \text{ cancer/mg}$ which corresponds to 0.08 mg/cancer.

For ingestion, we have $.08 \text{ millicurie/mg} \times 52 \text{ rem/millicurie} \times 5 \times 10^{-4} \text{ Cancer/rem} = .0021 \text{ cancer/mg}$ which corresponds to 480 mg/cancer.

Response to Commentor No. 1687

Commentor No. 1687: Arthur Doucette (Cont'd)

References for the quantities given in the expressions above:

0.08 mCi/mg: Homann, S. G., HOTSPOT Health Physics Codes for the PC, Lawrence Livermore National Laboratory, Livermore, CA, UCRL_MA_106315 (1994).

rem/mCi (inhalation), and 52 rem/mCi (ingestion; we have used , the value appropriate for plutonium oxide, for the fraction of plutonium absorbed from the GI tract into the bloodstream): Limiting Values of Radionuclide Intake and Air Concentration and Dose Conversion Factors for Inhalation, Submersion and Ingestion, U.S. Environmental Protection Agency, Washington, DC, Federal Guidance Report No. 11 (1988).

cancer/rem: ICRP 60 (Ref. 25).

A Perspective on the Dangers of Plutonium W. G. Sutcliffe, R. H. Condit, W. G. Mansfield, D. S. Myers, D. W. Layton, and P. W. Murphy. Lawrence Livermore National Laboratory, April 14, 1995

The problem with the previous article is it dealt with P239 in it's calculation. As it turns out P238 is far more dangerous, in fact as the following excerpt from the ATSDR shows the radiation per gram of P238 is 260 times as great as P239:

Plutonium has been released to the environment primarily by atmospheric testing of nuclear weapons and by accidents at weapons production and utilization facilities. In addition, accidents involving weapons transport, satellite reentry, and nuclear reactors have also released smaller amounts of plutonium into the atmosphere. When plutonium was released to the atmosphere, it returned to the earth's surface as fallout. Average fallout levels in soils in the United States are about 2 millicuries (mCi)/square kilometer (about 0.4 square miles) for plutonium_239 and 0.05 mCi/square kilometer for plutonium_238. A millicurie is a unit used to measure the amount of radioactivity; 1 mCi of plutonium_239

Response to Commentor No. 1687

Commentor No. 1687: Arthur Doucette (Cont'd)

weighs 0.016 gm, while 1 mCi of plutonium_238 weighs 0.00006 gm.

Agency for Toxic Substances and Disease Registry
ATSDR Public Health Statement, December 1990

If you review the formulas presented in the preceding paper you will see that there is a direct correlation of mCi/g to the toxicity. Thus where the previous formula suggests .08mg per cancer for inhaled Pu239, substituting the mCi rate of Pu238 yields .0003 mg/cancer. Thus making Pu238 260 times more lethal per gram!

I would agree that even in most re_entry scenarios, the likelihood of a catastrophe is very small, but there do exist plausible scenarios that could result in massive deaths and illness. This is the risk Vs reward issue. I've followed NASA since before the first Redstone took Carpenter on his suborbital flight. Never before, even considering the Apollo pad fire and Challenger, have I ever read or seen so many people and groups bashing NASA consistently and with such anger as over Cassini and launches containing RTG's. Simply from a public relations point of view Cassini will likely remain a net loss to NASA even if it succeeds in its planetary exploration mission. Future launches of Pu238 will continue to result in a ever growing part of the public which opposes their mission.

Sincerely,
Arthur Doucette

Response to Commentor No. 1687

Commentor No. 1688: Joyce A. Mikelson

From: Joyce A Mikelson
[SMTP:BRIGHTPRAIRIE@JUNO.COM]
Sent: Monday, September 18, 2000 12:18:09 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Opposal of FFTF startup
Auto forwarded by a Rule

Sirs: I oppose the start of the FFTF nuclear reactor at Hanford __ No more nuclear waste in the Columbia River or endangerment to the ecology and surrounding environment . There is already instability in the present holding tanks and leakage that needs to be addressed and resolved safely __ do not carry out this plan for restart __ clean up and stabilize the site for permanent shutdown.

Joyce Mikelson,
Portland, Oregon

|| 1688-1

|| 1688-2

|| 1688-1

|| 1688-2

Response to Commentor No. 1688

1688-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1688-2: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Commentor No. 1689: Suzanne C. Kneeland

From: JimsoozHQ@aol.com%internet
 [SMTP:JIMSOOZHQ@AOL.COM]
 Sent: Monday, September 18, 2000 12:16:47 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Potatoes not plutonium
 Auto forwarded by a Rule

Ms. Colette Brown
 DOE, Office of Space and Defense Power Systems

Dear Ms. Brown,
 Your Department's recent proposal to expand the civilian nuclear infrastructure, outlined in the Draft Programmatic Environmental Impact Statement for accomplishing expanded civilian nuclear energy research and development and isotope production mission in the United States, including the role of the Fast Flux Test Facility, raises significant nuclear weapons proliferation and environmental issues.

As a member of the Snake River Alliance I have become aware of the serious nuclear contamination and waste problems at INEEL. INEEL is one of the most contaminated areas in America. The Department's recent estimate on cleaning up our site is \$22 billion and is expected to take 50 years__longer than any other DOE facility. In addition, we have over 360 individual superfund sites within the 890 sq. mile area that comprises INEEL. With this known, the last thing we need is a plan to generate more nuclear waste at a site that needs more waste like the DOE needs security scandals. Out of concern for Idaho's environment, I strongly urge you not to pursue the plutonium_238 production mission outlined in your PEIS.

One of the most daunting problems confronting cleanup at major DOE facilities such as Hanford and INEEL, is the solidification of liquid high_level nuclear waste. Your current plan for plutonium_238 production entails the generation of approximately 288,000 additional gallons of this waste over the project's 35 year span. While this is a small portion of Hanford's high level waste, it

1689-1**1689-2****Response to Commentor No. 1689**

1689-1: The commentor's position regarding plutonium-238 production at INEEL is noted. Production of plutonium-238 at one or more of the candidate sites would be conducted in support of NASA's deep space missions Volume 1, Section 1.2.2 of the NI PEIS). As discussed in Sections 4.3.2.1.13 and 4.4.2.1.13 of the EIS, selection of the Fluorinel Dissolution Processing Facility and/or the Advanced Test Reactor to support production of plutonium-238 would have no significant impact on the waste management system at INEEL. Use of any of the facilities proposed in this PEIS for the stated missions would not impact cleanup missions at DOE sites.

Grand Teton National Park and Yellowstone National Park are approximately 139 kilometers (80 miles) and 112 kilometers (70 miles), respectively, from the boundary of INEEL. Airborne radioactive and nonradioactive pollutants that could result from implementation of the nuclear infrastructure alternatives would not contaminate Grand Teton National Park or Yellowstone National Park. As discussed in Chapter 4, Appendix H and Appendix I, for both normal operations and accidents, no significant environmental impacts are expected at distances in excess of 80 kilometers (50 miles) from the INEEL.

Waste management and cleanup efforts at INEEL are discussed in Section 3.3.11. Selection of candidate facilities at INEEL for support of DOE's nuclear infrastructure missions would not impact the cleanup missions at INEEL.

1689-2: The use of proposed alternative facilities associated with processing of neptunium-237 targets would have no impact on schedules or available funding for high-level radioactive waste programs at either Hanford or INEEL. At INEEL, the tanks would not be used although certain facilities at the Idaho Nuclear Technology Engineering Center (INTEC) would be used to treat the wastes resulting from processing the irradiated targets. These are reliable systems that would process a maximum of 1,050 cubic meters of low-level radioactive waste over the 35-year nuclear infrastructure operational period. The higher activity waste would be treated as a solid form via a stand-alone vitrification system, separate from any tank waste treatment system. At Hanford, the existing high-level radioactive waste facilities would not be used, and as analyzed in the PEIS, no existing or planned high-level radioactive waste facilities would be used to treat the wastes resulting from processing the irradiated targets.

Commentor No. 1689: Suzanne C. Kneeland (Cont'd)

is approximately one fifth of what we have remaining here in Idaho, which makes it a very significant amount. Previous leakage of this waste at INEEL and Hanford threatens our water supplies. What we certainly don't need is any more of this most highly problematic of waste forms.

**1689-2
(Cont'd)**

Given the certain risks inherent in production of plutonium, the justified need for this material would have to be tremendous, and the PEIS does a poor job of providing ample justification. Beyond the risks involved in production, and the aforementioned resulting waste problem, there is also the issue of an accident occurring upon lift_off or reentry of a space probe carrying this material. The cassini probe, launched in 1997, carried 72 pounds of Pu_238. The potential for an explosion during lift_off or upon an inadvertent reentry during the fly_by phase, gave many in the scientific community pause, including scientists within NASA. According to NASA's own conservative estimate, a burn up upon reentry of the cassini probe could have caused 2,300 cancer fatalities, independent analyses ranged much higher. This potential for a catastrophic release of this extremely toxic material will remain so long as the US government remains committed to the use of plutonium_238. If DOE is to have a role in developing power systems for NASA's instrumentation, it should focus on promising solar technology, an alternative that has been promoted in the European scientific community.

1689-3

There are also proliferation concerns as it pertains to this plan. A return to production of this isotope, however poorly justified, means a return to the use of aqueous reprocessing at DOE facilities where this technology has been used to extract bomb material for the weapons program. From President Carter to presidents Bush and Clinton, US policy has been to halt reprocessing in this country in order to set a global precedent to curtail the spread of nuclear weapons material_a noble effort in serious need of bolstering through action.

1689-4

Indeed, an otherwise lukewarm Nuclear Infrastructure

1689-5

Response to Commentor No. 1689

1689-3: Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed production of plutonium-238 are relatively low and are discussed in detail in Chapter 4 of Volume 1, and Appendixes H, I, and J of Volume 2 in the Final NI PEIS.

1689-4: DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternative energy sources for space missions, although issues such as NASA research priorities are beyond the scope of this PEIS. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch.

Commentor No. 1689: Suzanne C. Kneeland (Cont'd)

Nonproliferation Impact Assessment conducted by your Office of Arms Control and Nonproliferation questions whether our commitment to nonproliferation isn't weakened by the use of the Fluorinel Dissolution Process Facility within Building 666 at INEEL. INEEL's reprocessing facility is next door to a wet storage unit for Navy spent fuel, which contains a greater than average amount of highly enriched uranium. It was reprocessed from 1953 to 1989 at INEEL for the weapons program. Use of this facility to carry out plutonium_238 extraction, especially considering the dubious need for this isotope, at the very least raises the concern that DOE is not fully committed to ending reprocessing. The international community cannot be expected to trust DOE's civilian_mission claim when an agency devoutly committed to development of weapons uses a nuclear weapons technology at a weapons facility.

Considering all these factors that could adversely affect our environment and commitment to nonproliferation, I strongly urge you to select alternative 5 in the current PEIS. This alternative would allow the Advanced Test Reactor at INEEL to continue producing medical and industrial isotopes for the commercial sector and would not lead to the production of anymore highly radioactive liquid waste at Hanford or INEEL. The main mission at these two facilities has been and should continue to be cleanup of the mess left over from previous nuclear weapons work. Additional waste production would interfere with this already difficult and expensive work. Alternative 5 also calls for the decommissioning of the FFTF reactor at Hanford. FFTF is an aging breeder reactor whose use would be inconsistent with United States policy to discourage use of this technology due to the capability this class of reactors has to produce more plutonium than is consumed. Thank you for the opportunity to comment on this plan. As a downwinder of the INEEL site, I fear Yellowstone and Grand Teton National Parks are also unprotected from harmful airborne pollutants from INEEL. We find out more and more each day about INEEL's toxicity and lies and cover_up. I feel our community has learned a lot recently in a short amount of time, and citizens are deeply concerned about the

**1689-5
(Cont'd)**

1689-6

1689-1

Response to Commentor No. 1689

1689-5: It is not true that resumption of plutonium-238 production constitutes a return to reprocessing. The aqueous technique that would be used to separate plutonium consisting of over 80 percent plutonium-238 and neptunium from the irradiated target is similar to the technology that was used in portions of the complex process to extract plutonium-239. However, as discussed in PEIS Sections S.3, 2.2.3 and A.1.4, this technology would be used to chemically separate plutonium-238 and neptunium from irradiated targets and not from irradiated or spent nuclear fuel, whereas reprocessing separates weapons grade plutonium-239 from irradiated nuclear fuel. Plutonium-238 extraction is not reprocessing. Unlike plutonium-239, plutonium-238 is not used in nuclear weapons, but rather it would be used as a power and heat source for NASA space missions.

The Nuclear Infrastructure Nonproliferation Impact Assessment, published in September 2000, confirms that extracting plutonium-238 from irradiated targets would not undermine nonproliferation goals. In this report, DOE recognizes that proliferation concerns might be raised related to one of the technical assessment factors, "reduction in attractiveness of material forms," due to the fact that, in the extraction of plutonium-238, the remaining unconverted neptunium, a weapons useable fissile material used as target material for conversion into plutonium-238, must also be recovered (not produced), purified, and recycled. This is unavoidable (unless the United States elects to neither produce or purchase plutonium-238), and it impacts all PEIS alternatives and options, including the No Action Alternative and Alternative 5: permanently deactivate FFTF with no new missions at U.S. facilities. However, while the fact that concerns might be raised is a valuable input to the record of decision process, it does not constitute an inconsistency with or departure from nonproliferation policy, and plutonium-238 is needed to fulfill our missions. Further, in the event that plutonium-238 production is resumed in the United States, the total separated stocks of neptunium would be reduced over time in an irreversible manner since there is a moratorium on U.S. spent fuel reprocessing. This overall reduction in a weapons-useable material would mitigate the potential concerns related to material attractiveness, and offer an additional method to pursue U.S. nonproliferation goals. DOE's proposed approach in this mission, and its rigorous nonproliferation impact assessment, demonstrate its commitment to nonproliferation policy, domestically and in the international community.

Commentor No. 1689: Suzanne C. Kneeland (Cont'd)

mess being created over there each day. This plutonium plan is only one in a long list of foolish ideas from the DOE and INEEL. It's always so easy to say, "We didn't know that much back then...we know a lot more now," while explaining away past mistakes. Then we line up more foolish ideas that we do not know the consequences of until generations later. Everyone's always looking for the "cure" for cancer or AIDS...let's now look at the causes of these diseases which can be the direct result of living too close to a Nuclear Reactor Test Site or DOE facility. I am outraged at the poisoning of children and adults in Oak Ridge, Tennessee and the children in Winona, TX. People are dying every day because we are poisoning ourselves and our children in this mad race to produce bombs that will surely kill us all accidentally or on purpose. As a teacher and caretaker of children, I implore you to stop the madness of plutonium production. Give those INEEL folks jobs cleaning up the huge messes safely.

Thank you for your time.
Sincerely,
Suzanne C. Kneeland
PO Box 11951
Jackson, WY 83002
jimsoozhq@aol.com

**1689-1
(Cont'd)**

1689-7

1689-1

Response to Commentor No. 1689

The juxtaposition of Fluorinel Dissolution Process Facility (FDPF) in INEEL Building 666 to wet storage of highly enriched uranium Navy spent nuclear fuel, and its previous mission of reprocessing spent nuclear fuel, were rigorously and objectively evaluated in the Nuclear Infrastructure Nonproliferation Impact Assessment published in September 2000. In no uncertain terms, this report discusses the proliferation concerns raised in the areas of facilitating cost-effective international monitoring and supporting negotiation of a verifiable Fissile Material Cutoff Treaty (FMCT), and outlines what is needed to mitigate these concerns. This is a valuable input to the record of decision process.

Most of the concerns and uncertainties surrounding the use of FDPF are associated with its history as a defense programs facility and the resulting lack of transparency that could be afforded in the event that international monitoring becomes desirable under an FMCT. This is a different set of concerns than those expressed in the comment. The fact is, that since it is well known that FDPF has a long history of Navy defense missions, and since the described mission (plutonium-238 extraction) in the PEIS does not involve the production of special fissile material, sufficient transparency could possibly be provided by a managed access regime that would meet the requirements of FMCT verification. If this could be done, the aforementioned concerns would be mitigated.

1689-6: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. It should be noted that medical isotopes would continue to be produced at ATR regardless of which alternative is selected in the Record of Decision. The FFTF would produce spent nuclear fuel and low-level radioactive waste, and as discussed throughout Section 4.3 of Volume 1, none of the proposed alternatives would add waste to the high-level waste tanks at Hanford or INEEL. Also, it should be pointed out that while FFTF supported the breeder reactor program, it is not itself a breeder reactor, but rather a fast flux research reactor.

Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the

Commentor No. 1689: Suzanne C. Kneeland (Cont'd)

Response to Commentor No. 1689

Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

With respect to cleanup of wastes at Hanford or INEEL, the proposed action and the existing cleanup missions are independent programs and actions related to one will not impact the other. While the cleanup activities at both Hanford and INEEL are high priority to DOE, it should be noted that the cleanup of legacy wastes is beyond the scope of the NI PEIS.

1689-7: The commentor's positions on plutonium production and health impacts of nuclear reactors are noted. As discussed in Section 1.2.2 of Volume 1, under the nuclear infrastructure alternatives, plutonium-238 would be produced to support NASA's deep space probes. Plutonium-238 is not used to make nuclear weapons.

Impacts on public health in the Oak Ridge Area that would occur under implementation of the nuclear infrastructure alternatives are discussed in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.9, 4.4.1.1.9) and Appendixes H through J of Volume 2. Implementation of the alternatives would not be expected to result in latent cancer fatalities among populations residing in the potentially affected area surrounding the Oak Ridge Reservation.

Commentor No. 1690: Chip Ruberry

From: cruberry@miicor.com%internet
[SMTP:CRUBERRY@MIICOR.COM]
Sent: Monday, September 18, 2000 12:34:35 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: nuclear comment deadline
Auto forwarded by a Rule

Ms. Colette Brown
DOE, Office of Space and Defense Power Systems

Dear Ms. Brown,

I support Alternative 5 in which production of plutonium would not be re_initiated. We need to focus on cleaning up our past mistakes, rather than creating new ones.

Chip Ruberry
Boise, ID

1690-1

Response to Commentor No. 1690

1690-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. DOE also notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations. Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

Commentor No. 1691: Barbara LaMorticella

From: Barbara LaMorticella[SMTP:BARBALA@TELEPORT.COM]
 Sent: Monday, September 18, 2000 1:40:16 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Public Comment on Hanford Fast Flux Reactor
 Auto forwarded by a Rule

This is to comment on the Environmental Impact Statement_
 NIPEIS

Please do not restart the Fast Flux Test Facility nuclear reactor at Hanford. There is no safe way to dispose of the waste, and it will go on causing death and destruction in the biological chain for hundreds of thousands of years. Help make 2000 the year we begin to turn away from nuclear folly and from degrading the Columbia River and the northwest.

Sincerely,

Barbara LaMorticella

1691-1

1691-2

Response to Commentor No. 1691

-
- 1691-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 1691-2:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Commentor No. 1692: Robert LaMorticella

From: GenIron@aol.com%internet
 [SMTP:GENIRON@AOL.COM]
 Sent: Monday, September 18, 2000 1:52:58 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Public Comment on Restart of Hanford Fast Flux
 Reactor
 Auto forwarded by a Rule

To address the environmental impact statement__ NIPEIS

Restarting the Fast Flux Test Facility at Hanford will not help our defense but the opposite__ it will make us weaker, by weakening our biological fabric.

1692-1

No technology can contain the nuclear waste generated, and no benefits justify the risk of making the Pacific Northwest a biological dead zone. Please help keep the future from judging us wickedly foolish. Please don't allow the reactor to reopen!

1692-2**1692-1**

Robert LaMorticella

Response to Commentor No. 1692

1692-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF. No component of the proposed action is for the purpose of supporting any defense- or weapons-related mission.

1692-2: DOE notes the commentor's concern regarding waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 1693: Dave Bjur

From: Dave Bjur[SMTP:DAVE@SERVANT.ORG]
Sent: Monday, September 18, 2000 3:08:40 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Please re_start the FFTF
Auto forwarded by a Rule

I would like to respectfully ask you to please re_start the FFTF. This is necessary for both medical and energy research.

Dave Bjur
dave@servant.org

1693-1

Response to Commentor No. 1693

1693-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1694: Ellen M. Eddy

From: EDDYELLEN@aol.com%internet
[SMTP:EDDYELLEN@AOL.COM]
Sent: Monday, September 18, 2000 3:19:47 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF
Auto forwarded by a Rule

To whom it may concern:
I support the restart of FFTF for the production of medical isotopes. It is very important that these isotopes are available to help people. Please expedite this project.

Sincerely,

Ellen M. Eddy, 11736 Scott Creek Drive SW, Olympia WA
98512

1694-1

Response to Commentor No. 1694

1694-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1695: Paul A. Eddy

From: EDDYELLEN@aol.com%internet
[SMTP:EDDYELLEN@AOL.COM]
Sent: Monday, September 18, 2000 3:19:49 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF
Auto forwarded by a Rule

This is a message to state that I support the restart of FFTF for the production of medical isotopes. I feel that these isotopes will help many ill people and that it is in our interest to provide these isotopes.

Sincerely yours,
Paul A. Eddy
11736 Scott Creek Drive SW
Olympia WA 98512

1695-1**Response to Commentor No. 1695**

1695-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1696: Brian Setzler

From: Brian Setzler[SMTP:BSETZLER@YAHOO.COM]
Sent: Monday, September 18, 2000 3:47:28 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Citizen comment
Auto forwarded by a Rule

I'm writing to voice my opposition to restarting the FFTF reactor at Hanford.

I live in Portland, Oregon with my family, friends and neighbors and am particularly concerned about adding more nuclear waste and pollution to what is arguably the nation's most polluted place.

Restarting the FFTF will add more waste to Hanford's leaking and explosive waste holding tanks.

In 1995 the Department of Energy promised (in the Hanford Clean_up Agreement) to shut down FFTF and use the money saved for higher priority Clean_Up. Instead, USDOE has spent more than \$100 million of clean_up money keeping FFTF on hot standby.

The purported reason for restarting FFTF is to obtain Plutonium_238 yet NASA has stated they have no need to purchase Plutonium_238 for the specific space mission used to justify FFTF restart. How can it be economically viable to operate FFTF for Pu_238 if there are no buyers? And besides, we haven't even been told the cost of the restart. How can the public make an informed decision without knowing the cost? And why was NASA's decision not included in the PEIS study?

Finally, Northwest citizens have repeatedly voiced their concerns over FFTF _ telling USDOE to shut it down and get Hanford cleaned up. Why does the USDOE continue to ignore Northwest citizens? Honor your commitment to clean_up and shut down FFTF!

1696-1

1696-2

1696-3

1696-4

1696-5

1696-4

1696-3

Response to Commentor No. 1696

1696-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1696-2: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. This waste would not be stored in the high-level radioactive waste tanks. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

1696-3: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

All environmental parameters (e.g., air, soil, surface water, groundwater, vegetation, animals, etc.) in and around the Hanford Site are monitored on a set frequency. The information is available to the public in annual monitoring reports. No food or water restrictions are currently in place outside the Hanford Reservation as a result of Hanford activities.

Commentor No. 1696: Brian Setzler (Cont'd)

Hanford's high_level nuclear waste tanks are already leaking radioactive waste into the groundwater, which is moving closer to the Columbia River and threatening the life of the river and the people downstream. With this real and imminent danger, how can anyone reasonably propose restarting a reactor that will add more waste to this ecosystem?

40 years of history have established that USDOE cannot be trusted to disclose the truth. In June, during the Hanford fire, USDOE lied about Plutonium releases. For years ago, USDOE promised independent regulation of reactors, including FFTF. USDOE has lied and broken its promises. How can we trust you to run an unsafe, unregulated reactor?

Do not restart the FFTF!!!!!!

Brian Setzler
4608 NE Beech Street
Portland, OR 97213
503_287_1798

1696-3
(Cont'd)

1696-2

1696-3

1696-1

Response to Commentor No. 1696

In regards to the Hanford wildfire of 2000, the DOE Richland Operations Office, the State of Washington Department of Health, and U.S. Environmental Protection Agency performed environmental monitoring on and around the Site to assess potential radiological impacts. The wildfire did not cause a release of radioactive materials from any Hanford facilities but did result in resuspension of radioactive materials which were already in the environment. The very low levels of radioactive materials that were resuspended were slightly above natural background levels and required several days of analysis to quantify. Information on this event has been made available to the public and can be accessed at <http://www.Hanford.gov/envmon/index.html>. This site also provides a link to information on the independent offsite air monitoring That was conducted by the U.S. Environmental Protection Agency.

As discussed in Appendix N, section N.3.2, implementation of any of the DOE missions at Hanford would not be in conflict with the land use plan or the Tri-Party Agreement. Additionally, DOE has made a commitment that implementation of the Record of Decision will not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

As identified in Section N.4.2 of the NI PEIS, the subject of independent regulation is not within the scope of the NI PEIS but is an operational issue to be considered only if FFTF restart is selected in the Record of Decision.

1696-4: The May 22, 2000, correspondence from NASA to DOE identifies that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large RTG may be

Commentor No. 1696: Brian Setzler (Cont'd)

Response to Commentor No. 1696

maintained as a backup. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

- 1696-5:** The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such an ancillary document need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed this document to about 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P in the Final NI PEIS.

**Commentor No. 1697: Gary E. Richardson
Snake River Alliance**

From: Gary Richardson
[SMTP:GARY@SNAKERIVERALLIANCE.ORG]
Sent: Wednesday, September 20, 2000 11:34:32 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Fw: ATTN: Collette Brown
Auto forwarded by a Rule

_____ Original Message _____

From: Gary Richardson
To: Nuclear.Infrastructure_PEIS@hq.doe.gov
Sent: Monday, September 18, 2000 4:35 PM
Subject: ATTN: Collette Brown

Attached are the comments of the Snake River Alliance in MS Word format. A hard copy of these comments plus attachments and petitions signed by more than 200 persons supporting our statement have been mailed via the US Postal Service today.

Gary E. Richardson
Executive Director
Snake River Alliance

September 18, 2000
Ms. Colette Brown
DOE, Office of Space and Defense Power Systems

Re: Draft Programmatic Environmental Impact Statement for accomplishing expanded civilian nuclear energy research and development and isotope production mission in the United States, including the role of the Fast Flux Test Facility

Dear Ms. Brown,

The following comments are submitted on behalf of the 1,300 members of the Snake River Alliance_an Idaho_based, grassroots group working for peace and justice, the end of nuclear weapons production and responsible solutions to nuclear waste and

Response to Commentor No. 1697

Commentor No. 1697: Gary E. Richardson (Cont'd)
Snake River Alliance

contamination. We have acted as the citizen watchdog of activities at the Idaho National Engineering and Environmental Laboratory for 21 years.

Your department's proposal to expand the civilian nuclear infrastructure raises significant nuclear weapons proliferation and environmental issues. INEEL is already one of the most contaminated areas in America. The Department's recent estimate on cleaning up our site is \$22 billion over 50 years. In addition, we have approximately 400 individual Superfund sites within the 890_square_mile area that comprises INEEL. With this known, the last thing we need is a plan to generate more nuclear waste at a site that needs more waste like the DOE needs more security scandals.

One of the most daunting problems confronting cleanup at major DOE facilities, such as Hanford and INEEL, is the solidification of liquid high_level nuclear waste. Your current plan for plutonium_238 production entails the generation of approximately 288,000 additional gallons of this waste over the project's 35_year span. While this is a small portion of Hanford's high_level waste, it is approximately one fifth of what we have remaining here in Idaho, which makes it a very significant amount. Previous leakage of this waste at INEEL and Hanford threatens our water supplies. What we certainly don't need is any more of this highly dangerous waste form.

Overall, the current PEIS is seriously flawed: It fails to justify the need for expanding the civilian nuclear infrastructure when balanced against the additional waste that would be generated at major DOE facilities and against this nation's non_proliferation policy. Many of the alternatives analyzed are simply unreasonable. The DOE has looked at many alternatives in place of a wide range of alternatives.

Unreasonable alternatives and analysis

This PEIS, while analyzing many alternatives when all the permutations of the various alternatives are factored, does not necessarily analyze a wide range of alternatives as required under the National Environmental Policy Act. It is clear, especially when

1697-1

1697-2

1697-3

1697-4

Response to Commentor No. 1697

1697-1: The commentor's position on generation of nuclear waste at INEEL is noted. Use of facilities considered in the NI PEIS would not impact the cleanup missions at their respective sites.

1697-2: The use of proposed alternative facilities associated with processing of neptunium-237 targets would have no impact on schedules or available funding for high-level radioactive waste programs at either Hanford or INEEL. At INEEL, the tanks would not be used although certain facilities at the Idaho Nuclear Technology Engineering Center (INTEC) would be used to treat the wastes resulting from processing the irradiated targets. These are reliable systems that would process a maximum of 1050 cubic meters of low-level radioactive waste over the 35-year nuclear infrastructure operational period. The higher activity waste would be treated as a solid form via a stand-alone vitrification system, separate from any tank waste treatment system. At Hanford, the existing high level radioactive waste facilities would not be used, and as analyzed in the PEIS, no existing or planned high-level radioactive waste facilities would be used to treat the wastes resulting from processing the irradiated targets.

1697-3: DOE notes the commentor's opinion concerning the justification of the purpose and need for the DOE missions. DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

Commentor No. 1697: Gary E. Richardson (Cont'd)
Snake River Alliance

examining alternative 2, that an attempt was made to throw in as many alternatives as possible, even if they contradict the overall stated intent of expanding the nuclear infrastructure. Alternative 2 involves using existing DOE research reactors to accomplish the stated mission to the extent possible, even if the change in course over the current mission of these reactors as outlined in the PEIS diminishes the overall civilian nuclear infrastructure. For instance, use of INEEL's ATR under alternative 2 would involve plutonium_238 production, but would strip ATR of its current medical and industrial isotope production. Production of these isotopes under current operation represents two-thirds of the isotopes the DOE expects an increased need for as outlined in the PEIS. Because alternative 2, particularly as it concerns the use of ATR, would diminish the DOE's current civilian nuclear infrastructure mission, it cannot be said to be a reasonable alternative and therefore should be dropped from consideration in the final EIS. Including this alternative in the PEIS is an admission that the plutonium production mission is really your only concern and that the supposed justification for other isotope production is simply intended to make this civilian infrastructure PEIS appear more appealing and important to the public.

Furthermore, all alternatives involve breaking up the missions: target fabrication, storage, irradiation, and (to a degree) target processing. This also is unreasonable as it involves transport of nuclear materials. For instance, under alternative 1, option 2, the neptunium oxide would be shipped for SRS to INEEL for target fabrication; the targets would then be shipped to Hanford for irradiation; and then returned to INEEL for separation. Why break up the missions to this extent other than to spread the mess around? If the mess can be spread out around DOE facilities, then it is possible for the additional waste to be considered insignificant (especially considering the amount already stored and generated at facilities like Hanford and INEEL) by site while the overall amount of generated waste is far from insignificant. Unless a clear rationale for breaking up the missions can be provided in the revised draft PEIS, then these options should also be dropped from consideration. This also is an

1697-4
(Cont'd)

Response to Commentor No. 1697

DOE has taken the Expert Panel and NERAC report recommendations under consideration in developing the range of alternatives evaluated in the NI PEIS. These reports were made available to the public at the NI PEIS public information centers and on the Internet at <http://www.nuclear.gov>.

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Under the No Action Alternative, DOE would continue to purchase plutonium-238 to meet the space mission needs for the 35-year evaluation period considered in the NI PEIS. However, DOE recognizes that any purchase beyond what is currently available to the United States through the existing contract would likely require negotiation of a new contract and may require additional NEPA review.

The May 22, 2000, correspondence from NASA to DOE identifies that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, SRTG development efforts were stopped in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires one-third less plutonium-238 as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000, letter to DOE that large RTGs be maintained as backup. Section 1.2.2 of Volume 1 was revised to clarify plutonium-238 mission needs.

Commentor No. 1697: Gary E. Richardson (Cont'd)
Snake River Alliance

instance of throwing in many options to attempt to satisfy a wide range of alternatives when it is instead many alternatives within a narrow context.

In addition, it is possible that a hybrid of various alternatives would end up being selected as the preferred alternative. This selection method was recently criticized by the National Academy of Sciences. Because the preferred alternative could end up looking nothing like any one of the individual alternatives analyzed, it becomes difficult for the public to be confident of the analyses.

Waste generation and management at INEEL (4.3.2.1.13)
First and foremost, the term "high_level waste" is not used to describe the liquid waste stream resulting from processing the irradiated targets. How is this possible? High_level waste is a product of the operation (aqueous reprocessing) described in the PEIS for extracting the plutonium. Previous use of this technology at INEEL's FDPF facility resulted in approximately 8 million gallons of liquid high_level waste that has since been converted to calcine. The production of this waste stream at INEEL raises serious environmental management concerns.

Furthermore, the DOE has previously inventoried liquid waste in gallons. By using cubic meters by year (table 4_35) to represent the amount of liquid waste generated, the DOE is attempting to portray the amount generated as relatively small. If a conversion is done to gallons, the measure normally used by the DOE, approximately 288,000 gallons of high_level liquid waste will be generated at INEEL over the 35_year life of the project. If the current PEIS were to accurately classify newly generated liquid waste as high_level, it would of course be enormously significant.

There is no place to store the HLW that will be produced. The current INEEL tank farm is aging, leaking, and will eventually be closed. The tanks are well beyond their design life and are not suitable for storage of new HLW. In all probability, new sets of tanks would have to be built for the Pu_238 extraction. The PEIS must

1697-4
(Cont'd)

1697-5

Response to Commentor No. 1697

It is the current United States policy that clean, safe, reliable nuclear power continue as a viable component of the United States' energy portfolio. In recognition of this need, the United States has initiated nuclear energy research and development programs to address potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) and to ensure that current nuclear power plants can continue to deliver adequate and affordable energy supplies. An enhanced DOE nuclear facility infrastructure is required to support such nuclear energy research and development for civilian applications.

The NI PEIS provides an estimate of waste generation impacts associated with each of the alternatives proposed for the production of medical, industrial and research isotopes, plutonium-238, and nuclear research and development. Any additional wastes generated in support of these missions would be managed in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations, and applicable DOE orders.

Nonproliferation is not included in the NI PEIS, but is discussed in a separate nonproliferation impact assessment report. The technology that is discussed in the NI PEIS would be used to chemically separate plutonium-238 and neptunium from irradiated targets and not from irradiated or spent nuclear fuel, whereas reprocessing separates weapons grade plutonium-239 from irradiated nuclear fuel. As discussed in the separate nonproliferation impact assessment report, use of this technology to produce plutonium-238 from irradiated targets will not create a nonproliferation threat. DOE is committed to full compliance with and support of the U.S. policy prohibiting reprocessing.

1697-4: DOE has undertaken to analyze a range of reasonable alternatives in the NI PEIS as required by NEPA (40 CFR 1502). Alternative 2, Use Only Existing Operational Facilities, represents a reasonable alternative that is keyed to the plutonium-238 mission. Under this alternative production of medical and industrial isotopes and support of nuclear research and development in DOE reactors and accelerators would continue at No Action Alternative levels, although near term growth could be limited under some options. It should be noted that variation in the consequences of an alternative does not make an alternative unreasonable, rather it provides an additional basis for selection of one alternative over another by the decision-maker.

Commentor No. 1697: Gary E. Richardson (Cont'd)
Snake River Alliance

consider the costs, timelines, and implications of constructing new HLW storage facilities at INEEL.

The PEIS and US non-proliferation policy
 A return to production of plutonium_238, however poorly justified, means a return to the use of aqueous reprocessing at DOE facilities where this technology has been used to extract bomb material for the weapons program. From President Carter to presidents Bush and Clinton, US policy has been to halt reprocessing in this country in order to set a global precedent to curtail the spread of nuclear weapons material_a noble effort in serious need of bolstering through action.

Indeed, an otherwise lukewarm Nuclear Infrastructure Nonproliferation Impact Assessment conducted by your Office of Arms Control and Nonproliferation questions whether our commitment to nonproliferation isn't weakened by the use of the Fluorinel Dissolution Process Facility within Building 666 at INEEL. INEEL's reprocessing facility is next door to a wet storage unit for Navy spent fuel, which contains a greater than average amount of highly enriched uranium. It was reprocessed from 1953 to 1989 at INEEL for the weapons program. Use of this facility to carry out plutonium_238 extraction, especially considering the dubious need for this isotope, at the very least raises the concern that the DOE is not fully committed to ending reprocessing. The international community cannot be expected to trust the DOE's civilian_mission claim when an agency devoutly committed to development of weapons uses a nuclear weapons technology at a weapons facility.

If the FFTF is restarted, the preferred fuel is highly enriched uranium (HEU) and mixed (plutonium) oxide fuel (MOX). It is against US policy to use HEU and the use of MOX fuel is still being debated. Use of HEU as fuel violates non-proliferation policy and agreements with international governments. HEU (enriched to 93%) is currently being used at the ATR. Efforts must be taken to abandon that use in order to conform to US non-proliferation policy. In addition, FFTF is an aging breeder reactor and use of this facility is inconsistent with

1697-5
(Cont'd)

1697-6

Response to Commentor No. 1697

The various alternatives and options have different transportation requirements. These differing requirements resulted from DOE's desire to evaluate those irradiation, processing, and storage facilities that are reasonably able to accomplish the nuclear infrastructure missions as set forth in the NI PEIS. This was not done in order to minimize the impact of waste generation and disposal. If fact, the cumulative impact of waste generation and disposal are specifically addressed in Sections 4.8.1.4, 4.8.2.4, and 4.8.3.5 for ORR, INEEL and Hanford, respectively.

Section 1.3 of Volume 1 states that in addition to the range of reasonable programmatic alternatives evaluated in the NI PEIS, DOE could choose to combine components of several alternatives in selecting the most appropriate strategy. It should be noted, however, that if such an alternative were selected, it would be bounded by the range of reasonable alternatives analyzed in the NI PEIS.

1697-5: The DOE Manual 435.1. Radioactive Waste Management defines high level radioactive waste as the highly radioactive waste material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid material derived from such liquid waste that contains fission products in sufficient concentrations; and other highly radioactive material that is determined, consistent with existing law, to require permanent isolation. DOE has prepared an implementation guide to DOE M 435.1 to assist in implementing the requirements contained in that manual. For this particular requirement, the definition of high-level radioactive waste, the guide is intended to facilitate the classification of indefinite waste as to whether or not they are high-level radioactive waste. It is recognized that the definition of high-level radioactive waste is not precise and is essentially a source-based definition that also alludes to concentrations of a given waste stream. Page II-8 of this guide notes that for the purpose of managing high-level waste under DOE M 435.1-1 [sic], spent nuclear fuel includes spent driver elements and/or irradiated target elements that contain transuranium elements. This statement was included in the guide because the concentrations of long-lived isotopes are likely to be somewhat high during reprocessing and it also meets the source-based definition. As a result of reviewing this guide and to address the comments raised, DOE is considering whether the waste from processing of irradiated neptunium-237 targets should be classified as high-level radioactive waste and not transuranic waste. As a result, the Waste Management sections (i.e., Sections 4.3.1.1.13; 4.3.2.1.13; 4.3.3.1.13;

***Commentor No. 1697: Gary E. Richardson (Cont'd)
Snake River Alliance***

US policy to discourage use of this special class of reactors capable of producing more plutonium than is consumed. The only legitimate course for FFTF is deactivation, similar to EBR-II only with a firm schedule and serious effort.

The fact that certain alternatives raise significant non-proliferation issues, especially the restart of FDPF involved in several options within alternatives 1 through 4, is more than reason enough to drop these alternatives from consideration in a revised Draft PEIS.

Resource Conservation and Recovery Act issues involved in restarting FDPF

INEEL's reprocessing operation at FDPF was shut down in 1989 due to environmental noncompliance (see enclosed newspaper clippings). The piping associated with the operation was not double contained and therefore operation of the reprocessor violated the Resource Conservation and Recovery Act. Leaky piping is an issue of concern at INEEL, considering that past leaky piping at the high-level waste tank farm has led to the release of approximately 38,000 gallons of high-level waste into our environment. This cleanup effort involving several hundred thousand cubic meters of contaminated soil at INEEL has been delayed due to the complexity of integrating cleanup of this contamination with treatment of the high-level waste tanks.

Are we now to assume that this problem has been resolved? It was surprising to read in the cost estimate for the various alternatives that use of FDPF would be significantly cheaper than use of the other reprocessing facilities analyzed in the PEIS. The DOE was still working on bringing this facility up to code when President Bush officially halted reprocessing on non-proliferation grounds in 1992. A Resource Conservation and Recovery Act permit would be necessary to operate this facility as outlined in the PEIS. What are the plans for obtaining this permit? Because of the danger involved in extraction of plutonium through aqueous reprocessing and the difficulty of managing liquid radioactive waste as mentioned above, it would also be necessary to conduct a separate Environmental

**1697-6
(Cont'd)**

1697-7

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and 4.4.3.1.13) of this NI PEIS have been revised to reflect this different classification from what was assumed in the draft NI PEIS. As discussed in these revised sections, irrespective of how the waste is classified (i.e., transuranic or high-level radioactive waste), the composition and characteristics are the same and the waste management (i.e., treatment and on-site storage) for this NI PEIS would be the same. In addition, even if the waste is managed as high-level radioactive waste it would have no impact on the existing high-level radioactive waste management infrastructure (e.g., high-level waste storage tanks), since the high activity waste from processing of the targets would be initially stored and vitrified within the processing facility (i.e., FMEF, REDC, or FDPF).

1697-6: The commentor is correct in stating that the aqueous processing technology that would be used to separate plutonium consisting of over 80 percent plutonium-238 and neptunium from the irradiated target is similar to the technology that was used to extract plutonium-239. However, unlike plutonium-239, plutonium-238 is not used in nuclear weapons, but rather it would be used as a power and heat source for NASA space missions. The technology that is discussed in Sections S.3, 2.2.3 and A.1.4 of the NI PEIS would be used to chemically separate plutonium-238 and neptunium from irradiated targets and not from irradiated or spent nuclear fuel whereas reprocessing separates weapons grade plutonium-239 from irradiated nuclear fuel. As discussed in the separate Nuclear Infrastructure Nonproliferation Impact Assessment, published in September, 2000, use of this technology to produce plutonium-238 from irradiated targets will not create a nonproliferation threat. DOE is committed to full compliance with and support of the U.S. policy prohibiting reprocessing. The juxtaposition of INEEL Building 666 to wet storage of highly enriched uranium Navy spent nuclear fuel and its previous mission of reprocessing spent nuclear fuel were considered in the separate nonproliferation impact assessment.

The use of mixed oxide or highly enriched uranium to fuel the FFTF has been rigorously evaluated in the Nuclear Infrastructure Nonproliferation Impact Assessment. This report confirms that the manner in which these fuels would be used, as described in the PEIS, is consistent with nonproliferation policy. In the event that a decision is made to restart FFTF, the first six years of operation would use existing onsite mixed oxide (MOX) fuel. DOE expects that an additional 15-year supply of mixed oxide fuel in Germany could be available for FFTF. MOX fuel

Commentor No. 1697: Gary E. Richardson (Cont'd)
Snake River Alliance

Impact Statement on restart of this facility.

A questionable need for Pu_238

It is not clear whether any Pu_238 will be required in the future. NASA wrote a letter to the DOE, dated 22 May 2000, regarding production of Thermoelectric Generators (powered by Pu_238). The letter is a modification to a Memorandum of Understanding from 1991. The key part of the NASA letter is:

"As a result of the proposed DSS program changes, NASA Headquarters no longer has an identifiable planned requirement for Small Radioisotope Thermoelectric Generator (SRTG) power systems. Therefore NASA Headquarters requests that all SRTG development efforts for DSS spacecraft missions be halted. In addition, investigation into the utilization of the ES and Multi_Hundred Watt systems for DSS applications should be stopped."

This letter implies that there is no future need for Pu_238 by NASA beyond current missions for which they already have Pu_238 power supplies. This view is shared by 15 elected officials who publicly stated their opposition to startup of the FFTF in a 1997 letter to President Clinton (enclosed).

Public concern for the possibility of re_entry into the atmosphere of a Pu_238 power supply is providing impetus to develop alternative power supplies. The numbers in the draft PEIS for Pu_238 needs appear to be based on historical trends and not on what NASA really needs. It is essential that the PEIS provide incontrovertible proof that, in fact, NASA has a need for Pu_238 for the next 35 years.

Inadequate comment period

The non_proliferation assessment was originally due to be released at the time of the PEIS. We did not receive it until one week prior (9/11/2000) to the end of the comment period. This is an indication of how little serious attention the DOE currently pays non_proliferation_it is given less consideration than socio_economic impacts analyzed in the PEIS.

1697-8

1697-9

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does not use highly enriched uranium. Further, use of the Hanford MOX fuel would dispose of a significant U.S. stockpile of highly attractive fresh plutonium fuel by conversion to spent fuel through irradiation in FFTF. This represents a safe, low-cost, high benefit opportunity to reduce U.S. civilian plutonium without chemical or bulk processing. Use of the German MOX represents a similar advantage with respect to the German stockpile of separated civilian plutonium. During the period of MOX fuel use, in support of U.S. nonproliferation policy directives, DOE's Office of Nonproliferation and National Security would undertake a study under RERTR to consider the technical feasibility of using low enriched uranium to fuel the FFTF. Under this nonproliferation protocol, if use of low enriched uranium fuel is found infeasible in FFTF for meeting assigned missions, policy would allow DOE to subsequently procure highly enriched uranium fuel for use in FFTF. Again, this approach is consistent with U.S. nonproliferation policy.

1697-7: The FDPF was closed because it no longer had a mission (i.e., reprocessing spent nuclear fuel). At the same time when FDPF was operational, it was just one of several INTEC facilities that sent waste to the INTEC liquid waste handling system. The INTEC liquid waste handling system did have hazardous waste compliance issues associated with it. However, because the INTEC waste handling system was and is used by other INTEC processes, it was necessary for DOE to complete extensive upgrades to that system to meet state and Federal hazardous waste requirements even though the FDPF was shut down for other reasons. In addition, several of the individual systems are currently in the process of being permitted in accordance with the Resource Conservation and Recovery Act (RCRA). Other portions of the system e.g., the INTEC Tank Farm) will not be permitted and will be closed in accordance with RCRA requirements.

If chosen for target storage and processing operations, DOE believes that this facility will meet the criteria to safely conduct these processes without impact to the environment. The FDPF would be upgraded, as necessary, and associated waste handling system would comply with RCRA. This NI PEIS provides the NEPA coverage for the FDPF for activities described.

1697-8: The May 22, 2000, correspondence from NASA to DOE identifies that NASA no longer has a planned requirement for small radioisotope

Commentor No. 1697: Gary E. Richardson (Cont'd)
Snake River Alliance

Considering all the problems inherent in the restart of FFTF and the DOE's reprocessing facilities, we urge you to either address these problems more adequately in a revised draft PEIS or choose alternative 5 in the current PEIS and commence shutdown of the FFTF. Thank you for the opportunity to comment on this proposed plan.

Respectfully submitted,

Steve Hopkins
Program Associate
Snake River Alliance
PO Box 1731
Boise, ID 83701
Comment _ Infrastructure EIS

Snake River alliance 5 18 September, 2000

1697-9
(Cont'd)

1697-10

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thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, SRTG development efforts were stopped in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires one-third less plutonium-238 as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000, letter to DOE that large RTGs be maintained as backup. Section 1.2.2 of Volume 1 was revised to clarify plutonium-238 mission needs.

1697-9: The nuclear nonproliferation impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such an ancillary document need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed this document to about 730 interested parties on September 8, 2000. The report was made available immediately upon release on the NE web site <http://www.nuclear.gov> and in the public reading rooms. DOE has also provided a summary of the Nuclear Infrastructure Nonproliferation Impact Assessment in Appendix Q in the Final NI PEIS.

The Council on Environmental Quality's (CEQ) "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act" (40 CFR 1506.10(c)) require that a minimum of 45 days be allowed for public comment on the Draft NI PEIS. As stated in the Notice of Availability (65 FR 46443 et seq.), the public comment period began on July 28, 2000 and continued to September 18, 2000. In preparing the Final PEIS, DOE has assessed and considered both oral and written comments received on the Draft PEIS during the public comment period and has responded to these comments in the Final PEIS. Volume 3 of the NI PEIS contains public comments received on the NI PEIS and DOE responses to those comments. Moreover, late comments were considered to the extent practicable.

1697-10: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 1697: Gary E. Richardson (Cont'd)
Snake River Alliance

**PETITION in opposition to
 Plutonium production**

PROPOSED AT THE IDAHO NATIONAL ENGINEERING AND ENVIRONMENTAL LABORATORY

The use of building '666' to produce plutonium at the Department of Energy's Idaho National Engineering and Environmental Laboratory poses unacceptable hazards to human health and the environment. Plutonium is one of the most toxic substances known to man, and the current plan to produce more is unjustifiable.

Restarting this highly contaminated facility at INEEL would produce a large quantity of dangerous and difficult to contain liquid radioactive waste. Past leakage of this type of waste currently threatens the Snake River Aquifer beneath the site. The Snake River Aquifer is Southern Idaho's number one source of water and must be protected. INEEL already has a tremendous nuclear waste problem, and production of more would make an already difficult cleanup job more difficult.

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X		Frank Sykes	1921 N. 33rd
	Signature	Print Name	Complete Mailing Address
	BOISE	ID 83701	
	Town/State/Zip	Phone	Email
X		LORI FRISK	3911 ALBION
	Signature	Print Name	Complete Mailing Address
	BOISE ID 83703	333-8974	FRISKY@PRIMENET.COM
	Town/State/Zip	Phone	Email
X		Keith Wilmes	
	Signature	Print Name	Complete Mailing Address
	BOISE ID 83703	344-5219	IMORM@earthlink.net
	Town/State/Zip	Phone	Email
X		JANET GREER	1926 N. 25TH
	Signature	Print Name	Complete Mailing Address
	BOISE ID 83702		GREER@MCCON.NET
	Town/State/Zip	Phone	Email
X		DIANE PETERS	3058 WINDSTREAM LN.
	Signature	Print Name	Complete Mailing Address
	BOISE ID	3950483	DUNN@DIALUP.GATEWAY.NET
	Town/State/Zip	Phone	Email
X		Rick Outhat	9052 W. TONISH
	Signature	Print Name	Complete Mailing Address
	BOISE ID 83704	328-8725	
	Town/State/Zip	Phone	Email
X		PETE STRATTON	6011 E. JEFFERSON
	Signature	Print Name	Complete Mailing Address
	BOISE ID 83712	(208) 429-8401	stratton@excite.com
	Town/State/Zip	Phone	Email

Please Return completed petitions to: Snake River Alliance, PO Box 1731, Boise, ID 83701
 Boise: Call 208/344-9161; Ketchum 208/726-7271, Pocatello 208/234-4782

Response to Commentor No. 1697

1697-11: DOE notes the concern expressed in the comment on the potential environmental and health impacts of INEEL Building-666 use in NI PEIS alternatives. Building-666 at INEEL is divided into two parts, the fuel storage facility and FDPF. The FDPF is a candidate storage and processing facility for plutonium-238 production. The impacts to human health and the environment from storage and processing activities are presented in Section 4.4.2 of the NI PEIS. All impacts on human health to workers and the general public, both during normal operations and from postulated accidents, are shown to be small. Impacts to all other environmental resources are also shown to be small.

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Commentor No. 1697: Gary E. Richardson (Cont'd)
Snake River Alliance

PETITION in opposition to
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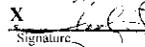
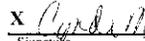
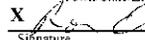
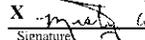
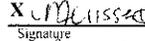
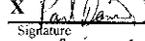
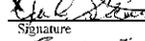
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Sincerely,

X		Andrew Elliot	422 S. Logan St.
	Signature	Print Name	Complete Mailing Address
	Boise ID 83706	381-2331	elliott2mrs@aol.com
	Town/State/Zip	Phone	Email
X		Candy Maddux	1622 S. Cooper, Boise, ID 83706
	Signature	Print Name	Complete Mailing Address
	Boise, ID 83706	381-8331	cmaddux2000@aol.com
	Town/State/Zip	Phone	Email
X		Ron DeTman	1119 Shoshone Ave
	Signature	Print Name	Complete Mailing Address
	Nampa ID 83651	467-4161	RDETMAN@EMERALINK.NET
	Town/State/Zip	Phone	Email
X		Misty Labbee	215 E 35th
	Signature	Print Name	Complete Mailing Address
	Boise ID 83714	424-9511	mlabbee@uswest.net
	Town/State/Zip	Phone	Email
X		Melissa Caprio	321 N 30th St #5208
	Signature	Print Name	Complete Mailing Address
	Boise ID 83702	208-421-6104	mcaprio@mick.com
	Town/State/Zip	Phone	Email
X		Paul Hanson Gaska	2311 30th St Apt D-303
	Signature	Print Name	Complete Mailing Address
	Boise ID 83702	424-7184	
	Town/State/Zip	Phone	Email
X		John Stevenson	PO Box 3357
	Signature	Print Name	Complete Mailing Address
	Boise ID 83723	208-250-0215	
	Town/State/Zip	Phone	Email

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 Boise: Call 208/344-9161; Ketchum 208/726-7271; Pocatello 208/234-4782

Commentor No. 1697: Gary E. Richardson (Cont'd)
Snake River Alliance

PETITION in opposition to
Plutonium production

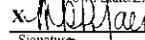
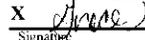
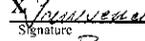
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Sincerely,

X		ERIC LECUIT	1198 Shoshone
	Signature	Print Name	Complete Mailing Address
	Boise ID 83712		niculox@uswest.net
	Town/State/Zip	Phone	Email
X		JONATHAN GARDNER	2217 N. 9th St
	Signature	Print Name	Complete Mailing Address
	Boise ID 83702	331 3159	
	Town/State/Zip	Phone	Email
X		Michelle Prokopy	1031 Klick Boise
	Signature	Print Name	Complete Mailing Address
	Boise ID 83704	253-1813	
	Town/State/Zip	Phone	Email
X		Grace Gambrell	8909 W. Irving St #29 Boise
	Signature	Print Name	Complete Mailing Address
	Boise ID 83704	658-1657	8.57m
	Town/State/Zip	Phone	Email
X		Matthew Gambrell	8909 W. Irving St #201 Boise
	Signature	Print Name	Complete Mailing Address
	Boise ID 83704		Boise 83704
	Town/State/Zip	Phone	Email
X		Sabine Cove	1102 N. 13th Boise ID 83712
	Signature	Print Name	Complete Mailing Address
	Boise ID 83712		
	Town/State/Zip	Phone	Email
X		Lawrence Kagit	7894 W. Holt Ct
	Signature	Print Name	Complete Mailing Address
	Boise ID 83706	375-0945	
	Town/State/Zip	Phone	Email

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Chapter 2—Written Comments and DOE Responses

**Commentor No. 1697: Gary E. Richardson (Cont'd)
Snake River Alliance**

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Sincerely
 X Steve Hopkins Steve Hopkins 914 Rebb
 Signature Print Name Complete Mailing Address
Boise, ID 83702 208/342-8216
 Town/State/Zip Phone Email

X David Honey DAVID HONEY 2003 N. 28TH
 Signature Print Name Complete Mailing Address
BOISE ID 83703 208-367-0629
 Town/State/Zip Phone Email

X Gary E. Shatz GARY E. SHATZ 5215 LATHAM BOISE ID 83707
 Signature Print Name Complete Mailing Address
208 362-9134
 Town/State/Zip Phone Email

X Sue Bell Sue Bell 1483 E. CARTER L.
 Signature Print Name Complete Mailing Address
Boise Id 83706 342-2366
 Town/State/Zip Phone Email

X Seth Sursky Seth Sursky 1701 N 28th St.
 Signature Print Name Complete Mailing Address
Boise ID 83702 336-2380 mtalman@jmicron.net
 Town/State/Zip Phone Email

X Jeffery A. Middlemas Jeffery A. Middlemas 5341 Wagonmaster
 Signature Print Name Complete Mailing Address
Boise, ID 83706 (208) 381-0476 JK.Musser@jmicron.com
 Town/State/Zip Phone Email

X Blair D. Harris Blair D. Harris 1689 Star Capital
 Signature Print Name Complete Mailing Address
PO BOX 110 208-885-0407 BLAIR.D.HARRIS@JMICRON.COM
 Town/State/Zip Phone Email

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Sincerely
 X Elizabeth Paul Elizabeth Paul 6155 Montclair Lane
 Signature Print Name Complete Mailing Address
Boise ID 83703 9534435
 Town/State/Zip Phone Email

X Patricia Sullivan PATRICIA SULLIVAN 1430 SE 14th Ave 211
 Signature Print Name Complete Mailing Address
PO BOX 107, OR 97017 (503) 211-6709 psullivan@ketchup.com
 Town/State/Zip Phone Email

X Maria E. Gooden Maria Gooden 702 Utevalley St
 Signature Print Name Complete Mailing Address
Boise Id 83712 455-9059 maria@ketchup.com
 Town/State/Zip Phone Email

X Brent Marchbanks Brent Marchbanks 1207 N. 14
 Signature Print Name Complete Mailing Address
Boise Id 244-5596 Bmarchbanks@exocore.net
 Town/State/Zip Phone Email

X JJ Hammer JJ HAMMER 645 Park
 Signature Print Name Complete Mailing Address
EMMETT, ID 83617 365-5453 61421ER45@HOTMAIL.COM
 Town/State/Zip Phone Email

X Althea Hammer Althea Hammer 645 E. Park Emmett, Id
 Signature Print Name Complete Mailing Address
Emmett, Id, 83617 365-7200 83617
 Town/State/Zip Phone Email

X Crystal Hammer Crystal Hammer 1318 N 11th St Boise 83707
 Signature Print Name Complete Mailing Address
Boise 338-7700
 Town/State/Zip Phone Email

Please Return completed petitions to: Snake River Alliance, PO Box 1731, Boise, ID 83701
 Boise: Call 208/344-9161; Ketchum 208/726-7271; Pocatello 208/244-4782

Commentor No. 1697: Gary E. Richardson (Cont'd)
Snake River Alliance

PETITION in opposition to
Plutonium production

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Sincerely,

X Saundra Unzicker Saundra Unzicker 1757
 Signature Print Name Complete Mailing Address
 Boise, ID 83702 336-4092 saundra@idstate.com
 Town/State/Zip Phone Email

X Muel Eckerberg Muel Eckerberg 2505 N 15th #204
 Signature Print Name Complete Mailing Address
 Boise, ID 83702 336-4092 muele@idstate.com
 Town/State/Zip Phone Email

X Mit Torrie Martindale Torrie Martindale 2505 N 15th APT #604
 Signature Print Name Complete Mailing Address
 Boise, ID 83702 336-6096 CHAIZUO@KUB.NET
 Town/State/Zip Phone Email

X Jedul Mahnken Jedul Mahnken 1422 N Meridian Rd
 Signature Print Name Complete Mailing Address
 Meridian, ID 83642 8877847 Mahnkenj@juno.com
 Town/State/Zip Phone Email

X Carol Moxent Carol Moxent 2018 N.Y. Ave.
 Signature Print Name Complete Mailing Address
 Union City, N.J. 07087 (201)866-0772
 Town/State/Zip Phone Email

X Mary Owens Mary Owens 10042210 @yahoo
 Signature Print Name Complete Mailing Address
 Boise, ID 83709 (208)362-2256 6380 S. Luma
 Town/State/Zip Phone Email

X Eric Owens Eric Owens
 Signature Print Name Complete Mailing Address
 702 Mal St #2 Reno NV 89506
 Town/State/Zip Phone Email (775)786-8434

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Sincerely,

X Heidi Banknecht Heidi Banknecht 2143 S. Hilton St
 Signature Print Name Complete Mailing Address
 Boise, ID 83705 426-9484 Vera@idstate.com
 Town/State/Zip Phone Email

X David Eisenhauer David Eisenhauer 2143 S. Hilton St.
 Signature Print Name Complete Mailing Address
 Boise, ID 83705 426-9484 Vera@idstate.com
 Town/State/Zip Phone Email

X Eltona L. Henderson Eltona L. Henderson 1324 Vista Drive
 Signature Print Name Complete Mailing Address
 Emmett, ID 83617 208-365-5840 tonhenderson@integrityonline4.com
 Town/State/Zip Phone Email

X John R. Henderson John R. Henderson 1324 Vista Dr
 Signature Print Name Complete Mailing Address
 Emmett, ID 83617 208-365-5840 johnhenderson@integrityonline4.com
 Town/State/Zip Phone Email

X Mary Ellen Ryder MARY ELLEN RYDER 3594 IMMIGRANT PASS
 Signature Print Name Complete Mailing Address
 Boise, ID 83716 208 345-7437
 Town/State/Zip Phone Email

X Kimberly Davis Kimberly Davis 103 N. Raymond Pl
 Signature Print Name Complete Mailing Address
 Boise, ID 83704
 Town/State/Zip Phone Email

X Dani Dani 463 S. Grant
 Signature Print Name Complete Mailing Address
 Boise, ID 83702 208-349-8255 BARBARA DAVIS
 Town/State/Zip Phone Email

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Sincerely,

X *Peter Ryder* **PETER RYDER** 3594 IMMIGRANT PASS
 Signature Print Name Complete Mailing Address
 Boise, ID 83716 345-7477
 Town/State/Zip Phone Email

X *Dale Sims* **DALE SIMS** 1016 W. FLANKLIN #1 BOISE ID 83702
 Signature Print Name Complete Mailing Address
 Boise, ID 83702
 Town/State/Zip Phone Email

X *Brandy Murdoch* **BRANDY MURDOCH** 2211 N 15TH ST BOISE 83702
 Signature Print Name Complete Mailing Address
 brandymurdoch@cs.com
 Boise, ID 83702
 Town/State/Zip Phone Email

X *Barry Mathias* **BARRY MATHIAS** 602 VILLAGE LN BOISE ID 83702
 Signature Print Name Complete Mailing Address
 (208) 426-8374 iceburn76@hotmail.com
 Boise, ID 83702
 Town/State/Zip Phone Email

X *Brian Warner* **Brian Warner** 34 Wilburton Way BOISE 83716
 Signature Print Name Complete Mailing Address
 Boise, ID 83702
 Town/State/Zip Phone Email

X *Sarah Hagen* **Sarah Hagen** 602 Village Ln Boise, ID
 Signature Print Name Complete Mailing Address
 83702 (208) 426-8374 sarahh@salid.com
 Boise, ID 83702
 Town/State/Zip Phone Email

X *Rich Benedict* **RICH BENEDECOT** 1816 N 13th APT 7
 Signature Print Name Complete Mailing Address
 Boise, ID 83702 242-8400 benedict_r@salid.com
 Boise, ID 83702
 Town/State/Zip Phone Email

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Sincerely,

X *Errol D. Jones* **ERROL D. JONES** 2115 DAWDREE
 Signature Print Name Complete Mailing Address
 Boise, ID 83702 385-0234
 Town/State/Zip Phone Email

X *Steven J. Schuster* **STEVEN SCHUSTER** 2114 Madison
 Signature Print Name Complete Mailing Address
 Boise, ID 83702 385-0589
 Town/State/Zip Phone Email

X *Lidia Barbee* **LIDIA BARBEE** 874 Rose St
 Signature Print Name Complete Mailing Address
 Boise, ID 83702 314-4791
 Town/State/Zip Phone Email

X *Jason M. Jobe* **JAYSON M. JOBE** 10998 CAMHS ST
 Signature Print Name Complete Mailing Address
 Boise, ID 83704 378-8846 mackrookeyc@aol.com
 Boise, ID 83704
 Town/State/Zip Phone Email

X *Carolyn Bynum* **CAROLYN BYNUM** 1024 AVE H
 Signature Print Name Complete Mailing Address
 Boise, ID 83702 424-0893
 Boise, ID 83702
 Town/State/Zip Phone Email

X *Chris Greenup* **CHRIS GREENUP** CHURCH 420 ave.com
 Signature Print Name Complete Mailing Address
 Boise, ID 83702 433-8671 CHURCH 420 ave.com
 Boise, ID 83702
 Town/State/Zip Phone Email

X *Brad Ooley* **BRAD OOLEY** 2502 N 28th St
 Signature Print Name Complete Mailing Address
 Boise, ID 83702 424-1038 bradooley@att.net
 Boise, ID 83702
 Town/State/Zip Phone Email

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Sincerely,

X <u>[Signature]</u>	John French	P.O. Box 7222
Signature	Print Name	Complete Mailing Address
Boise, ID 83707		
Town/State/Zip	Phone	Email
X <u>[Signature]</u>	Angela Schurger	boiseaquifer.org
Signature	Print Name	Complete Mailing Address
Boise, ID 83716	343-7248	5451 Amarillis Pl.
Town/State/Zip	Phone	Email
X <u>[Signature]</u>	Lisa Schultz	1816 Leadville
Signature	Print Name	Complete Mailing Address
Boise, ID	342-8149	
Town/State/Zip	Phone	Email
X <u>[Signature]</u>	Leslie J. Stubbs	ljstubbs@msm.com
Signature	Print Name	Complete Mailing Address
Boise, ID 83706	342-8149	
Town/State/Zip	Phone	Email
X <u>[Signature]</u>	Gary Habiger-Meier	5218 W. Centin. Ave., ID 83703
Signature	Print Name	Complete Mailing Address
	332-8329	
Town/State/Zip	Phone	Email
X <u>[Signature]</u>	Steve F. Scanlon	
Signature	Print Name	Complete Mailing Address
Boise, ID 83712		
Town/State/Zip	Phone	Email
X <u>[Signature]</u>	Lorie Estey	10855 W. Smoke Ranch
Signature	Print Name	Complete Mailing Address
Town/State/Zip	Phone	Email

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Sincerely,

X <u>[Signature]</u>	Amanda Laib	2015 Pleasanton Ave
Signature	Print Name	Complete Mailing Address
Boise, ID 83702	345-3743	
Town/State/Zip	Phone	Email
X <u>[Signature]</u>	Brad Acton	1919 W. Nez Perce
Signature	Print Name	Complete Mailing Address
Boise	331-1717	83705
Town/State/Zip	Phone	Email
X <u>[Signature]</u>	Melanie Allardale	PO Box 83 Montesa, ID
Signature	Print Name	Complete Mailing Address
Town/State/Zip	Phone	Email
X <u>[Signature]</u>	CHARLOTTE DUNN	3716 RUN Dr. Granger
Signature	Print Name	Complete Mailing Address
Granger Valley, ID 83622	462-4020	Char@micron.net
Town/State/Zip	Phone	Email
X <u>[Signature]</u>	SARA HAGEN	101 Festina Ct Granger
Signature	Print Name	Complete Mailing Address
Granger, ID 83605	(208) 465-0149	SARA.HAGEN@YAHOO.COM
Town/State/Zip	Phone	Email
X <u>[Signature]</u>	Pamela Smith	4065 N. Jennifer
Signature	Print Name	Complete Mailing Address
Boise, ID 83702	338-8937	pmellastar@hotmail.com
Town/State/Zip	Phone	Email
X <u>[Signature]</u>	Carol M Sevier	3221 N 24th St
Signature	Print Name	Complete Mailing Address
Boise, ID 83702	345-7062	dcsevier@netzero.net
Town/State/Zip	Phone	Email

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Chapter 2—Written Comments and DOE Responses

Commentor No. 1697: Gary E. Richardson (Cont'd)
Snake River Alliance

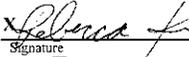
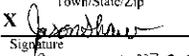
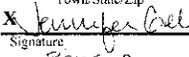
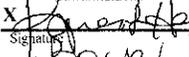
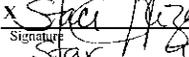
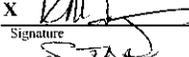
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Sincerely,
 X  Richard G. Sevier 3221 N. 24th St
 Signature Print Name Complete Mailing Address
Boise ID 345-7062 desevier@hotmail.net
 Town/State/Zip Phone Email
 X  Rebecca Kun 2730 Heron
 Signature Print Name Complete Mailing Address
Boise 83702
 Town/State/Zip Phone Email
 X  Jason Shaw 1300 W State St
 Signature Print Name Complete Mailing Address
Boise, ID 83702 342-7939 bsugreens@yahoo.com
 Town/State/Zip Phone Email
 X  Jennifer Geland NE 20077 E Valley
 Signature Print Name Complete Mailing Address
Boise ID 83702 342-7939
 Town/State/Zip Phone Email
 X  Karen Hess 1611 9th
 Signature Print Name Complete Mailing Address
Boise 345-1944 karenhess@worldnet.att.net
 Town/State/Zip Phone Email
 X  Staci Hazard
 Signature Print Name Complete Mailing Address
Star Idaho 83669 286-7330
 Town/State/Zip Phone Email
 X  [unclear] LA2-200
 Signature Print Name Complete Mailing Address
724 208-206-7330
 Town/State/Zip Phone Email

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 Boise: Call 208/344-9161, Ketchum 208/726-7271, Pocatello 208/234-4782

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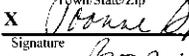
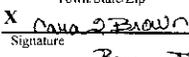
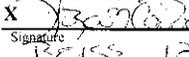
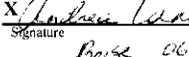
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Sincerely,
 X  ELIZABETH WASSON 2800 N. 30th BOISE ID 83705
 Signature Print Name Complete Mailing Address
Boise ID 83712
 Town/State/Zip Phone Email
 X  Barzila E. Young 630 SAN JOSE WAY
 Signature Print Name Complete Mailing Address
BOISE ID 83712 342-1587
 Town/State/Zip Phone Email
 X  ROBERT DMY PO BOX 8704
 Signature Print Name Complete Mailing Address
Boise
 Town/State/Zip Phone Email
 X  DANA BROWN 1159 Kimberlan Lane
 Signature Print Name Complete Mailing Address
Boise ID 83712
 Town/State/Zip Phone Email
 X  LISA CROSS 1302 E. BRANCK
 Signature Print Name Complete Mailing Address
BOISE ID 345-0803 WHS@SCEPAC.COM
 Town/State/Zip Phone Email
 X  Meg Fereday 1320 E HAYS WAY
 Signature Print Name Complete Mailing Address
Boise ID 83712
 Town/State/Zip Phone Email
 X  [unclear] 2934 S. [unclear]
 Signature Print Name Complete Mailing Address
Boise 06 345-6177
 Town/State/Zip Phone Email

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Sincerely,

X Alicia Flinn Alicia Flinn 1415 N. 14th St.
 Signature Print Name Complete Mailing Address
 Boise, ID 83702 345-0132 aflinn@micron.net
 Town/State/Zip Phone Email

X Jane Wright JANE WRIGHT 5654 EL GATO LN MERIDIAN 83642
 Signature Print Name Complete Mailing Address
 Meridian, ID 83642 885-3293 jbray@primem.com
 Town/State/Zip Phone Email

X Gene E Bray Gene E Bray 5654 El Gato Ln Meridian 83642
 Signature Print Name Complete Mailing Address
 Meridian, ID 83642 885-3293 gbray@primem.com
 Town/State/Zip Phone Email

X Ariel Simmons Ariel Simmons 1605 N. 10th St.
 Signature Print Name Complete Mailing Address
 Boise ID 83702 344-4650 ariel@isnet.net
 Town/State/Zip Phone Email

X Tiffany Roodrai TIFFANY ROODRAI 2401 So Apple St. #308
 Signature Print Name Complete Mailing Address
 Boise, ID 83702 424-3353 roodrai@micron.net
 Town/State/Zip Phone Email

X Amanda Cassin AMANDA CASIN 6731 E Glacier 83716
 Signature Print Name Complete Mailing Address
 Boise, ID 83702 342-6736 amanda.cassin@idstate.gov
 Town/State/Zip Phone Email

X Reed Burkholder Reed Burkholder 6105 Twin Springs Dr
 Signature Print Name Complete Mailing Address
 Boise ID 83709 323-8355 burk@cyberhighway.net
 Town/State/Zip Phone Email

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Sincerely,

X Amanda Bennett Amanda Bennett 116 E 36
 Signature Print Name Complete Mailing Address
 Carleton, ID 83714 236-9029 amabennett@idstate.gov
 Town/State/Zip Phone Email

X Corrie Harris Corrie Harris 5424 Waterwheel Dr.
 Signature Print Name Complete Mailing Address
 Boise, ID 83703 368-0481 corrie.harris@idstate.gov
 Town/State/Zip Phone Email

X Randa Cecil Randa Cecil 4544 Pasadena Dr.
 Signature Print Name Complete Mailing Address
 Boise, ID 83705 345-6067 rcecil@idstate.gov
 Town/State/Zip Phone Email

X Betsy Smith Betsy Smith 2112 Cleveland Box 703
 Signature Print Name Complete Mailing Address
 Caldwell, ID 83406 459-5237 bsmith@albertson.edu
 Town/State/Zip Phone Email

X Bob Clifford Bob Clifford 2716 Heron
 Signature Print Name Complete Mailing Address
 Boise, ID 83702 342-6736
 Town/State/Zip Phone Email

X Cynthia Clifford CYNTHIA CLIFFORD 2710 Heron
 Signature Print Name Complete Mailing Address
 Boise, ID 83702 342-6736 cclifford@idstate.gov
 Town/State/Zip Phone Email

X Thomas Van Buskirk
 Signature Print Name Complete Mailing Address
 Boise, ID 83714
 Town/State/Zip Phone Email

Please Return completed petitions to: Snake River Alliance, PO Box 1731, Boise, ID 83701
 Boise: Call 208/344-9161; Ketchum 208/726-7271; Pocatello 208/234-4782

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Sincerely,

X *[Signature]* Andy McLean 812 S. 2nd St. RD
Signature Print Name Complete Mailing Address
Boise ID 83709 326-58-0920
Town/State/Zip Phone Email

X *[Signature]* LESLIE D. KENT 2500 Williamsport Lane Box
Signature Print Name Complete Mailing Address
Boise Id. 83905 367-0477
Town/State/Zip Phone Email

X *[Signature]* Cathy Maxwell 904-A 27th Boise ID
Signature Print Name Complete Mailing Address
Sandy Achilles 658-4567 8302
Town/State/Zip Phone Email

X *[Signature]* Margie L Smith Margie L Smith 5800 Wilster
Signature Print Name Complete Mailing Address
Boise 83703 (208) 343-6457
Town/State/Zip Phone Email

X *[Signature]* James F. Smith III 5840 Collins
Signature Print Name Complete Mailing Address
Boise ID 83702 (208) 343-9957 jim@steelhead.com
Town/State/Zip Phone Email

X *[Signature]* Jeff Cowatser Jeff Cowatser 607-300
Signature Print Name Complete Mailing Address
Wagoner UT 84404
Town/State/Zip Phone Email

X *[Signature]* Scott Clime PO Box 1741
Signature Print Name Complete Mailing Address
Boise ID 83701 343-0220
Town/State/Zip Phone Email

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Sincerely,

X *[Signature]* Hank Stone 11 Wainwright Court
Signature Print Name Complete Mailing Address
Boise ID 83703 653-2328 Please do not put on mailbox
Town/State/Zip Phone Email 602

X *[Signature]* Gene Donnelly 6381 Camelback Pl.
Signature Print Name Complete Mailing Address
Boise ID 83703 653-2328 Please do not put on mailbox
Town/State/Zip Phone Email 602

X *[Signature]* Don Martin 878 N. Princeton way
Signature Print Name Complete Mailing Address
Meridian ID 83447
Town/State/Zip Phone Email

X *[Signature]* John R. Ryan 2701 Apple St 1-307
Signature Print Name Complete Mailing Address
Boise ID 83706
Town/State/Zip Phone Email

X *[Signature]* Celeste BISHOP - RYAN 2901 Apple Street 1-307
Signature Print Name Complete Mailing Address
Boise ID 83706
Town/State/Zip Phone Email

X *[Signature]* NO LIST PLEASE 305 E. 20th
Signature Print Name Complete Mailing Address
Boise ID 83705 No List Please
Town/State/Zip Phone Email

X *[Signature]* LESLIE STAFF 914 N 8th St #304
Signature Print Name Complete Mailing Address
Boise ID 83702 345-4211
Town/State/Zip Phone Email

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Sincerely,

No
 April 1998
 please

X <u>[Signature]</u>	<u>Beth Lea Donnelly</u>	<u>6281 Charleston</u>	<u>83703</u>
Signature	Print Name	Complete Mailing Address	
Town/State/Zip	Phone	Email	
X <u>[Signature]</u>	<u>Lyle Martin</u>	<u>879 N. principle</u>	<u>Meridian ID 83642</u>
Signature	Print Name	Complete Mailing Address	
Town/State/Zip	Phone	Email	
X <u>[Signature]</u>	<u>JENNE G. RILEE</u>	<u>4111 N AZALEA LN</u>	
Signature	Print Name	Complete Mailing Address	
Town/State/Zip	Phone	Email	
X <u>[Signature]</u>	<u>Sharon York</u>	<u>3031 Jordan</u>	
Signature	Print Name	Complete Mailing Address	
Town/State/Zip	Phone	Email	
X <u>[Signature]</u>	<u>Joseph G. Ulfican</u>	<u>5572 Tuxedo Way</u>	<u>Boise ID</u>
Signature	Print Name	Complete Mailing Address	
Town/State/Zip	Phone	Email	
X <u>[Signature]</u>	<u>[Signature]</u>	<u>1515 N. 1st</u>	<u>Boise ID 83702</u>
Signature	Print Name	Complete Mailing Address	
Town/State/Zip	Phone	Email	
X <u>[Signature]</u>	<u>Kenn Gustafson</u>	<u>377-5766</u>	<u>Kenn.gustafson@hotmail.com</u>
Signature	Print Name	Phone	Email
Town/State/Zip	Phone	Email	
X <u>[Signature]</u>	<u>Wm Greenwell</u>	<u>6810 Randolph</u>	
Signature	Print Name	Complete Mailing Address	
Town/State/Zip	Phone	Email	

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Sincerely,

X <u>[Signature]</u>	<u>Joe Stratton</u>	<u>4350 Freedom Dr</u>	<u>Meridian ID 83642</u>
Signature	Print Name	Complete Mailing Address	
Town/State/Zip	Phone	Email	
X <u>[Signature]</u>	<u>Chris DesJardins</u>	<u>1200 E Boise Ave</u>	
Signature	Print Name	Complete Mailing Address	
Town/State/Zip	Phone	Email	
X <u>[Signature]</u>	<u>Leslie Fritchman</u>	<u>1801 Grant Ave</u>	<u>Boise 83708</u>
Signature	Print Name	Complete Mailing Address	
Town/State/Zip	Phone	Email	
X <u>[Signature]</u>	<u>Nicholas G. Bayus</u>	<u>1051 Locust</u>	<u>Boise ID 83701</u>
Signature	Print Name	Complete Mailing Address	
Town/State/Zip	Phone	Email	
X <u>[Signature]</u>	<u>Nancy Stanger</u>	<u>2655 N Camden</u>	
Signature	Print Name	Complete Mailing Address	
Town/State/Zip	Phone	Email	
X <u>[Signature]</u>	<u>David Stanger</u>	<u>2655 N Camden</u>	
Signature	Print Name	Complete Mailing Address	
Town/State/Zip	Phone	Email	
X <u>[Signature]</u>	<u>Suzanne Lavery</u>	<u>211 Hillview Dr</u>	<u>Boise 83712</u>
Signature	Print Name	Complete Mailing Address	
Town/State/Zip	Phone	Email	

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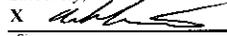
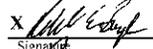
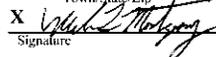
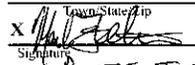
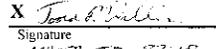
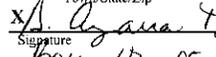
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Sincerely,

X		Rick Lebow	9535 Poule ST
Signature	Print Name	Complete Mailing Address	
	La Jolla CA 92037 (858) 453-6378	rlebow@nadac.com	
	Town/State/Zip	Phone	Email
X		ROBERT BOYLE	1510 N. 12th Boise ID 83702
Signature	Print Name	Complete Mailing Address	
	James Bulmer	1807 4th St S Nampa ID 83657	
	Town/State/Zip	Phone	Email
		463-8374	
	Signature	Print Name	Complete Mailing Address
	Town/State/Zip	Phone	Email
X		Wade Matson	345-3894 1004 N 15th Boise ID 83702
Signature	Print Name	Complete Mailing Address	
	Town/State/Zip	Phone	Email
X		MARK FELTON	2619 DNA ST
Signature	Print Name	Complete Mailing Address	
	Boise ID 83705	208-343-2053	
	Town/State/Zip	Phone	Email
X		Todd Williams	447th Ave #16192
Signature	Print Name	Complete Mailing Address	
	MHA-3, ID 83248	208-417-59	
	Town/State/Zip	Phone	Email
X		Donna Williams	315 Oak B
Signature	Print Name	Complete Mailing Address	
	Boise ID 83705	474-8271 donna@idajob.com	
	Town/State/Zip	Phone	Email

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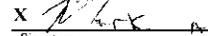
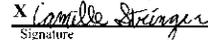
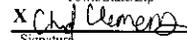
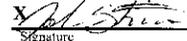
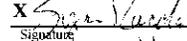
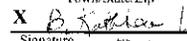
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Sincerely,

X		Rick Lebow	2717 Sheburne
Signature	Print Name	Complete Mailing Address	
	Boise ID 83705	433-7252	
	Town/State/Zip	Phone	Email
X		Holly Hudson	3604 W High Ridge Ln
Signature	Print Name	Complete Mailing Address	
	Boise ID 83706	208-7499	
	Town/State/Zip	Phone	Email
X		Camille Stringer	18 N Canyon St
Signature	Print Name	Complete Mailing Address	
		Nampa, ID 83651	
	Town/State/Zip	Phone	Email
X		Chad Clemens	3619 sunset Boise ID 83703
Signature	Print Name	Complete Mailing Address	
		Boise ID 83703	
	Town/State/Zip	Phone	Email
X		Josh Strasser	4523 Shirley St
Signature	Print Name	Complete Mailing Address	
	Boise ID 83703	208-343-2005	
	Town/State/Zip	Phone	Email
X		Susan Paquette	141 F. Johnson
Signature	Print Name	Complete Mailing Address	
	Boise Idaho 83702	424-8400	
	Town/State/Zip	Phone	Email
X		B. Kathleen Colbert	2013 An. Pines #2
Signature	Print Name	Complete Mailing Address	
	Boise ID 83702		
	Town/State/Zip	Phone	Email

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Camille Stringer @ not the 11.com

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Sincerely,

X *[Signature]* EATUCHER 1918 N. 19th St.
 Signature Print Name Complete Mailing Address
 Boise ID 83702 342-4458 atucher@micronet
 Town/State/Zip Phone Email

X *[Signature]* LANI HOUGHTON 557 N. R. JOBE Ave.
 Signature Print Name Complete Mailing Address
 IDAHO FALLS IDAHO 83402
 Town/State/Zip Phone Email

X *[Signature]* STEVE SMALL 642 N. WHITE ST.
 Signature Print Name Complete Mailing Address
 Boise ID
 Town/State/Zip Phone Email

X *[Signature]* JENEFER 106 W. EL RELO
 Signature Print Name Complete Mailing Address
 Boise
 Town/State/Zip Phone Email

X SUZANDE SWEEZEN PO BOX 124
 Signature Print Name Complete Mailing Address
 CHATELAIN WA 99003 509-292-0866
 Town/State/Zip Phone Email

X *[Signature]* CURSON SANKLEY PO BOX 1200
 Signature Print Name Complete Mailing Address
 IDAHO SPRINGS CO 80452 303/517-1150
 Town/State/Zip Phone Email

X *[Signature]* BLAIN BARBARA A. BLAIN 11533 GUNSMITH ST
 Signature Print Name Complete Mailing Address
 Boise 83713
 Town/State/Zip Phone Email

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Sincerely,

X *[Signature]* Stephanie Hillius 526 Falls Ave W
 Signature Print Name Complete Mailing Address
 Twin Falls, Idaho 83301 steph@micron.net
 Town/State/Zip Phone Email

X *[Signature]* KAREN WALTER (Willard) 2502 N 28th
 Signature Print Name Complete Mailing Address
 Boise, Id 83703 (208) 424-1038
 Town/State/Zip Phone Email

X *[Signature]* Virginia Huston 3215 Crescent R. imdr. #10
 Signature Print Name Complete Mailing Address
 Boise ID 83106 (208) 342-8146
 Town/State/Zip Phone Email

X *[Signature]* (Aset) SWENOIG 812 W. MELROSE U.
 Signature Print Name Complete Mailing Address
 Boise/ID 83706 SWENOIG@CYOS.COM
 Town/State/Zip Phone Email

X *[Signature]* LAUREL BARBERI LC Barberi@DACC.COM
 Signature Print Name Complete Mailing Address
 5030145700
 Town/State/Zip Phone Email

X *[Signature]* MARY HARRIS 191 Cherry Ln Nampa ID 83850
 Signature Print Name Complete Mailing Address
 Nampa ID 83850
 Town/State/Zip Phone Email

X *[Signature]* PRINCESSA DARKIN@DACC.COM
 Signature Print Name Complete Mailing Address
 (208) 444-1414
 Town/State/Zip Phone Email

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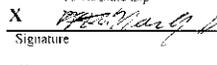
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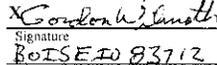
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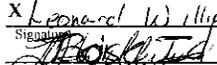
Sincerely,
 X  Mischel Vandenberg 1912 N. 11th S Boise
 Signature Print Name Complete Mailing Address
 Town/State/Zip Phone Email 02

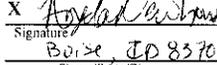
X  Carrie Redille 1816 N. 15th #1 83708
 Signature Print Name Complete Mailing Address
 Town/State/Zip Phone Email

X  Annette Gudry 2833 Stephen #201
 Signature Print Name Complete Mailing Address
 Town/State/Zip Phone Email Boise ID 83706

X  Mark Spn -100 Fuel's Boise ID 83702
 Signature Print Name Complete Mailing Address
 Town/State/Zip Phone Email

X  Gordon Wilmoth GORDON WILMOTH 517 N. COSTON
 Signature Print Name Complete Mailing Address
 Town/State/Zip Phone Email BOISE ID 83712 343-9530 ghw5@home.com

X  Leonard Williams 381-0521 2800 NW 30th St. Boise ID
 Signature Print Name Complete Mailing Address
 Town/State/Zip Phone Email 83703 Lemuel@KMC.net

X  Angela Newhouse 3020 Hester St.
 Signature Print Name Complete Mailing Address
 Town/State/Zip Phone Email Boise ID 83702 338-8937 anewhouse@hotmail.com

Please Return completed petitions to: Snake River Alliance, PO Box 1731, Boise, ID 83701
 Boise: Call 208/344-9161; Ketchum 208/726-7271; Pocatello 208/234-4782

Commentor No. 1697: Gary E. Richardson (Cont'd)
Snake River Alliance

**PETITION in opposition to
 Plutonium production**

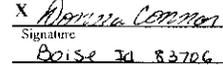
PROPOSED AT THE IDAHO NATIONAL ENGINEERING AND ENVIRONMENTAL LABORATORY

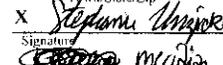
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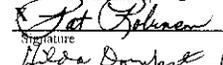
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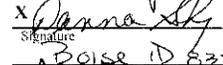
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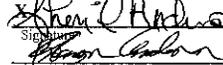
Sincerely,
 X  Kelt J. Laverty 10492 Summerwind
 Signature Print Name Complete Mailing Address
 Town/State/Zip Phone Email Boise ID 83704

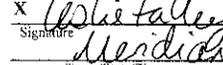
X  Donna Connor 3225 Maze Ave
 Signature Print Name Complete Mailing Address
 Town/State/Zip Phone Email Boise ID 83706 395-1481 chinacat@earthlink.com

X  Stephanie Unzicker 894-1336
 Signature Print Name Complete Mailing Address
 Town/State/Zip Phone Email Meridian, ID 83442

X  Pat Robinson 1562 W. Stacey, Meridian, ID.
 Signature Print Name Complete Mailing Address
 Town/State/Zip Phone Email Hilda Dorner 1546 ALTA VISTA DR, LAHAR, CA

X  Danna Gearings 2214 N. 14th St
 Signature Print Name Complete Mailing Address
 Town/State/Zip Phone Email Boise ID 83702 388-0564

X  Sheril Anderson 7295 Coalinga Dr
 Signature Print Name Complete Mailing Address
 Town/State/Zip Phone Email Boise 83704

X  Leslie Talley 4052 Daphne St
 Signature Print Name Complete Mailing Address
 Town/State/Zip Phone Email Meridian, Idaho 83442

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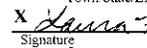
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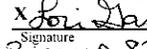
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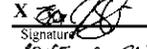
Sincerely,

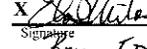
 Signature: IDAHO Town/State/Zip
 Print Name: JOE ELLIOTT
 Complete Mailing Address: c/o Best Western
 Email: peterelli@bestwestern.com

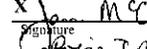
X 
 Signature: BOISE ID 83702 Town/State/Zip
 Print Name: JODIE R. MOON
 Complete Mailing Address: 2308 N. 26th
 Email: 368-0015

X 
 Signature: BOISE ID 83712 Town/State/Zip
 Print Name: Laura Farmer
 Complete Mailing Address: 1192 Shearwater
 Email: 385-0831

X 
 Signature: BOISE ID 83702 Town/State/Zip
 Print Name: LORI GARDINER
 Complete Mailing Address: 1718 N. 9th #3
 Email: 331-3159

X 
 Signature: BOISE ID 83702 Town/State/Zip
 Print Name: JONATHAN ANDERSON
 Complete Mailing Address: 1718 N. 9th #3
 Email: 331-3159

X 
 Signature: BOISE ID 83702 Town/State/Zip
 Print Name: Elton Whitlock
 Complete Mailing Address: 1516 N. 126th
 Email: 345-4849

X 
 Signature: BOISE ID 83702 Town/State/Zip
 Print Name: Jan McCuskey
 Complete Mailing Address: 387-5612
 Email: 387-5612

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 Boise: Call 208/344-9161; Ketchum 208/726-7271; Pocatello 208/234-4782

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Snake River Alliance

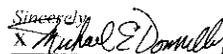
PETITION in opposition to
Plutonium production

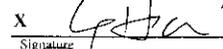
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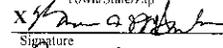
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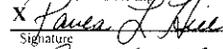
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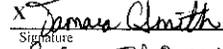
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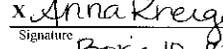
Sincerely,

 Signature: BOISE ID 83703 Town/State/Zip
 Print Name: MICHAEL E. DONNELLY
 Complete Mailing Address: 4382 W. Samara Ct
 Email: 344-4889

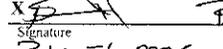
X 
 Signature: BOISE ID 83702 Town/State/Zip
 Print Name: Leonard Hill
 Complete Mailing Address: 220 Horizon Dr.
 Email: 342-4168

X 
 Signature: BOISE ID 83703 (208) Town/State/Zip
 Print Name: KAREN A MCFARLANE
 Complete Mailing Address: 4882 W SAMARA CT
 Email: 343-3331

X 
 Signature: BOISE ID 83702 (208) Town/State/Zip
 Print Name: Paula Hill
 Complete Mailing Address: 220 HORIZON DR
 Email: 342-4164

X 
 Signature: BOISE ID 83704 Town/State/Zip
 Print Name: Tamara Smith
 Complete Mailing Address: 10443 Irving Ct
 Email: tate_89@excite.com

X 
 Signature: BOISE ID 83705 Town/State/Zip
 Print Name: Anna Kreiger
 Complete Mailing Address: 2910 Edson St.
 Email: 429-8526

X 
 Signature: BOISE ID 83705 Town/State/Zip
 Print Name: Brian Beck
 Complete Mailing Address: 3415 Wardaces
 Email: 367-1019

Please Return completed petitions to: Snake River Alliance, PO Box 1731, Boise, ID 83701
 Boise: Call 208/344-9161; Ketchum 208/726-7271; Pocatello 208/234-4782

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Sincerely,

- X Susan M. Brown / Susan M. Brown
 Signature Print Name Complete Mailing Address
 10130 Hackamore, Boise, Id 83709
 Town/State/Zip Phone Email
- X Rebecca Davis
 Signature Print Name Complete Mailing Address
 Boise, ID 83702 344-0848
 Town/State/Zip Phone Email
- X Karen R. Oster
 Signature Print Name Complete Mailing Address
 3089 W. S. mi. Rd. #204- Boise, Id. 83713
 Town/State/Zip Phone Email
- X Alane Dominick
 Signature Print Name Complete Mailing Address
 Boise, Idaho 83702 342-5374
 Town/State/Zip Phone Email
- X Fred Klene III
 Signature Print Name Complete Mailing Address
 Boise ID 83706 208-368-0430
 Town/State/Zip Phone Email
- X Heidi A. Andrade
 Signature Print Name Complete Mailing Address
 Heidi A. Andrade @usa.net
 713 Stilson Rd. #106 Boise 03
 Heidi.andrade@usa.net
 Town/State/Zip Phone Email
- X Jesse Andrade
 Signature Print Name Complete Mailing Address
 Jesse Andrade
 705 Stilson rd #104
 Boise ID 83703 208-433-9278
 fidelity.ors
 Town/State/Zip Phone Email

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Sincerely,

- X Trudy R Day
 Signature Print Name Complete Mailing Address
 Trudy R Day 5601 Terrace St, Boise ID 83726
 Town/State/Zip Phone Email
- X Brooklyn Weir
 Signature Print Name Complete Mailing Address
 Brooklyn Weir 120 E. Mallard Dr
 Boise ID 83706 (208) 368-0430
 Town/State/Zip Phone Email
- X Michael Pfen
 Signature Print Name Complete Mailing Address
 Michael Pfen 208 388 1437
 Boise ID 83702 2626 N. 10th St, Boise ID 83704
 Town/State/Zip Phone Email
- X Karen King
 Signature Print Name Complete Mailing Address
 Karen King 3095 Sunderland Dr
 Boise ID 83704 343-6096
 Town/State/Zip Phone Email
- X Jan Rasmussen
 Signature Print Name Complete Mailing Address
 Jan Rasmussen 215-9775
 Boise ID 83702 2403 Fairwinds Dr
 Town/State/Zip Phone Email
- X Michelle Wilson
 Signature Print Name Complete Mailing Address
 Michelle Wilson 1903 N. 7th St, Boise ID 83702
 Michelle Wilson 208-344-9161
 Town/State/Zip Phone Email
- X John Wilson
 Signature Print Name Complete Mailing Address
 John Wilson 9306 92nd St
 Boise ID 83703 861-0151
 Town/State/Zip Phone Email

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Sincerely,
X [Signature] Paul Payer 8815 Sankwitz
Signature Print Name Complete Mailing Address
Boise ID 83704 207-2201 payer1@uswest.net
Town/State/Zip Phone Email

X [Signature] Chris Hitesman 10827 W. Lusk Rd Apt 202
Signature Print Name Complete Mailing Address
Boise ID 83713 208-321-1656 hitesc@netcom.net
Town/State/Zip Phone Email

X [Signature] Brad Schmitz 1319 W. Boise Ave. Apt. G
Signature Print Name Complete Mailing Address
Boise ID 933-1174 Bradschmitz@hotmail.com
Town/State/Zip Phone Email

X [Signature] Ray Russell 5001 E. 1st St #3
Signature Print Name Complete Mailing Address
Caldwell ID 3154-0752
Town/State/Zip Phone Email

X [Signature] Steve Moser P.O. Box 3471 Boise ID 83704
Signature Print Name Complete Mailing Address
Boise ID 327-8903
Town/State/Zip Phone Email

X [Signature] DEBBIE PHELPS 1707 C. HOWARD CANYON RD
Signature Print Name Complete Mailing Address
Boise ID 83712 989-1252 debbie@cityofboise.org
Town/State/Zip Phone Email

X [Signature] Dylan Webster P.O. Box 364 Rexburg, ID 83440
Signature Print Name Complete Mailing Address
Town/State/Zip Phone Email

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Sincerely,
X [Signature] Karen Thomason 12294 W. Audi Boise
Signature Print Name Complete Mailing Address
Boise ID 83713 378-5896
Town/State/Zip Phone Email

X [Signature] KIM CASHMAN 2021 Colorado
Signature Print Name Complete Mailing Address
Boise ID 384-9790
Town/State/Zip Phone Email

X [Signature] Chad Holton 2021 Colorado
Signature Print Name Complete Mailing Address
Boise ID 384-9790
Town/State/Zip Phone Email

X [Signature] Jeffrey Stallings 975 Strawberry Ln
Signature Print Name Complete Mailing Address
Boise ID 83712 363-0360
Town/State/Zip Phone Email

X [Signature] Steve Moser 3128 Byron
Signature Print Name Complete Mailing Address
Boise ID n/a n/a
Town/State/Zip Phone Email

X [Signature] GARY E. RICHARDSON rencon@micron.net
Signature Print Name Complete Mailing Address
Boise ID 83712 336-2125 746 SANTA ANITA CT.
Town/State/Zip Phone Email

X
Signature Print Name Complete Mailing Address
Town/State/Zip Phone Email

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Boise: Call 208/344-9161; Ketchum 208/726-7271; Pocatello 208/234-4782

Chapter 2—Written Comments and DOE Responses

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Snake River Alliance

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Sincerely,

X Marie D Hoff Marie D. Hoff / 1116 N. 15 St.
 Signature Print Name Complete Mailing Address
Boise, ID 83702 208-368-9864 HDaKotamane@aol.com
 Town/State/Zip Phone Email

X Brian Winkler
 Signature Print Name Complete Mailing Address
Boise 22003 SB CA 93102
 Town/State/Zip Phone Email

X Jill Stephens Jill Stephens 3006 E. Fern Brook Dr, Eagle, ID 83614
 Signature Print Name Complete Mailing Address
 Town/State/Zip Phone Email

X
 Signature Print Name Complete Mailing Address
 Town/State/Zip Phone Email

X
 Signature Print Name Complete Mailing Address
 Town/State/Zip Phone Email

X
 Signature Print Name Complete Mailing Address
 Town/State/Zip Phone Email

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 Signature Print Name Complete Mailing Address
 Town/State/Zip Phone Email

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 Boise: Call 208/344-9161; Ketchum 208/726-7271; Pocatello 208/234-4782

Commentor No. 1698: Richard C. Geary

From: ReCarDeaux@aol.com%internet
[SMTP:RECARDEAUX@AOL.COM]
Sent: Sunday, September 17, 2000 4:54:59 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: D.O.E. Comments on expansion of plutonium 238
Auto forwarded by a Rule

To: Colette E. Brown,
U.S. Department of Energy, NE_50,
19901 Germantown Road, Germantown, MD 20874_1290
Nuclear.Infrastructure_PEIS@hq.doe.gov

From: Richard C. Geary
520 NW 44th Street
Oklahoma City, OK 73118
ReCarDeaux@aol.com

Dear Ms Brown:

After reading considerably on the subject, I have come to some conclusions about plutonium and its problems.

Babysitting plutonium 238 for 240,000 years until it becomes non-radioactive is NOT INEXPENSIVE OR SAFE. Cleaning up the existing Hanford site (\$300 Billion) is NOT INEXPENSIVE. Waiting for radioactive waste to leak into the groundwater or into the food_chain is NOT SAFE. Dispersing plutonium into the upper atmosphere to be inhaled by the inhabitants of Earth, producing cancer, below (at a 10% rocket_failure rate) is NOT ADVISABLE.

Therefore, I respectfully urge D.O.E. NOT TO WORSEN THE PROBLEM by producing more, unnecessary (when Europe has developed solar alternatives) plutonium for launches which NASA thinks it needs for its purposes.

Richard C. Geary

Response to Commentor No. 1698

1698-1: DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternative energy sources for space missions, although issues such as NASA research priorities are beyond the scope of this PEIS. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch.

Under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately only 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005.

DOE also notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

1698-1

**Commentor No. 1699: Thomas A. Coleman
Framatome Cogema Fuels**

+8322932

FCF

F-863 T-073 P-002/002 SEP 18 '00 15:37

FRAMATOME COGEMA FUELS

September 18, 2000
GR00-130.doc

Ms. Colette Brown, Document Manager
Office of Space and Defense Power Systems (NE-50)
Office of Nuclear Energy, Science and Technology
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

Re: Draft Programmatic Environmental Impact Statement for Accomplishing
Expanded Civilian Nuclear Energy Research and Development and
Isotope Production Missions in the United States, Including the Role of
the Fast Flux Test Facility

Dear Ms. Brown:

This memorandum supplements our previous comments of September 5, 2000, on the subject document. We appreciate the consideration being given to commercial light water reactors (CLWRs) as an option for producing Pu-238. We also strongly suggest that CLWRs be more thoroughly evaluated for their suitability for producing medical isotopes.

Further, as we mentioned in earlier telephone conversations, we were surprised to see one figure from the proprietary material we shared with you last year incorporated in the draft PEIS. While we are not asking that this figure be deleted from the final EIS, we would like to maintain the proprietary status of the remaining material and hope that our proprietary material will be treated appropriately in the future.

Very truly yours,



Thomas A. Coleman
Vice President
Government Relations

TAC:jfd



Framatome Cogema Fuels
3315 Old Forest Road, P.O. Box 10835, Lynchburg, VA 24306-0935
Telephone: 804-832-3000 Fax: 804-832-3653

Response to Commentor No. 1699

1699-1

1699-1: DOE notes the commentor's suggestion to consider CLWRs for the production of plutonium-238 and medical isotopes. CLWRs were evaluated to the extent necessary for the purpose of supporting the PEIS in a similar manner as other alternatives such as the new research reactor new accelerator, ATR, HFIR, and FFTF. However, modification of CLWRs to enable online insertion and retrieval of targets for the medical and industrial isotope production missions was evaluated and dismissed as a reasonable alternative because the required facility modifications would be significant, would include penetrations into the reactor vessel, and, possibly, the containment vessel, and would require additional facility modifications to enable loading of targets into a shielded cask for transport to a processing facility, and would require an extended refueling outage for performing the facility modifications, which would result in a loss of power generation revenue to the CLWR owner.

***Commentor No. 1700: Marlene G. Oliver
New Medical Technology***

Marlene G. Oliver, Consultant
New Medical Technology
94006 Northstar Lane PR NE
West Richland WA 99353
509_967_9000, o FAX 509_967_7280
bmoliyer~televar.com

DOE N1 PEIS Statement
September 18, 2000

As a consultant, I introduce physicians and their support staff to emerging medical technologies. I was trained as a research biologist. The information that follows comes from the National Institutes of Health, the National Cancer Institute, the Centers for Disease Control in Atlanta, Medicare, the Health Care Finance Administration, studies published in medical journals, studies presented at medical conferences, physicians, medical companies and the American Cancer Society. References are available.

Over 1500 cancer patients die daily in this country. This is equivalent to three fully loaded Boeing 747s crashing to the earth and killing everyone on board, every day. This is a national public health issue, a national outrage, and an urgent national health care emergency. Nearly one in two males and one in three females will develop cancer. Cancer is the leading cause of death for Americans under the age of 65. It will soon overtake heart disease as the number one killer in America. Every hour in this country, a child is diagnosed with cancer. Cancer is an equal opportunity disease. Radiation kills cancer cells. Radiation administered internally, in as little as a 30 second injection, may be directed just to cancer cells as "smart bullets". With alpha emitters, radiation penetrates no more than three cells thick, sparing healthy surrounding tissue. Boredom is the most common study side effect of these isotope treatments. Early study patients are given less than six months to live and have failed at least two other treatments such as often debilitating chemotherapy. Many patients refuse therapy as they are more afraid of the treatment than the disease. Now, five and more years later,

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many of these patients treated with isotopes who faced death remain cancer_free. Laura from Alabama said "No other previous treatment had done anything to reduce my tumors. What I love about this treatment is that it works, it takes the pain away, and there's no side effects." This is a quality of life issue, a humanitarian issue. I ask that the DOE please consider these facts in its decision making process. DOE requests are given in bold face type.

In the NI PEIS the I ask the DOE to include the following information.

Isotope quantity, quality and availability, particularly for research Isotopes and isotopes with high specific activity. Over 90% of Isotopes are imported. In Canada, where most isotopes used in America are produced, nuclear workers threatened to go on strike the last two times their contract came up for renewal. They have a four year contract. The situation was so dire that the last renewal, the University of Virginia Medical Center, as an example, sent a letter to its staff suspending all but emergency tests requiring isotopes as of Monday morning. Canadian nuclear workers signed at the eleventh hour. This foreign isotope dependency, no matter how friendly the source, is not acceptable to health care providers or for patients in this country. Over 14 million isotope_dependent diagnostic tests are performed yearly, 36,000 procedures daily in this country. One in three hospital patients are diagnosed with tests that require medical isotopes.

Many of the isotopes required to best treat diff use cancers are alpha emitters. Half_lives of short_lived, powerful alpha_emitting isotopes, measured in minutes, REQUIRE a domestic supply. Isotope production sources should be Identified in the NI PEIS considering current DOE nuclear facilities, including reactors, cyclotrons, and accelerators, and address which Isotopes, both for diagnosis AND treatment, are best produced in which facilities and will come from which specifically identified DOE nuclear facility sources. A list of the isotopes that are best or only produced In cyclotrons, reactors, and/or accelerators is attached, based on

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1700-1: DOE notes the commentor's support for restarting FFTF to enhance availability of medical isotopes. DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

For the purposes of analyses in the NI PEIS, a representative set of isotopes was selected on the basis of the recommendations of the Expert Panel, medical market forecasts, reviews of medical literature, and more than 100 types of ongoing clinical trials that use radioisotopes for the treatment of cancer and other diseases. These isotopes, which are comprised of both reactor- and accelerator- produced isotopes, are listed in Section 1.2, Volume 1 of the NI PEIS along with a brief description of their medical and/or industrial applications. As identified in Appendix C, Volume 2 of the NI PEIS, FFTF would be capable of producing the majority of these representative isotopes. These include research isotopes with currently limited availability, such as copper-67, as well as commercial isotopes whose current application is inhibited by lack of availability or high cost, such as palladium-103. However, the absence of any specific isotope from these tables should not be interpreted to mean that it could not be considered for production under the proposed action. DOE expects that the actual isotopes and specific amounts produced as a result of the proposed action would vary from year to year in response to the focus of clinical research and the specific market needs occurring at that time.

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calculations performed by experts. This information should be included in the NI PEIS and the DOE should consult this list prior to deciding its course of action in its nuclear Infrastructure mapping plan. Current committed facility missions should be accounted for, as medical isotope production cannot occur if other missions are given priority, as at present. Cancer does not wait. Again, the DOE should consider and identify which facilities realistically might most efficiently produce which of the over 40 different isotopes that have been identified as having medical application to treat over 200 identified cancers and other diseases, given that many treatment isotopes are best produced in reactors that require a high neutron flux, such as the FFTF. Please also recall that the FFTF produced approximately 60 different research isotopes during its operation. Consider the volumes of treatment isotopes that will be required, and that presently the private sector is not equipped to meet this demand. It is estimated that over one million cancer patients diagnosed per year, over three million currently living with cancer, might be Isotope treatment candidates. Please note that Frost and Sullivan, in their 2000 report, revised the estimated medical isotope growth rate upward, to between 12 and 25 percent per year. Last year, this growth rate was 19 percent. Recognize that FFTF is well suited to produce small quantities of research and large quantities of treatment isotopes. At the Seattle NI PEIS meeting, I spoke with a woman whose father was treated with high specific activity ^{131}I produced at FFTF for his non-Hodgkins lymphoma, generally a fatal disease. Without this treatment, he was given less than three months to live. His good health was restored after one "smart bullet" injection, and he remains cancer-free eleven years later. She stated that his restored health and life is priceless to his family. She also stated that his physician was dismayed when he could no longer obtain this purified isotope when FFTF was put on standby. Louisiana State Medical University, among others, has asked the DOE to please supply this isotope for their studies. Their request is attached. The DOE should be aware that ^{131}I currently obtained from Canada is only about seven percent pure, and that a domestic supply of purified, high specific activity ^{131}I will be substituted for the Canadian version should the FFTF be restarted. Physicians are

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using this inferior isotope because it is readily available. It is probably not the isotope of choice to treat other than thyroid cancer. Again, cancer is a collection of over 200 different diseases. Just as different antibiotics are required to treat different infections, various isotopes are required to treat a variety of cancers. The DOE should consider requests from physicians who have been unable to obtain the isotopes they need and have asked for to treat even small numbers of study patients. Approximately seventy-five percent of physician/researchers polled who attended the DOE _ sponsored Medical Isotope conference in Washington, D.C. in March, 1999, stated that their research isotope needs are not being met. The DOE should consider its policy commitment to supply research isotopes to these and other physicians conducting clinical trials, and logistically explain how these orders will be filled, and in a timely fashion. Dr. Robert Schenter testified August 31, 2000 in Richland that the IFFTF successfully produced research isotopes during its operation, in contrast to the DOE statement that the FFTIF is not a research isotope production candidate. The DOE should reverse this statement. This expert nuclear physicist told me that FFTF produced sixty research isotopes "efficiently and cost-effectively." Isotopes were sent to, among others, Children's Hospital in Boston, who received them at no charge after production piggybacked onto another program. This successful research Isotope production program should be outlined in the NI PEIS and considered and continued in a restarted FFTIF. Dr. Schenter was the Hanford Isotopes Program manager for IFFTF from 1985 _ 1996. The DOE should reexamine FFTF for research isotope production and consult with those who worked to produce these research isotopes and obtain relevant facts from experts who were involved in this effort. "Junk science" should have no part in the NI PEIS nor in any decision making related to this document. Please seek out the truth from recognized experts in their fields for topics listed throughout the N1 PEIS. Please especially consider physician requests such as "Our organization represents over 30,000 practicing radiologists... it is difficult to conduct clinical studies with even very small numbers of patients. Research is being hampered or removed from consideration by a lack of these isotopes. Medical isotopes are often

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the only effective way to properly diagnose and treat serious disease. It is crucial that we ... have access to a wide variety of isotopes, including those with high specific activity, appropriate to diagnose, prevent and treat heart disease, cancer, arthritis, and, more recently, infectious disease." Signed, Jerry P. Petasnick, MD, Chairman of the Board, Radiological Society of North America. As examples, please see attached letters requesting research isotopes from the Radiological Society of North America and the American Society of Nuclear Cardiology, as well as the LSMU request. Patients do drive markets. Patients want their disease gone, as quickly and easily as possible. The DOE should recognize this fact and give physicians the tools they will need to satisfy patient demand. The DOE should also recognize that the 1997 _ Frost & Sullivan report was too conservative in its original report. It stated _that the expected growth in medical isotopes should be between seven and fourteen percent per year. The DOE should recognize that isotope demand should approach exponential growth initially, as study isotope therapies begin clearing the FDA and these treatments become available to the general patient population. Last year, again, the isotope growth rate was actually nineteen percent, yet not one isotope treatment was FDA approved. At least one and possibly more isotope treatments are projected to be approved within the next year. As disease is characterized more accurately, noninvasive isotope diagnostic tests that avoid more costly treatment procedures will continue_to increase in number. The DOE requested LESS Isotope production funding for FY 2001 than In FY 2000. This does not make sense. There may be a typographical error. The request should have been \$170 million instead of \$17 million for this program? Please send the corrected sum to Congress post haste. Further examples of shortages follow. Early stage prostate cancer patients may be treated with either surgery or tiny radioactive seed implants. Long term, twelve year survival results are the same for both procedures. With a new seed implant design on the horizon, results should become better with seeds than with surgery. Prostate surgery requires a painful six week recovery and a better than fifty percent chance that the patient will become impotent, incontinent, or both. Many men are thus forced into

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1700-2: The amount requested by DOE for isotope support in FY 2001 was approximately 17 million dollars. The reduction of approximately 3 million dollars from the previous fiscal year is a result of the near completion the new Beam Spur at the Los Alamos Isotope Production Facility, which required DOE to request less for capital cost associated with the construction of the Beam Spur.

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surgery and many must wear a diaper for the rest of their lives as a consequence of this backorder situation. This is but one example of many. Quality of life issues should be addressed In the NJ PEIS. Seed implants are done as an outpatient procedure that takes about an hour at half the cost of surgery, typically with a one or two day recovery, and less than a ten percent incidence of complications. Patients in San Francisco and Los Angeles have faced up to a one year backorder for seed implants due to a shortage of isotopes ¹²⁵I and ¹⁰³Pd. Apparently Johnson and Johnson, the largest medical company in the country, is Using 16 new cyclotrons that cost millions of dollars in an effort to alleviate ¹⁰³Pd backorders for their seeds. Cyclotrons (and accelerators) are inefficient producers of ¹⁰³Pd and other treatment isotopes. J & J still faces a backorder situation. J & J has recently contracted with the DOE's HFIR reactor to obtain additional quantities of ¹⁰³Pd in a manner identical to that proposed for the use of FFTF, yet HIFR is scheduled to close for four months beginning in October, With a fraction of a target, the FFTF could produce enough ¹⁰³Pd to fill over 100% of projected treatment needs in 2003 in a market that is expected to grow 20% per year for prostate seeds alone. When I spoke with a high_ranking J & J employee about FFTFS capability for ¹⁰³Pd production, he was speechless. Attached please find a letter from Johnson and Johnson expressing an interest in FFTF to produce this and other isotopes. This J and J employee _has requested more information. If you contact me, I will give you his name, address, telephone number and email address. Cancer does not wait. After a ten year breast cancer study with palladium implants, Carl Mansfield, MD, Thomas Jefferson University Hospital, Philadelphia, said, "these implants mean that a patient can keep a breast and still have the same chances of survival..." Mastectomy is where the surgeons remove the whole breast in an effort to take the cancer with it. The National Association of Cancer Patients and Citizens for Medical Isotopes presented information on breast cancer diagnosis and treatment with medical isotopes September 15 and 16, 2000 at the Susan G. Komen Breast Cancer Foundation's "Race for the Cure" Health Expo in Portland with its projected 50,000 runners, minimum. We

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1700-3: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

Quality of life issues are addressed in the PEIS as they relate to persons potentially affected by the environmental impacts of implementation of the alternatives. Quality of life as regards medical patients are benefits resulting from the availability of medical isotopes from all sources and is not within the scope of this PEIS. The scope of the PEIS is limited to the evaluation of alternatives to accomplish three missions, medical and industrial isotope production, plutonium-238 production for NASA missions, and nuclear research and development for civilian purposes.

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were told that this event should have national media coverage. This raised awareness among cancer and arthritis patients of improved isotope diagnoses and treatment regimens to an organization that provides hundreds of millions of dollars annually for breast cancer research, both through fundraising and via its influence with Congress. We hope that the DOE will be contacted. Signed petitions are being entered in the N1 PEIS. Cancer patients are also suffering from a lack of other isotopes. A promising study at the University of California at Davis with advanced breast cancer patients responding to Cu_67 isotope treatment was suspended when the DOE shut down the reactor producing this isotope. Cu_67 has a natural affinity for breast tissue as well as prostate tissue. A cyclotron supplied by the DOE for this facility is unable to produce enough Cu_67 for even small numbers of study patients. At the Memorial Sloan_Keffering Cancer Center in New York, it took three years to obtain enough alphaemitters to treat 18 study patients with acute myeloid leukemia. Last year John Stanford, the much_loved Seattle superintendent of schools who was stricken with this disease, was made aware of this study. He was ready for the treatment. The study results were published this summer. Had there been an adequate supply of alpha emitters to treat John Stanford, he would have had a 70% chance of being at his desk today, helping the children of Seattle. Study results showed 13 of the 18 patients responded to this therapy. Each had been given less than six months to live after other treatments failed. The DOE has graciously agreed to double the amount of alpha emitters to this facility for the next study phase by the year 2002. This is unacceptable. Please consider that this year, it is estimated that 9,700 patients will be diagnosed with this disease, and 7,100 will die. One of our state legislators included in her August 31, 2000 Richland testimony that a boy died of this disease one week earlier, one month before his fourteenth birthday. Cancer is largely an equal opportunity disease. Most of these deaths could have been prevented if patients had been treated with isotopes. The media has begun to present isotope treatment information to the public. The DOE should be prepared to meet a growing isotope demand. The NI PEIS should serve as the basis for a nuclear infrastructure to accommodate patient needs.

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The DOE should consider in the NI PEIS a public-private partnership in compliance with its own stated policy to spin off government enterprise to the commercial sector. The private sector should be more suited to coordinate production of medical isotopes such that they may be delivered in a timely fashion for processing and thence to medical facilities where patients await diagnosis and treatment. Please also realize that patients prefer to be treated near their homes. The DOE should consider in its NI PEIS placing mini high neutron flux reactors and accelerators with a primary medical isotope production mission at sites around the country so that all Americans have access to these diagnostic capabilities and life-giving treatments with short-lived and other medical isotopes. Thus, alternatives 1, 3 and 4 should be included in the nation's nuclear infrastructure plan. Again, the isotope production situation in this country is unacceptable to many in the medical community, must be addressed in the NI PEIS, and rectified post haste. My number one rule to manufacturers I work with who produce life support products is "You can't tell a patient you're backordered." Coupled with this is a requirement for redundancy of supply. It is recommended that the DOE not only restart FFTF, but add the alternatives listed in the NI PEIS to construct additional nuclear facilities to produce medical isotopes to meet the needs of Americans in their fight against serious disease.

The NACP asks the DOE to consider the Balanced Budget Act of 1997 and to include within the NI PEIS a cost-benefit analysis of radioisotope therapy, alone or in combination with other, older treatments such as surgery, chemotherapy and external beam radiation. I strongly disagree with the DOE statement at the PEIS hearing that these numbers are not readily available. DRGs and treatment expenses are easily obtainable from the Health Care Finance Administration and others. Figures for isotope-based diagnostic tests and therapeutic treatments should be addressed and are available through the HCFA and hospital billing records, among others. Please include in the NI PEIS cost estimates of how medical isotopes used to diagnose disease avoid unnecessary

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1700-4: DOE currently has business relationships with private companies related to the production of radioisotopes. DOE will continue to pursue business arrangements with private companies in order to offset the cost of isotope production.

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1700-5: DOE notes the commentor's support for the use of multiple reactors and accelerators around the country to provide patients with access to short-lived medical isotopes. However, the half-life of the isotopes to be produced within the context of the NI PEIS are sufficiently long to provide ample time for them to be processed and shipped to their end point without losing their effectiveness. Thus, DOE does not feel that it is necessary or cost-effective to build multiple reactors and accelerators to provide patients with an adequate supply of medical isotopes.

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1700-6: The estimated costs of the range of reasonable alternatives are presented in the Cost Report, summarized in Appendix P of the Final NI PEIS. However, the Cost Report is not a cost-benefit analysis. While it is reasonable to believe that the benefits of medical isotopes are substantial, the purpose of this NI PEIS is to describe the nuclear infrastructure missions (Section 1.2 of Volume 1), a range of reasonable alternatives for satisfying the mission requirements (Section 2.5 of Volume 1), and the environmental impacts that would result from implementation of the alternatives. According to 40 CFR Section 1502.23, if a cost-benefit analysis exists, it must be reported and summarized in the NI PEIS.

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invasive procedures, as the mother of a teenager testified in Richland. After his eye was removed due to trauma, the noninvasive isotope diagnosis showed that her son did not require further surgery. Many exploratory surgeries and other procedures are avoided after a diagnosis based on isotope testing. A new technique used in the emergency room separates patients complaining of chest pain into two categories: those who really are having a heart attack and should be referred for further treatment, and those who are just having severe indigestion and could be sent home instead of being admitted for further costly tests. Another isotope test distinguishes between patients who might benefit from open heart surgery and those who would not, saving the latter from unnecessary trauma. This cost study should be based on the top ten cancers, rheumatoid arthritis, and heart disease, comparing older treatments with medical isotope treatment cost savings. Statistics presented for diagnoses, the few FDA approved cancer radioisotope treatments, and for clinical study, results published in the medical literature should naturally be included. Again, these figures are readily available. Please keep in mind that, in 1993, it cost an average of \$15,000 to care for each dying cancer patient, and that over 550,000 cancer deaths are expected in 2000. Medical isotope treatment could cut that figure in half. The goal of cancer treatments is to rid the patient of cancer cells during the first treatment regimen. For example, sixty percent of cancer patients undergo surgery, at a cost of from \$10,000 to \$200,000 for more involved brain and lung cancer procedures. Surgeons only remove the cancer that they can see. Sixty percent of these patients undergo at least one more surgery when small pockets of cancer cells that are too small to see are left behind to proliferate. Radioimmunoguided surgery is successfully treating study patients. Isotopes are placed where the tumor was removed. Given in small amounts, these isotopes guide the surgeon to remove pockets of cancer cells that would otherwise be missed. These isotopes may also be given as treatment smart bulletSTM to "zap" remaining cancer cells. Similarly, seed implants are also being used to irradiate the area surrounding the removed tumor, as in costly brain cancer, to eradicate missed, remaining cancer cells.

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Seed implants have been approved for use in the general liver cancer population in Australia, New Zealand, Hong Kong, and, more recently, Canada. Many cancer patients, especially prostate and breast, develop liver cancer when their cancer migrates, or metastasizes, away from its original site. Liver cancer is basically a fatal disease. Up to forty percent of liver cancer patients survive after isotope seed implant therapy. An absolute minimum two billion dollars might be saved annually after these intraoperative isotope treatments are approved in this country and become a part of the surgical armamentarium. In one recent study, it cost \$1500 per day, or about \$60,000 per patient in direct medical costs to treat leukemia, patients with the first round of chemotherapy for the first six weeks in a series of treatments. These patients normally continue with external beam radiation, followed by a second regimen of another six to eight week chemotherapy session, at a cost of well over \$100,000 per patient. Many patients endure this regimen multiple times. Seventy percent of adult leukemia patients die in spite of this effort. Over 100,000 Americans are diagnosed each year with blood cancers. Over 70% of isotope study patients with advanced blood cancer see their disease disappear and remain in remission five years later., and over 90% of such cancers shrink significantly, with a single "smart bullets" intravenous administration or needle injection at a cost of less than \$10,000 per patient, typically without the debilitating side effects of chemotherapy. Melody, a non-Hodgkins lymphoma patient, described her 30 second isotope injection as "wham, bam, thank you maam". Three chemotherapy treatments failed Melody. Over 50,000 cancer patients will contract NHL in 2000. Jacqueline Kennedy Onassis and, more recently, King Hussein, were NHL patients. Melody's "smart bullet" injection at NeoRx company in Seattle put her cancer into remission. Please note that this company has asked the DOE to supply the isotope Holmium-166 for study patients with multiple myeloma, another blood cancer. NeoRx waits for this isotope as the incidence of this cancer rises in this country. Recognize in the NIPERIS such realistic estimates as over 10 billion dollars per year in health care cost savings when isotope treatment becomes mainstream for blood cancer patients alone. Study data for the most

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common type of non_Hodgkins lymphoma, is complete and before the FDA for final approval to sell in this country. Additionally, it costs thousands of dollars per gram of protein or peptide, the biological component of "smart bullets". Should purified high specific activity ¹¹³In become available, the cost to treat patients with "smart bullets" with this isotope, instead of the impure, less desirable Canadian ¹¹³In, will shrink substantially, further reducing treatment costs. Consider that the six year death rate from ovarian cancer, the disease that claimed comedienne Gilda Radner, and, more recently, Academy_Award winning actress Madeline Kahn, was 86% in a recent study. Only 10% of ovarian cancer study patients died of this disease within six years after 'smart bullet' treatment. The last phase of this study prior to seeking FDA approval is underway.

Patients restored to good health after their isotope treatment return to the workforce, as did Melody. Include in the NI PEIS cost_benefit analysis a projected realistic estimate of increased tax revenues to the U.S. Treasury.

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Heart disease is the number one killer in this country. Medical isotopes in late _ stage studies in this country are working to keep coronary arteries open, avoiding costly repeat angioplasty and open heart surgery for potentially 50,000 patients per year. Some patients undergo six angioplasties, after their arteries repeatedly close. Medicare paid \$10,666 for each stented procedure in 1999. Studies show that half of these repeats might be avoided by adding an isotope during the initial procedure that interferes with the primary complication, excess scar tissue formation. This would also help avoid costly open heart surgery for these patients.

Also be aware that isotope treatment is routine in Western Europe for intractable rheumatoid arthritis, a disease that currently affects about eight million Americans. This number expected to grow to a minimum of 12 million patients over the next 20 years. This therapy involves a thirty second isotope injection per joint treated, commonly in the knee and small joints of the hand. The isotope works to clear inflammatory cells clogging the joint. The European cost: about \$500 per injected

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knee. This treatment replaces a surgery referral for a majority of these patients. In this country, these patients are referred for total knee replacement. Their diseased knee joint is removed and an artificial metal joint inserted in its place. Medicare pays about \$15,000 per knee joint replacement surgery. Hand surgery is even more costly. The European isotope of choice for the hand is Er_169. When Oak Ridge was contacted last summer, I was told Er_169 is not available. FFTF is an ideal production candidate for this isotope. Arthritis is the number one reason that Medicare patients visit their physicians. Again, projected cost savings with isotope treatment is in the billions of dollars annually.

The first studies are being conducted using "smart bullets" to target infectious disease such as the AIDS virus.. Include in the N1 PEIS an estimated cost savings of approximately \$40,000 per AIDS patient per year for medications alone should this study prove successful. We are also but one antibiotic away from other infectious disease epidemics as pathogens mutate and become resistant to antibiotics. One example is tuberculosis. Isotope treatments may keep these diseases from becoming widespread.

One of the best ways to increase the bottom line in business is to reduce costs. Cost savings for the above treatments should be estimated in the N1 PUS. Venture capitalists are generally happy to receive a five to one return on investment. They are extremely happy to see a ten to one ROL Recognize that restarting the IFFTF should produce at least a 25 to 1 R01 In cost savings, over 100 to one for some diseases treated with medical isotopes, even without including revenues from isotope sales. Recognize that the projected cost savings to Medicare and Medicaid alone, as these therapies become more mainstream, should more than pay for this isotope production program, including construction of accelerators and mini high flux reactors across the country. Recognize that the cost savings from restarting FFTF might also pay for over one hundred of Mr._ Magwood's existing programs, with money left over to supply prescription drugs at no charge to the elderly and health insurance to the over 40 million Americans who have no coverage. Recognize that

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It is the lack of health insurance coverage for these individuals that pose the greatest health threat to this country. This potential human, economic, and environmental impact to this country is severe. In addition, as taxpayers, we have already paid for the FFTF As stakeholders, Americans would want to see and expect a return on this investment. Restarting FFTF is the single most cost effective alternative in the N11 PEIS given the facts as listed above, and should be so recognized.

3., Waste minimization. The DOE is always questioned about the waste generated from the operation of its nuclear facilities. The NI PEIS question is "How much waste is generated?" Another question should be "How much waste could be eliminated?" The DOE should consider waste minimization from the medical community's point of view, from a national level and from the health perspective of the increasing use of medical isotopes. Compared with the numbers shown in the NI PEIS, the volume of infectious and toxic waste that is generated with current, less effective cancer treatment methods is enormous. These numbers would be sharply reduced from the more efficient use of medical isotopes for diagnosis and therapy. Cancer patients produce a lot of waste. Surgery waste is infectious; chemotherapy waste is both poisonous and infectious. Witness Ms. Piippo's Richland testimony that the vomitus after her chemotherapy treatments ate away the insides of the Rubbermaid™ type container provided to collect her discharge. Recognize that these wastes are toxic, infectious hazardous wastes and require special handling at high cost. A single cancer surgery produces a minimum of two to over twenty large 33 gallon garbage bags of hazardous waste. A realistic estimate should be made to determine how much of this waste would be eliminated by the use of medical isotope therapy. The cost savings to the medical community would be substantial, and should be factored into any cost-benefit analysis that the DOE should conduct. These waste disposal cost savings might mean the difference between hospitals closing and remaining solvent. The DOE should also take the lead to assure that proper facilities and methods are available to handle medical isotope wastes from each state and explain how this will be done in the NI PEIS. Nonagreement states pose a serious public health hazard as their facilities have no

1700-6
(Cont'd)

1700-7

Response to Commentor No. 1700

1700-7: Medical wastes are regulated by the U.S. Environmental Protection Agency and authorized State agencies. Commercial generation of radioactive waste are regulated by the Nuclear Regulatory Commission or Agreement State. DOE does not have purview over these wastes or the waste generators. This type of analysis requested by the commentor is out of scope of the NI PEIS. DOE's policy prohibits reprocessing of spent nuclear fuel.

Commentor No. 1700: Marlene G. Oliver (Cont'd)
New Medical Technology

legal waste repository. Visits to medical facilities in these areas will show 55 gallon drums containing radioactive waste being stored in hallways, under stairwells, on loading bays, and even in parking lots. Once again, from a national standpoint, the hazardous medical waste volumes are much higher than those generated from the operation of the DOE facilities of Alternate I listed in the PEIS. The DOE should consider enlisting the FFTF in research to determine the best ways to reduce or eliminate the various categories of nuclear waste, including, but not limited to, medical waste. Although this might be the realm of the NRC and other agencies, the government, including the DOE, should support the best medical diagnosis and treatment options and evaluate all of our needs for the best waste treatment methods implementation with the smallest waste disposal cost and minimum environmental impact. The compartmentalizing that has occurred in the Federal government is preventing the proper evaluation of the benefits from the use of medical isotopes, and inhibiting a fairer and more coordinated plan necessary to effectively pursue this very promising option. It is crucial that the foregoing be addressed in the N1 PEIS. In France, where over 70% of their electricity comes from nuclear reactors and where nuclear power is pretty much a non-issue, there is a nuclear waste reprocessing facility adjacent to a nuclear reactor in Normandy, across the channel from England. In June of 1999, the British government announced that anti-nuclear forces would no longer prevent the United Kingdom from proceeding with its nuclear waste recycling program. The government and DOE should recognize in the N1 PEIS that this waste recycling policy makes sense~ for this country as well, and that the FFTF could play a significant research role in this waste minimization and recycling effort. Please keep "junk science" separate from the N1 PEIS and the realm of public health. The DOE should consider working with Congress and the appropriate federal agencies to address nuclear waste storage and recycling options. This would do much to allay the public's fear about ever-increasing amounts of nuclear waste.

I ask the DOE to fairly address all of the above points in the N1 PEIS. With this document, the DOE has the opportunity to take the lead in this endeavor. I ask the DOE _ PLEASE, do not play politics on the backs of patients.

Thank you.

1700-7
(Cont'd)

Response to Commentor No. 1700

Commentor No. 1700: Marlene G. Oliver (Cont'd)
New Medical Technology

SEP-18-00 MON 12:31 PM MEDICAL ISOTOPES FAX NO. 5097379524 P. 12
 08/22/2000 10:58 FAX 5093760177 FTF PROJECT @UC2



880 Jorie Boulevard
 Oak Brook, Illinois 60521-2251
 630/671-2870
 FAX: 630/671-7887
 www.rsna.org



July 21, 1999

Dr. William J. Madia
 Pacific Northwest National Laboratory
 902 Battelle Blvd
 PO Box 99
 MISN: K1-46
 Richland, WA 99352

Dear Dr. Madia:

Our organization represents over 30,000 practicing radiologists. We are writing to you to express our strong support for a full and open consideration of the restart of the Fast Flux Test Facility (FFTF) and its renewed operation as a user facility to provide irradiation services for the nation's medical, science, and engineering communities.

With its restart, FFTF would provide an extremely valuable resource for the nation's faculty and students by supplying research and educational opportunities related to nuclear medicine, engineering, and nuclear science. The availability of FFTF's proven research capabilities would enhance and extend those efforts, especially in the areas of medical isotope development, production and applications, and materials processing.

The FFTF has the ability to produce large quantities of a variety of medical isotopes. Many of these promising isotopes are currently either unavailable or available in such small quantities from other production facilities that it is difficult to conduct clinical studies with even very small numbers of patients. Research is being hampered or removed from consideration by a lack of these isotopes. Medical isotopes are often the only effective way to properly diagnose and treat serious disease. It is crucial that we, as radiologists, have access to a wide variety of isotopes, including those with high specific activity, appropriate to diagnose, prevent and treat heart disease, cancer, arthritis, and more recently, infectious disease.

The FFTF is a unique facility with capabilities that no other device in the world can match. It also has an outstanding record of research, operational excellence, and environmental stewardship. A restart like FFTF might never be built again. Thus, I hope that the decision on its future will fully weigh its considerable merits and many prospective contributions to the nation's health and welfare.

Sincerely,

Jerry P. Petusnick, MD
 Chairman of the Board

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Commentor No. 1700: Marlene G. Oliver (Cont'd)
New Medical Technology

SEP-18-00 MON 12:31 PM MEDICAL ISOTOPES FAX NO. 5097379524 P. 13
 08/22/2000 10:59 FAX 5093760177 FTF PROJECT @001



American Society of Nuclear Cardiology

9111 Old Georgetown Road Bethesda, Maryland 20814-1, 22
 (301) 493-2360 FAX (301) 493-2376

July 20, 1999

Dr. William J. Madia
 Pacific Northwest National Laboratory
 902 Battelle Blvd.
 PO Box 99
 MISN: K1-46
 Richland WA 99352

Dear Dr. Madia:

I am writing to you to express our strong support for a full and open consideration of the restart of the Fast Flux Test Facility (FFTF) and its renewed operation as a user facility to provide irradiation services for the nation's medical community.

With its restart, FFTF could provide an extremely valuable resource for the nation's medical faculty and students by providing both research and educational opportunities related to nuclear science and especially nuclear medicine. The availability of FFTF's proven research capabilities would enhance and extend those efforts, especially in the areas of medical isotope development, production and applications for heart patients.

The FFTF has the ability to produce large quantities of a variety of medical isotopes. Many of these promising isotopes are currently either unavailable or available in such small quantities from other sometimes unreliable production facilities that it is difficult to conduct cardiac studies with even very small numbers of patients. Research is being hampered or removed from consideration by a lack of these isotopes. Medical isotope therapy is generally more effective against disease such as coronary revascularization, at lower cost. It is crucial that we receive a wide variety of isotopes, including those with high specific activity, appropriate to diagnose and treat heart disease.

It is vital that an adequate supply of medical isotopes be available to our members for research, diagnosis and treatment of coronary disease. We fully support the effort behind the FFTF restart.

Sincerely,

Timothy M. Bateman, MD
 President

EXECUTIVE DIRECTOR
 WILLIAM G. NEILGAN, C.A.E.
 ASSOCIATE EXECUTIVE DIRECTOR
 DAWN M. EGGERTSON

PRESIDENT
 TIMOTHY M. BATEMAN, M.D.

PRESIDENT-ELECT
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Chapter 2—Written Comments and DOE Responses

Commentor No. 1700: Marlene G. Oliver (Cont'd)
New Medical Technology

SEP-18-00 MON 12:32 PM MEDICAL ISOTOPES
 LOUISIANA STATE UNIVERSITY
 MEDICAL CENTER
 1542 Tulane Avenue
 New Orleans, LA 70112-2522
 Telephone: (504) 588-4750
 FAX: (504) 588-4933

FAX NO. 504-379524

P. 14



LSUMC

Department of Surgery

March 5, 1999

The Honorable Bill Richardson
 Secretary of Energy
 U.S. Department of Energy
 1000 Independence Avenue SW
 Washington, DC 20583

Dear Secretary Richardson,

**SHORTAGE OF CERTAIN MEDICAL ISOTOPES AND OUR NEED
 FOR THE FAST FLUX TEST FACILITY**

In March of 1996, I wrote to Senator John Breaux and Senator Patty Murray about our need for high-specific-activity iodine-131. This high-purity radioisotope is *not currently* available from any source anywhere in the world. We understand that it could be produced under a high neutron flux with the high neutron energies available in the core of the Fast Flux Test Facility, near Richland, Washington.

We need high specific activity iodine-131 because we are developing a cancer-targeting peptide that has four binding sites for radiolodine. The standard iodine-131 from Canada is mostly stable (non-radioactive) iodine-127, and these "cold" and useless atoms tend to occupy the binding sites on the targeting protein that we need for radioactive iodine-131. Our new approach will be able to treat patients with cancer cells that express the receptors that bind somatostatin. These cancers include certain lung, brain, colon, neuroendocrine, and pancreatic cancers.

As I previously wrote to Senators Breaux and Murray, one of our greatest challenges in developing new cancer treatments is the acute shortage of the necessary type, quality, and activity of radioisotopes for special applications. We believe that our approach will offer significant new hope to cancer patients who have no other resources for successful treatment.

For these reasons, I encourage you to support the restart of the Fast Flux Test Facility.

Sincerely yours,

EUGENE A. WOLTERING, M.D., F.A.C.S.
 The James D. Rives Professor of Surgery
 and Neuroscience
 Chief, Section of Surgical Endocrinology
 Director, Surgical Research



The Children's Hospital • Boston

Commentor No. 1700: Marlene G. Oliver (Cont'd)
New Medical Technology

CONTINUE FROM PREVIOUS PAGE 201



The Children's Hospital • Boston

300 Longwood Avenue, Boston, Massachusetts 02115 • (617) 735-6000
 THE DIVISION OF NUCLEAR MEDICINE

January 26, 1990

Robert E. Schenter, Ph.D.
 HO-36
 P.O. Box 1970
 Westinghouse Hanford
 Richland, WA 99352

Dear Dr. Schenter:

I would like to thank you for the ^{131}I that you provided us last year for use in our ^{131}I - ^{125}I generator research program. This material was used in our N.I.H. project to investigate new chemistry related to the basic chemical processes involved in radionuclide generators used in medical applications.

As we discussed, the F.D.A. has given us permission to resume our clinical studies with the ^{131}I - ^{125}I generator. These studies (funded by the F.D.A. Orphan Drug program) involve injection of the generator eluate directly into the patient and allow measurement of various aspects of cardiac function without the trauma associated with catheterization and with a lower radiation dose than that incurred with currently available radiopharmaceuticals. Additional advantages resulting from the very short half-life of ^{125}I include the ability to perform repeated studies to measure the effects of exercise or pharmaceutical intervention and better imaging statistics because of the higher photon flux that results from the larger administered dose of ^{125}I .

In order to resume these studies, we will require a dependable supply of ^{131}I that is of high radionuclidic purity. A reasonable estimate for the quantity required is on the order of 2-3 Ci/month. This will allow us to prepare 1-2 generators a month so that we can complete the Phase II clinical studies referred to above. When the Phase II studies are completed, we hope to be able to begin Phase III studies. This will involve a larger number of clinical sites and hence require the production of 3-5 generators/month. At this stage, we will require 3-5 Ci of ^{131}I per month for a period of 1-2 years.

Once again, thank you for your assistance in establishing a dependable source of this radionuclide.

Sincerely,

Alan B. Packard, Ph.D.
 Senior Research Associate

Commentor No. 1700: Marlene G. Oliver (Cont'd)
New Medical Technology

SEP-18-00 MON 12:33 PM MEDICAL ISOTOPIES FAX NO. 5097379524 P. 15

Os-191 APPLICATION

March 12, 1990

A better way of diagnosing heart function in premature babies could spare those infants from unnecessary open heart surgery. Physicians currently have few options when it comes to diagnosis -- and those options aren't without risk, either.

Using a catheter can cause trauma to the infant's fragile circulatory system, while the use of currently available radiopharmaceuticals means giving the premature baby a dose of radiation.

But researchers at the Children's Hospital in Boston have found that using a radioisotope of osmium, a metallic element similar to platinum, not only gives better diagnostic information but results in a lower radiation dose. Used like a bone X-ray, it allows the imaging of softer tissues, such as the heart and blood vessels.

The osmium-191 used in the initial Food and Drug Administration study was made at the Department of Energy's most advanced research reactor, the Fast Flux Test Facility at the Hanford Site in southeastern Washington. As the study is stepped up, researchers say they will need a dependable and greater supply of osmium-191.

Commentor No. 1700: Marlene G. Oliver (Cont'd)
New Medical Technology

SEP-18-00 MON 12:33 PM MEDICAL ISOTOPIES FAX NO. 5097379524 P. 16

Reactor/Accelerator Medical Isotopes

R.E. Schenter

REACTOR ONLY

1. Ac227 - Parent of Ra223 - RIT
2. Ag111
3. Au198
4. Au199
5. Br82
6. Cl4
7. Ce141
8. Cf252 - Brain cancer treatment
9. Co60 - "Gamma knife" Cancer treatment
10. Cs137 - FP
11. Dy165 - Arthritis treatment (2 hr.)
12. Er169
13. Fm255
14. Ga67 - SPECT
15. Gd153 - SPECT calibration - Osteoporosis detection
16. H3
17. Ho166 - Multiple Myeloma treatment - 1.1 day half-life
18. Ii29
19. Ii31 - Cell directed therapy ("Smart Bullets") - "RIT" - several forms of cancer
20. Ir192
21. Lu177 -RIT
22. Mo99 - Diagnostic - 40,000 procedures a day in US - comes from Canada, etc. - (Parent for Tc99m)
23. Os191 - Sent to Children's Hospital, Boston from FFTF 1992
24. Os194 - RIT
25. P32 -Heart disease treatment
26. P33 - Requires high energy neutrons
27. Pd109
28. Pt195m
29. Re186
30. Re188 - From W188 generator - for RIT cancer, heart disease treatment
31. Re188 - From Re187 - for RIT cancer, heart disease treatment
32. Rh105
33. Ru105
34. S35
35. Sb119
36. Sc47 - RIT
37. Se75 - Sent to NIH for research from FFTF
38. Sm153 - Bone Cancer Pain Relief - Has FDA approval - "QUADRAMET"
39. Sn113
40. Sr85

September 7, 2000, 10:00 AM

Commentor No. 1700: Marlene G. Oliver (Cont'd)
New Medical Technology

SEP-18-00 MON 12:34 PM MEDICAL ISOTOPIES FAX NO. 8087379524 P. 17

41. Sr89 – Bone Cancer Pain Relief – Has FDA approval – “METASTRON”
42. Sr89 – from Y89 – “Carrier free Sr89” – bone pain relief – requires high energy neutrons
43. Te123m
44. Th228 – Alpha emitter grand parent of Bi212 (AML, RIT, et al)
45. Th229 – Alpha emitter grand parent of Bi213 (AML, RIT, et al)
46. Ti44
47. Tm170
48. Xe133
49. Y90 - FP
50. Y90 - From Y89 – Liver cancer treatment – “microseeds”
51. Y91 – RIT
52. Yb169

September 7, 2000, 10:00 AM

2

Commentor No. 1700: Marlene G. Oliver (Cont'd)
New Medical Technology

SEP-18-00 MON 12:34 PM MEDICAL ISOTOPIES FAX NO. 8087379524 P. 18

ACCELERATOR ONLY

1. As72
2. As73
3. A1211 – Alpha emitter – RIT (Brain Cancer treatment)
4. Ba128
5. Be7
6. Bi205
7. Bi206
8. Bi207
9. Br75
10. Br76
11. C11 – Very short lived PET
12. Co55
13. Co56
14. Cu61
15. F18 – Very short lived PET
16. Fe52
17. Ga67
18. Ga68
19. Gd146
20. Gd148
21. Ge68
22. Hf172
23. Hg195m
24. I123
25. I124
26. In111 – Diagnostics
27. Kr81m
28. Lu172
29. Lu173
30. Mg28
31. Mn52
32. N13 – PET
33. O15 – PET
34. Pb203
35. Pm145
36. Rb81
37. Rb82
38. Ru97
39. Se72
40. Sr82
41. Ta178
42. Te118
43. Ti44
44. Tl201- Blood flow studies

September 7, 2000, 10:00 AM

3

SEP-18-00 MON 12:34 PM MEDICAL ISOTOPIES FAX NO. 8087379524 P. 18

45. V48
46. W178
47. Y86
48. Y87
49. Zn62
50. Zr88

Commentor No. 1700: Marlene G. Oliver (Cont'd)
New Medical Technology

REACTOR OR ACCELERATOR

1. Ag105
2. Ag108m
3. Ag109m
4. AJ26
5. As74
6. Br77
7. Br80m
8. Cd109
9. Ce139
10. Cr51
11. Co57
12. Cu62
13. Cu64 – RIT
14. Cu67 – RIT – Accelerators can't keep up with demand (see Denardo's comments)
15. F18
16. Fe55
17. Fe59
18. Hg197
19. Ho163
20. I125 – Brachytherapy ("seeds") – Prostate, Breast, et al treatments
21. Na22
22. Pd103 – Brachytherapy ("seeds") – Prostate, Breast, et al treatments
23. Pm149
24. Rb83
25. Rb86
26. Rh105
27. Ru103
28. Sc44
29. Sc46
30. Sc47
31. Si32
32. Sm145
33. Sn117m
34. Ta179
35. Tc95m
36. Tc96
37. Xe122
38. Xe127 – Diagnostics – "Xe-127 production continues to be a problem for the combined capabilities of BNL and LANL..."
39. Y88
40. Zn65
41. Zr89

September 7, 2000, 10:00 AM

5

SEP-18-00 MON 12:36 PM MEDICAL ISOTOPES FAX NO. 5097399524

2-1417

Commentor No. 1700: Marlene G. Oliver (Cont'd)
New Medical Technology

SEP-18-00 MON 12:35 PM MEDICAL ISOTOPES FAX NO. 5097399524 P. 21

FFTF Isotopes and Their Applications*

Isotope	Application	Isotope	Application
Ac-227	Mabs - Alpha Emitters	Os-191	Heart Disease Diagnostics
Ac-227	Tracers for Environmental Applications	Os-194	Mabs - Beta Emitters
Ai-37	Nuclear Physics Experiments	P-32	Medical Applications
C-14	Medical Applications	P-33	Bone Cancer Pain Relief
Cd-109	Heart Disease Diagnostics	Pd-103	Prostate Cancer Treatment
Cd-109	X-Ray Fluorescence	Pm-147	Heart Power Source
Cf-252	Brachytherapy and Other Cancer Treatments	Pt-195M	Diagnostic Applications
Cf-252	Radiography	Re-186	Mabs - Beta Emitters
Co-57	Gamma Camera Calibration	S-35	Heart Disease Diagnostics
Co-60	General Applications	Sc-47	Bone Cancer Pain Relief
Cu-64	Medical Applications	Se-75	Diagnostic Applications
Cu-67	Mabs - Beta Emitters	Sm-145	Prostate, Brain, and Thyroid Cancer Treatment
Dy-165	Medical Applications	Sm-153	Bone Cancer Pain Relief
Es-254	Nuclear Physics Experiments	Sn-117M	Bone Cancer Pain Relief
Fe-55	Medical Applications	Sr-89	Mabs - Alpha Emitters
Gd-153	Diagnostic Applications	Th-228	Tracers for Environmental Applications
Ho-166	Bone Marrow Ablation	Th-229	Mabs - Alpha Emitters
I-125	Prostate, Brain, and Thyroid Cancer Treatment	Tm-170	Brachytherapy and Other Cancer Treatment
I-125	Diagnostic Applications	Tm-170	Heart Power Source
I-131	Mabs - Beta Emitters	W-188	Mabs - Beta Emitters
I-131	Prostate, Brain, and Thyroid Cancer Treatment	Xe-127	Tracers for Environmental Applications
I-131	Brachytherapy and Other Cancer Treatments	Xe-127	Diagnostic Applications
I-192	Radiography	Xe-133	Diagnostic Applications
Ir-192	Diagnostic Applications		
Mo-99	General Applications		
Nb-94	Heat Power Source		
Ni-63			

*All the isotopes shown in this table have been previously produced, sold and/or requested for FFTF Production.

Commentor No. 1702: J. Christopher Hormel

**J. Christopher Hormel
P.O. Box 153
Bills, ID 83314
208/352-4234
jchormel@micron.net**

September 18, 2000

Ms. Colette Brown
Department of Energy
Office of Space and Defense Power Systems

Re: Draft Programmatic Environmental Impact Statement for accomplishing expanded civilian nuclear energy research and development and isotope production mission in the United States, including the role of the Fast Flux Test Facility.

Dear Ms. Brown,

I am concerned about the proposal to expand the civilian nuclear infrastructure contained in the above referenced document. As a member of the Snake River Alliance I am concerned about the existing waste at the INEEL, and its potential contamination of the Snake River Aquifer. The last thing we in Idaho need is a plan to generate more nuclear waste at the INEEL - a site that urgently needs to be cleaned up already. Therefore, I strongly urge you not to pursue the plutonium-238 production mission outlined in your PEIS.

My specific concerns about the consequences of the proposed activities include:

- Increasing the amount of liquid high level waste at the INEEL
- the inherent risks in plutonium production at INEEL or any other site
- the potential for a catastrophic release of plutonium during lift-off or re-entry of a space probe carrying this material
- the precedent that would be set if our country re-starts its plutonium re-processing activities and the resulting negative impact upon nuclear non-proliferation efforts.

Considering the factors I've mentioned above, I strongly urge you to select alternative 5 in the current PEIS. Doing so would allow the INEEL facilities concerned to continue their focus on cleaning up the existing mess left over from past nuclear weapons work, and would not make worse an already difficult task of limiting the proliferation of nuclear weapons. Thank you for the opportunity to comment on this plan.

Respectfully Yours,



J. Christopher Hormel

1702-1

1702-2

1702-3

1702-4

1702-5

1702-6

1702-7

1702-1

Response to Commentor No. 1702

- 1702-1:** The commentor's concerns regarding existing waste at INEEL and contamination of the Snake River Plain aquifer are noted. Contamination of the Snake River Plain aquifer is discussed in Sections 3.3.4.2.1 and 3.4.2.2. As discussed in Section 4.3.2.1.13, implementation of nuclear infrastructure alternatives that would involve the Fluorinel Dissolution Process Facility would generate additional waste at INEEL. This section also describes the disposition of waste that would be generated under the nuclear infrastructure alternatives. Implementation of the nuclear infrastructure alternatives would not affect funding or cleanup schedules at INEEL.
- 1702-2:** DOE notes the commentor's opposition to the plutonium-238 mission.
- 1702-3:** The use of proposed alternative facilities associated with processing of neptunium-237 targets would have no impact on schedules or available funding for high-level radioactive waste programs at either Hanford or INEEL. At INEEL, the tanks would not be used although certain facilities at the Idaho Nuclear Technology Engineering Center (INTEC) would be used to treat the wastes resulting from processing the irradiated targets. These are reliable systems that would process a maximum of 1,050 cubic meters of low-level radioactive waste over

Commentor No. 1702: J. Christopher Hormel (Cont'd)

Response to Commentor No. 1702

the 35-year nuclear infrastructure operational period. The higher activity waste would be treated as a solid form via a stand-alone vitrification system, separate from any tank waste treatment system. At Hanford, the existing high-level radioactive waste facilities would not be used, and as analyzed in the PEIS, no existing or planned high level radioactive waste facilities would be used to treat the wastes resulting from processing the irradiated targets.

- 1702-4:** The facilities evaluated in the NI PEIS can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Sections 4.2-4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from implementation of the alternatives, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that the radiological and nonradiological risks associated with each of the alternatives would be small.
- 1702-5:** DOE notes the commentor's concern for NASA's use of nuclear materials for space missions, although this issue is beyond the scope of this PEIS. Through a Memorandum of Understanding with NASA DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch.
- 1702-6:** It is not true that resumption of plutonium-238 production constitutes a return to reprocessing. The aqueous technique that would be used to separate plutonium consisting of over 80 percent plutonium-238 and neptunium from the irradiated target is similar to the technology that was used in portions of the complex process to extract plutonium-239. However, as discussed in PEIS Sections S.3, 2.2.3 and A.1.4, this technology would be used to chemically separate plutonium-238 and neptunium from irradiated targets and not from irradiated or spent nuclear fuel, whereas reprocessing separates weapons grade plutonium-239 from irradiated nuclear fuel. Plutonium-238 extraction is not reprocessing. Unlike plutonium-239, plutonium-238 is not used

Commentor No. 1702: J. Christopher Hormel (Cont'd)

Response to Commentor No. 1702

in nuclear weapons, but rather it would be used as a power and heat source for NASA space missions.

The Nuclear Infrastructure Nonproliferation Impact Assessment, published in September 2000, confirms that extracting plutonium-238 from irradiated targets would not undermine nonproliferation goals. In this report, DOE recognizes that proliferation concerns might be raised related to one of the technical assessment factors, "reduction in attractiveness of material forms," due to the fact that, in the extraction of plutonium-238, the remaining unconverted neptunium a weapons-useable fissile material used as target material for conversion into plutonium-238, must also be recovered (not produced) purified, and recycled. This is unavoidable (unless the United States elects to neither produce or purchase plutonium-238), and it impacts all PEIS alternatives and options, including the No Action Alternative and Alternative 5: permanently deactivate FFTF with no new missions at U.S. facilities. However, while the fact that concerns might be raised is valuable to the record of decision process, it does not constitute an inconsistency with or departure from nonproliferation policy, and plutonium-238 is needed to fulfill our missions. Further, in the event that plutonium-238 production is resumed in the United States, the total separated stocks of neptunium would be reduced over time in an irreversible manner since there is a moratorium on U.S. spent fuel reprocessing. This overall reduction in a weapons-useable material would mitigate the potential concerns related to material attractiveness, and offer an additional method to pursue U.S. nonproliferation goals. DOE's proposed approach in this mission, and its rigorous nonproliferation impact assessment, demonstrate its commitment to nonproliferation policy, domestically and in the international community.

1702-7: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 1703: Tatiana Maxwell

September 18, 2000

Ms. Colette Brown
DOE
Office of Space and Defense Power Systems

Dear Ms. Brown,

Your Department's recent proposal to expand the civilian nuclear infrastructure, outlined in the *Draft Programmatic Environmental Impact Statement for accomplishing expanded civilian nuclear energy research and development and isotope production mission in the United States, including the role of the Fast Flux Test Facility*, raises significant nuclear weapons proliferation and environmental issues.

As a member of the Snake River Alliance I have become aware of the serious nuclear contamination and waste problems at INEEL. INEEL is one of the most contaminated areas in America. The Department's recent estimate on cleaning up our site is \$22 billion and is expected to take 50 years—longer than any other DOE facility. In addition, we have over 360 individual superfund sites within the 890 sq. mile area that comprises INEEL. With this known, the last thing we need is a plan to generate more nuclear waste at a site that needs more waste like the DOE needs security scandals. Out of concern for Idaho's environment, I strongly urge you not to pursue the plutonium-238 production mission outlined in your PEIS.

One of the most daunting problems confronting cleanup at major DOE facilities such as Hanford and INEEL, is the solidification of liquid high-level nuclear waste. Your current plan for plutonium-238 production entails the generation of approximately 288,000 additional gallons of this waste over the project's 35 year span. While this is a small portion of Hanford's high level waste, it is approximately one fifth of what we have remaining here in Idaho, which makes it a very significant amount. Previous leakage of this waste at INEEL and Hanford threatens our water supplies. What we certainly don't need is any more of this most highly problematic of waste forms.

Given the certain risks inherent in production of plutonium, the justified need for this material would have to be tremendous, and the PEIS does a poor job of providing ample justification. Beyond the risks involved in production, and the aforementioned resulting waste problem, there is also the issue of an accident occurring upon lift-off or reentry of a space probe carrying this material. The cassini probe, launched in 1997, carried 72 pounds of Pu-238. The potential for an explosion during lift-off or upon an inadvertent reentry during the fly-by phase, gave many in the scientific community pause, including scientists within NASA. According to NASA's own conservative estimate, a burn up upon reentry of the cassini probe could have caused 2,300 cancer fatalities, independent analyses ranged much higher. This potential for a catastrophic release of this extremely toxic material will remain so long as the US government remains committed to

Response to Commentor No. 1703

1703-1: The commentor's position regarding plutonium-238 production at INEEL is noted. Production of plutonium-238 at one or more of the candidate sites would be conducted in support of NASA's deep space missions (Volume 1, Section 1.2.2 of the NI PEIS). As discussed in Sections 4.3.2.1.13 and 4.4.2.1.13 of the EIS, selection of the Fluorinel Dissolution Processing Facility and/or the Advanced Test Reactor to support production of plutonium-238 would have no significant impact on the waste management system at INEEL. Use of any of the facilities proposed in this PEIS for the stated missions would not impact cleanup missions at DOE sites.

1703-2: The use of proposed alternative facilities associated with processing of neptunium-237 targets would have no impact on schedules or available funding for high-level radioactive waste programs at either Hanford or INEEL. At INEEL, the tanks would not be used although certain facilities at the Idaho Nuclear Technology Engineering Center (INTEC) would be used to treat the wastes resulting from processing the irradiated targets. These are reliable systems that would process a maximum of 1,050 cubic meters of low-level radioactive waste over the 35-year nuclear infrastructure operational period. The higher activity waste would be treated as a solid form via a stand-alone vitrification system, separate from any tank waste treatment system. At Hanford, the existing high-level radioactive waste facilities would not be used, and as analyzed in the PEIS, no existing or planned high level radioactive waste facilities would be used to treat the wastes resulting from processing the irradiated targets.

1703-3: Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is

1703-1

1703-2

1703-3

1703-4

Commentor No. 1703: Tatiana Maxwell (Cont'd)

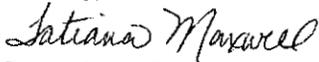
the use of plutonium-238. If DOE is to have a role in developing power systems for NASA's instrumentation, it should focus on promising solar technology, an alternative that has been promoted in the European scientific community.

There are also proliferation concerns as it pertains to this plan. A return to production of this isotope, however poorly justified, means a return to the use of aqueous reprocessing at DOE facilities where this technology has been used to extract bomb material for the weapons program. From President Carter to presidents Bush and Clinton, US policy has been to halt reprocessing in this country in order to set a global precedent to curtail the spread of nuclear weapons material—a noble effort in serious need of bolstering through action.

Indeed, an otherwise lukewarm *Nuclear Infrastructure Nonproliferation Impact Assessment* conducted by your Office of Arms Control and Nonproliferation questions whether our commitment to nonproliferation isn't weakened by the use of the Fluorine Dissolution Process Facility within Building 666 at INEEL. INEEL's reprocessing facility is next door to a wet storage unit for Navy spent fuel, which contains a greater than average amount of highly enriched uranium. It was reprocessed from 1953 to 1989 at INEEL for the weapons program. Use of this facility to carry out plutonium-238 extraction, especially considering the dubious need for this isotope, at the very least raises the concern that DOE is not fully committed to ending reprocessing. The international community cannot be expected to trust DOE's civilian-mission claim when an agency devoutly committed to development of weapons uses a nuclear weapons technology at a weapons facility.

Considering all these factors that could adversely affect our environment and commitment to nonproliferation, I strongly urge you to select alternative 5 in the current PEIS. This alternative would allow the Advanced Test Reactor at INEEL to continue producing medical and industrial isotopes for the commercial sector and would not lead to the production of anymore highly radioactive liquid waste at Hanford or INEEL. The main mission at these two facilities has been and should continue to be cleanup of the mess left over from previous nuclear weapons work. Additional waste production would interfere with this already difficult and expensive work. Alternative 5 also calls for the decommissioning of the FFTF reactor at Hanford. FFTF is an aging breeder reactor whose use would be inconsistent with United States policy to discourage use of this technology due to the capability this class of reactors has to produce more plutonium than is consumed. Thank you for the opportunity to comment on this plan.

Sincerely,



Tatiana Maxwell
P.O. Box 4856
Jackson, WY 83001

1703-4
(Cont'd)

1703-5

1703-6

Response to Commentor No. 1703

anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed production of plutonium-238 are relatively low and are discussed in detail in Chapter 4 of Volume 1, and Appendixes H, I, and J of Volume 2 in the Final NI PEIS.

1703-4: DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternative energy sources for space missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. The Cassini fly-by occurred exactly as planned, with no release of nuclear material.

1703-5: The commentor is correct in stating that the aqueous processing technology that would be used to separate plutonium consisting of over 80 percent plutonium-238 and neptunium from the irradiated target is similar to the technology that was used to extract plutonium-239. However, unlike plutonium-239, plutonium-238 is not used in nuclear weapons, but rather it would be used as a power source for NASA space missions. The technology that is discussed in EIS Sections S.3, 2.2.3 and A.1.4 would be used to chemically separate plutonium-238 and neptunium from irradiated targets and not from irradiated or spent

Commentor No. 1703: Tatiana Maxwell (Cont'd)

Response to Commentor No. 1703

nuclear fuel whereas reprocessing separates weapons grade plutonium-239 from irradiated nuclear fuel. As discussed in the separate nonproliferation impact assessment report, use of this technology to produce plutonium-238 from irradiated targets will not create a nonproliferation threat. DOE is committed to full compliance with and support of the U.S. policy prohibiting reprocessing. The juxtaposition of INEEL Building 666 to wet storage of highly enriched uranium Navy spent nuclear fuel and its previous mission of reprocessing spent nuclear fuel were considered in the separate nonproliferation impact assessment.

1703-6: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. It should be noted that medical isotopes would continue to be produced at ATR regardless of which alternative is selected in the Record of Decision. The FFTF would produce spent nuclear fuel and low-level radioactive waste, and as discussed throughout Section 4.3 of Volume 1, none of the proposed alternatives would add waste to the high-level waste tanks at Hanford or INEEL. Also, it should be pointed out that while FFTF supported the breeder reactor program, it is not itself a breeder reactor, but rather a fast flux research reactor.

With respect to cleanup of wastes at Hanford or INEEL, the proposed action and the existing cleanup missions are independent programs and actions related to one will not impact the other. While the cleanup activities at both Hanford and INEEL are high priority to DOE, it should be noted that the cleanup of legacy wastes is beyond the scope of the NI PEIS.

Commentor No. 1704: Lois R. Spinrad

Draft PEIS Comment Form

I would urge that the Fast Flux Test Facility (FFTF) be brought into operation again as soon as is possible. Our existing nuclear reactors are used in various fields of medicine to benefit many patients without turning to foreign sources.

Our space research can benefit from it without turning to other countries for energy sources.

My husband, Bernie Spinrad, now deceased, passed on to me his admiration and respect for the potential of these facilities. His history and expertise made his decision of great value.

Thank you,
Lois Spinrad

1704-1

1704-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Lois R. Spinrad

Organization: _____

Home/Organization Address (circle one): 2315 NE 65th St, Apt 1105

City: Seattle State: WA Zip Code: 98115 7056

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4592 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



Commentor No. 1705: Anonymous

Response to Commentor No. 1705

Draft PEIS Comment Form

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

I am opposed to expanding civilian nuclear energy research and development and isotope production (including plutonium-238) missions in the United States, including the role of the Fast Flux Test Facility (64 FR 50064). We must fund our research towards safer and cleaner alternatives (that already exist) We must put our emphasis on preventative medicine, and the well-being of the relationship between humanity and the environment. Space missions should not be funded above the importance of people. Take care of the waste we have already made - JUST CLEAN UP HANFORD!!

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear-Infrastructure-PEIS@hq.doe.gov

Name (optional): Concerned Citizen

Organization: _____

Home/Organization Address (circle one): _____

City: _____ State: _____ Zip Code: _____

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 1990 Germantown Road • Germantown, MD 20874
 Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear-Infrastructure-PEIS@hq.doe.gov



7/12/00

09/18/00 MON 17:00 FAX

1705-1

1705-1: DOE notes the commentor's opposition to expanding DOE's nuclear infrastructure to meet the three missions addressed in the NI PEIS and to the restart of FFTF.

1705-2

1705-2: DOE notes the commentor's interest in alternative energy sources and preventative medicine, although issues of research and development of alternative energy sources and preventative medicine are beyond the scope of this Nuclear Infrastructure PEIS. Consistent with its mandates under the Atomic Energy Act, DOE is proposing this enhancement for the purposes of addressing three primary needs: 1) to support the increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and for which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear energy research and development in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio.

1705-3

1705-3: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

Commentor No. 1706: J. L. Polehn

09/18/00 MON 12:54 FAX 509 378 3661

REGULATORY UNIT

001

Draft PEIS Comment Form

Dear Ms. Brown:

I am for the restart of the FFTF facility to produce the needed radioisotopes. As stated in the PEIS, these isotopes are needed to provide researchers with the isotopes to do their work (e.g., improve the standard of living of people in the area of medicine, power production, development of new technologies). I feel it is short-sighted to not use a facility that the American taxpayer has already paid for. In addition, the ability to obtain Congressional monies for long-term tasks appears to be not a sure thing and becomes even more at risk since it does not appear that Congress is able or willing to fund such projects. Also, use of FFTF will allow a more immediate production of radioisotopes where the alternative approaches are likely to result in extensive delays of radioisotope production.

Thank you for the opportunity to comment on this PEIS.

Sincerely,

J. L. Polehn
PO Box 482
Richland, WA 99352

MS. J. Polehn

509-372-0787

1706-1

1706-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): _____

Organization: _____

Home/Organization Address (circle one): _____

City: _____ State: _____ Zip Code: _____

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Collette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENT



***Commentor No. 1707: Hyun Lee
Heart of America Northwest***

From: Heart of America Northwest
[SMTP:OFFICE@HEARTOFAMERICANORTHWEST.ORG]
Sent: Monday, September 18, 2000 5:55:50 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Comments on Draft NI PEIS from Heart of America Northwest
Auto forwarded by a Rule

To whom it may concern,

Attached is Heart of America Northwest and Legal Advocates for Washington's comments on the Draft PEIS on Restarting the FFTF reactor at Hanford. If you have problems with the document, please write or call us at (206) 382_1014. Thanks

Hyun Lee

Response to Commentor No. 1707

- 1707-1:** Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.
- 1707-2:** Regarding nonproliferation policy, PEIS Alternative 1, which included the restart of FFTF, was evaluated along with a range of reasonable alternatives and options, in the Nuclear Infrastructure Nonproliferation Impact Assessment, published in September, 2000, and placed on the DOE web site (<http://www.nuclear.gov>) for public dissemination. The restart of the FFTF reactor would not violate U.S. nuclear nonproliferation policies. As stated in Appendix Q of the PEIS, "FFTF restart would fully meet nonproliferation objectives." This means that there are no significant identified concerns contrary to U.S. nonproliferation objectives.
- 1707-3:** DOE has evaluated the environmental impacts of a range of reasonable alternatives to fulfill the requirements of the proposed action. The commentor is referred to Volume 1, Section 2.5 of the PEIS for specific details.
- 1707-4:** The commentor outlines a number of issues to be addressed within Comment 1 (including Comment d in the Overview) in the submittal. To ensure that each issue is addressed, the responses have been organized to match the numerical subheadings in the submittal.

Commentor No. 1707: Hyun Lee (Cont'd)
Heart of America Northwest

Comments of Heart of America Northwest And Legal Advocates for Washington On the US Department of Energy's Programmatic Environmental Impact Statement On Restart of the FFTF Nuclear Reactor at Hanford (Nuclear Infrastructure PEIS) September 2000 (Supplementing comments given orally, and materials turned in, at hearings)

Overview:

USDOE issued its Draft Programmatic Environmental Impact Statement (Expanded Nuclear Infrastructure PEIS, called "PEIS" herein) on Restarting the FFTF Nuclear Reactor at the end of July, 2000. The EIS illegally failed to disclose:

- a) what would be done with the wastes from restart of the FFTF reactor and the proposed resumption of Plutonium processing at Hanford;
- b) whether restart of the FFTF reactor violated U.S. nuclear non_proliferation policies;
- c) reasonable alternatives (including some recommended by the USDOE's own blue ribbon medical advisory committee on isotope production) for producing research medical isotopes and assisting commercial isotope providers in producing isotopes for commercial markets;
- d) that the same blue ribbon medical advisory committee concluded in a report provided to USDOE's Office of Nuclear Energy (the author of the PEIS) in April "that the FFTF will not be a viable source of research radioisotopes", and, that the USDOE has a sound policy against investing in restart or new construction to serve commercial isotope producers; and,
- e) the costs of restarting the FFTF reactor and costs of alternatives _ along with the impact on USDOE's ability to meet its nuclear waste cleanup obligations if it prioritizes funding for restart ahead of funding its cleanup program.

For each of these areas, USDOE published separate reports _ which were not available to the public for comment at the time of the public hearings. The National Environmental Policy Act (NEPA)

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1707-5

Response to Commentor No. 1707

Overview Comment d: The issues with respect to the NERAC Subcommittee recommendations and DOE's policy against investing in restart or new construction are addressed in the response for 1.0 provided below.

1.0 DOE's production and sale of radioisotopes fall into two categories, commercial and research, and both types of isotope production are considered under the proposed actions. Commercial radioisotopes are those that are produced in large, bulk quantities and sold to pharmaceutical companies or distributors, or to equipment or sealed source manufacturers. Examples of commercial radioisotopes produced by DOE include strontium-82 and germanium-68 for medical applications, and iridium-192 and californium-252 for industrial applications. DOE only produces commercial isotopes when there is no U.S. private sector capability or when foreign sources do not have the capacity to meet U.S. needs reliably. In contrast, research radioisotopes are typically produced and sold in small quantities in response to specialty orders from researchers preparing experiments in the field of medicine, with small quantities of these radioisotopes also purchased by industrial researchers. Because small-quantity production of research isotopes is not financially attractive to private-sector producers and is generally not undertaken, DOE attempts to provide all research radioisotopes that are requested, subject to production capability, inventory, and financial constraints. As successful application of a specific research isotope is established, the production and sales of that radioisotope may shift from research to commercial status. In recent years, over 95 percent of DOE's sales of radioisotopes by dollar volume were commercial and 5 percent have been for research. Additional discussion of how DOE's isotope program fits into the overall U.S. and foreign isotope production capabilities was incorporated into Section 1.2.1 of Volume 1.

The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, (April 2000) regarding the suitability of FFTF to produce research isotopes in a timely and cost-efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of

Commentor No. 1707: Hyun Lee (Cont'd)
Heart of America Northwest

requires that the agency disclose in one report (the EIS) all reasonably foreseeable impacts from proposed actions and interrelated decisions and all reasonable alternatives. Even where the reports were published long in advance of the publication of the PEIS, USDOE failed to disclose in the PEIS those reports' conclusions and suggested alternatives. Nor was the public reasonably notified of the existence of those reports and their relevance to the PEIS (i.e., they were not on the PEIS website). Other reports were deliberately made available only after the public hearings had ended.

Process Was Legally Inadequate: The PEIS fails to meet the substantive requirements of Washington's State Environmental Policy Act as well as NEPA. Site specific impacts (i.e., impacts from specific waste dumps or treatments) are not disclosed. USDOE refused to provide legally adequate notice and to follow the requirements of the Hanford Clean_Up Agreement Community Relations Plan for notice and conduct of the hearings. USDOE will not legally be able to utilize this PEIS for amending the Agreement or obtaining State hazardous waste (RCRA) permits. Our specific numbered comments begin on the next page.

1. The PEIS fails to disclose that the FFTF nuclear reactor is not suited for a research medical isotope production mission, and falsely implies that production of research isotopes is a mission for which the Department is considering restart of the reactor. The PEIS fails to disclose and discuss the policy of the Department against making major capital investment decisions (i.e., restart of a reactor or new construction) to serve a commercial isotope production mission (i.e., making space available in a reactor core or accelerator for production of commercial isotopes on a marginal cost reimbursed basis is considered only a "piggyback" mission). The PEIS and Record of Decision must fully disclose and discuss the difference between research isotope production missions and commercial isotope production, along with the full disclosure and consideration of the Department's own blue ribbon medical advisory committee (NERAC Subcommittee for Isotope Research and

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Response to Commentor No. 1707

producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates use of FFTF when coupled with the other DOE missions.

Under the NI PEIS proposed action and consistent with its mandates under the Atomic Energy Act, DOE would enhance its existing nuclear facility infrastructure to, among other things, more effectively support the production of radioisotopes for medical applications and research. However, DOE is not proposing to restart or build any new facility for the primary mission of serving the commercial medical isotope market. DOE's intent is to complement commercial sector capabilities to ensure that a reliable supply of isotopes is available in the United States to meet future demand, and to encourage the commercial sector to privatize the production of isotopes that have established applications to a level that would support commercial ventures.

1.1 The referenced joint congressional letter has been logged in as Commentor No. 158 and the responses are included therein.

1.2 The references to research isotope production are not misleading. The NERAC Subcommittee concludes the following, "Implement a contingency plan to guarantee an uninterrupted radioisotope and stable isotope supply for the country's research needs." The conclusions are addressed in more detail in Paragraph 2 of Response 1.0 and in Section 1.2 of Volume 1 of the PEIS. Further, as discussed in Paragraph 1 of Response 1.0, the proposed action includes both research- and commercial-scale isotope production.

1.2.1 DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent

Commentor No. 1707: Hyun Lee (Cont'd)
Heart of America Northwest

Production Planning, Final Report, April, 2000): "The Subcommittee concludes that the FFTF will not be a viable source of research radioisotopes.":

1.1. As stated in the submitted joint Congressional letter (by Senator Wyden, Representatives Baird, McDermott, Smith, Blumenauer, DeFazio, Hooley and Wu), FFTF is not suited for production of medical isotopes for research (i.e., small quantities, quick turnarounds, for use in research or clinical trials as opposed to large scale batches for commercial markets produced on behalf of private pharmaceutical companies on a marginal cost basis).

1.2. The conclusion of the NERAC Subcommittee for Isotope Research and Production Planning should be clearly stated in the PEIS, and misleading references to research medical isotope production missions for the FFTF alternative (or all alternatives for the PEIS) must be removed:

1.2.1. In "Purpose and Need for Agency Action" (Section 1.2 of the PEIS), USDOE falsely presents the need for, and primary missions of, expanded infrastructure considered in the PEIS, including for the FFTF reactor restart, as: "DOE must provide an adequate supply of isotopes to keep pace with the growing and changing needs of the research community if it is to serve this key role." (referring to role of DOE to "develop isotopes"). Page 1_3.

1.2.2. There are numerous other misleading references throughout the PEIS to research isotope production missions as providing the justification or primary missions under consideration for restart of the FFTF reactor.

1.2.2.1. I.e.: The only quote from the Subcommittee on Isotope Research and Production Planning in the PEIS refers to the need to provide capability to produce isotopes for research: "It is now widely conceded that limited availability of specific radionuclides is a constraint on the progress of research." PEIS at 1_3.

1.2.2.2. I.e.: "Research isotopes that have shown promise... are not being explored because of their lack of availability or high price." Id.

1.2.3. The Office of Nuclear Energy uses this PEIS as an advocacy document, selectively quoting its NERAC Subcommittee to make it appear that the Subcommittee supports the need for investment in the FFTF restart alternative or other alternatives in this PEIS,

1707-4
(Cont'd)

Response to Commentor No. 1707

with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth rate of medical isotope use is consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

1.2.2 The commentor's contention that numerous references to research isotope production are misleading is not true. This issue is addressed in Paragraph 1 of Response 1.0 and in Response 1.2.1.

1.2.3a The issue regarding the NERAC Subcommittee recommendations concerning the suitability of the FFTF to produce research isotopes is addressed in Paragraph 2 of Response 1.0.

1.2.3b The mission under consideration is for the production of both research- and commercial-scale isotopes. This issue regarding the production of both isotope types is addressed in Paragraph 1 of Response 1.0.

1.2.3.c The issues with regard to DOE policy precluding the restart or building new infrastructure for commercial interests are addressed in Paragraph 3 of Response 1.0.

1.2.5 The issues with respect to the research- and commercial-scale isotope production as well as the associated restart or building new infrastructure are addressed in Paragraphs 1 and 3, respectively, of

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without disclosing that:

a) "The Subcommittee concludes that the FFTF will not be a viable source of research radioisotopes." (NERAC Subcommittee Report at 31, April, 2000);

b) the mission under consideration for isotopes in this PEIS (at least for Alternative 1, restart of FFTF) is for support of commercial production, not for research purposes; and,

c) USDOE has a sound policy that precludes the investment in restart or building new infrastructure for the purpose of a primary mission of serving commercial isotope production (as opposed to research).

1.2.4. The PEIS fails to disclose that serving a commercial isotope production mission involves subsidizing the production of isotopes for commercial interests, who pay only the marginal cost of reactor or accelerator time and none of the infrastructure investment costs or waste costs.

1.2.5. The PEIS and Battelle's 1999 business plan place heavy emphasis on FFTF making research isotopes. Furthermore, most of the pro_FFTF statements by elected officials (E.g: Senator Gorton's statement) and from proponents at the hearings focused on production for research, rather than to serve commercial customers. This was encouraged by the FFTF Project and Office of Nuclear Energy, and demonstrates the need for the PEIS and Record of Decision to clearly state that FFTF is not under consideration for a research production mission, and that the USDOE will not make restart or construction of new facilities decisions based on consideration of serving commercial isotope producers as a primary mission.

1.2.6. The only logical conclusion is that the Department should eliminate the alternative of restart of the FFTF reactor from consideration because it is not a viable means to meet the research isotope production mission and the Department will not (and should not) consider restart for purposes of serving a commercial isotope production mission.

1.2.6.1. USDOE has a policy against restarting any facility or building a new facility for a primary mission of serving the commercial medical isotope market. This means that USDOE

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Response 1.0. The Record of Decision for the NI PEIS will be based on a number of factors, including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

1.2.6 DOE notes the commentor's opposition to the restart of FFTF.

1.2.6.1 This issue with regard to DOE policy precluding the restart or building new infrastructure for commercial interests is addressed in Paragraph 3 of Response 1.0.

1.2.6.2 DOE's isotope production mission is discussed in the NI PEIS and includes both research- and commercial-scale isotope production. Specific details with regard to these issues are addressed in Paragraphs 1 and 2 of Response 1.0.

1.2.7 The commentor refers to the Secretarial sponsored dialogue on FFTF (September 5 and 6, 2000). The participants in that meeting, including the "Heart of America Northwest," signed a confidentiality agreement pledging not to discuss the meeting details in public. Referring to discussions that occurred in that meeting in this letter is a violation of that confidentiality agreement.

The NERAC Subcommittee for Isotope Research and Production Planning did not conclude that the decision on FFTF should not be based on using FFTF for medical isotopes. The Subcommittee said that because of its size the FFTF was more suited to producing commercial quantities of medical isotopes needed for diagnosis and treatment, and not the much smaller research quantities needed for testing and trials. The Program Scoping Plan for the Fast Flux Test Facility (August 1999) essentially concurred with that recommendation, stating that only \$1.5M of the projected \$31M per year revenue (2005-2010) and \$1.0M of the projected \$61M per year revenue (2010-2020) was expected to come from producing clinical trial quantities of targeted isotopes. And even that assumption for FFTF producing clinical quantities was based on that fact that if operating for other missions, producing clinical quantities of specialized isotopes for which FFTF was especially qualified would have a small impact on other plant operations. The comments about the Program Scoping Plan

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should NOT make a decision to restart FFTF based on consideration of whether it will serve the commercial medical isotope market. Commercial isotope production (where the companies pay what DOE calls the full cost, but which is just the marginal cost for the irradiation time in the reactor or accelerator) is supposed to be a "piggyback" only mission. Research isotope production, on the other hand, may be a primary mission for determining if a facility is built or restarted. This policy, has very sound underpinnings. USDOE should not be in the business of building or restarting facilities to serve commercial customers _ especially since this provides them access to subsidized facilities that their competitors do not have access to, and Congress has not told DOE to construct and operate facilities for the benefit of private companies.

1.2.6.1.1. The Cost report _ which must be incorporated into the PEIS and reissued for public comment _ and PEIS must be modified to disclose the cost subsidies that the Department of Energy would incur to provide new infrastructure for meeting commercial isotope producers' market requests.

1.2.6.2. Nowhere in the PEIS does USDOE disclose that FFTF is not suited, nor under consideration for, research medical isotope production as a major mission. This must be prominently disclosed.

1.2.7. The Chair of USDOE's NERAC Subcommittee on Isotopes, Dr. Richard Reba (Chair, University of Chicago Radiology Dept.) spoke to the Secretarial sponsored dialogue on FFTF (September 5 and 6, 2000). The following points need to be addressed in the PEIS and Record of Decision:

* subcommittee felt that the decision on FFTF should not be based at all on using FFTF for medical isotopes. He reiterated that the committee concluded that FFTF should not have a mission of making research isotopes.

* the "business plan" prepared by Battelle last year, and on which Secretary Richardson based his decision to go ahead with considering to restart FFTF, was entirely suspect in the eyes of the blue ribbon medical committee. It seemed to rely heavily on research medical isotopes, which the panel found FFTF not to be suited to produce. The committee encouraged Battelle to seek

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underestimating or overestimating production rates, costs, or markets between now and 2045 are very subjective. The plan was a projection, but the production rates were all based on validated technical models (proven through actual previous isotope production runs at the FFTF), and the economics were based on a business model that was independently reviewed by Dr. Howard Kaufold of the Wharton Business School and using financial information from previous expert reports, as well as multiple surveyed government and private industry companies.

1707-5: The commentor raises a number of cost issues. To assure each issue is addressed, the responses have been organized to match the numerical sub-headings in the submittal.

Overview Comment e: The NI PEIS discloses and analyzes all pertinent report information needed to evaluate the environmental impacts of reasonable alternatives to fulfill the requirements of the DOE missions. The costs and nuclear nonproliferation impacts of alternatives are not required by NEPA and CEQ regulations to be included in an EIS. DOE prepared a separate Cost Report and Nuclear Infrastructure Nonproliferation Impacts Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such ancillary documents need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR 1505.1(e)). Nevertheless, DOE mailed these documents to more than 730 interested parties on August 24 and September 8, 2000, respectively. Both reports were made available immediately upon release on the NE website (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided summaries of the Cost Report and Nuclear Infrastructure Nonproliferation Impacts Assessment in this Final NI PEIS.

DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and

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commercial customers for isotope production at FFTF _ only if the reactor was restarted for other purposes;
* the business plan was never peer reviewed;
* the plan underestimated the cost of preparing the reactor and infrastructure to make isotopes at FFTF and Hanford facilities;
* the plan overestimated the market share for FFTF and the revenue isotopes would bring in;
* the plan underestimated the cost of making isotopes at FFTF;
* the plan overestimated the rate at which FFTF could produce isotopes;
* the projections for isotope need and FFTF market share, the projected costs and the rate of production should all be peer reviewed _ or a new, independent study done with peer review _ before money is invested to make the changes needed to produce isotopes in FFTF.

Each of these points must be fully reconsidered in the PEIS.

2. The PEIS must consider availability of other sources of research and commercial production of medical isotopes from Canadian reactors, universities and hospitals, commercial reactors, and private isotope production facilities in the US and abroad.

2.2. The PEIS fails to consider all reasonable alternatives, and does not even disclose the existence of alternatives recommended by the Department's own NERAC Subcommittee on Isotope Research and Production Planning; i.e., the availability of investment or subsidy to the University of Missouri facilities, the capacity of private companies in Texas (including the company that purchased the accelerator from the Super Conducting Super Collider).

2.3. These facilities can clearly meet both research and commercial production demands.

2.4. The PEIS must fully disclose and consider the availability of USDOE's own facilities to meet all or portions of reasonable forecasts for research medical isotopes, and to use unused capacity for commercial isotope production consistent with Departmental policy.

2.5. The PEIS fails to disclose the new construction of an accelerator at Los Alamos for isotope production, and whether similar additions can be made for additional capacity.

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schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The draft Waste Minimization and Management Plan for the Fast Flux Test Facility (May 2000) and the NERAC Isotope Subcommittee Report (April 2000) were referenced in the NI PEIS and were available prior to the public hearings.

As detailed in Section 4.3.1.1.13 and 4.3.3.1.13 of the NI PEIS and elsewhere, DOE has developed the draft Waste Minimization and Management Plan to incorporate pollution prevention and waste minimization practices in its consideration of the future of FFTF. This plan identifies DOE's preferred options for management, treatment, and/or disposition of all waste streams related to the restart and operation of FFTF. The Waste Minimization and Management Plan for the Fast Flux Test Facility is in preparation. A draft of this plan was submitted to the States of Washington and Oregon for review and comment. The draft plan is available on the FFTF website (<http://fftf.org/reports>) and in the DOE public reading rooms.

Section 1.2 of Volume 1 of the PEIS discusses the recommendations and findings of the Nuclear Energy Research Advisory Committee (NERAC) contained in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, as addressed in the response to Comment 1707-4. The commentor's claim that DOE failed to make the whole of this report available for public review is false. The NERAC report and the earlier Expert Panel report entitled Expert Panel: Forecast Future Demand for Medical Isotopes, were made available to the public in the public reading rooms and on the NE web site (<http://www.nuclear.gov>).

1.2.4 and 1.2.6.1.1: Consistent with the mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure to support production of radioisotopes for medical applications and research. DOE is not proposing to restart or build any new facility for the primary mission of serving commercial medical isotope producers. DOE merely seeks to fulfill its responsibility to ensure that there is a reliable supply of isotopes in the U.S. to meet future demand. DOE does not subsidize commercial producers. DOE

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2.6. The PEIS mentions only in passing that 50% of current USDOE capacity at reactors and accelerators is utilized, and the additional 50% could be utilized to meet all or a significant portion of USDOE's claimed demand for isotopes. This is a reasonable alternative to all proposed actions in the PEIS.

2.7. If less than 5 kilograms per year of Plutonium 238 production was necessary, the Department fails to disclose in the PEIS that the Advanced Test Reactor (ATR) would have adequate capacity to produce isotopes that it is claimed FFTF is the only option for.

2.8. The PEIS fails to disclose that NASA does not have a need for 5 kilograms of Plutonium 238 per year, and falsely asserts that the current Radioisotope Thermoelectric Generators are the only technology that NASA can utilize for planned space missions.

2.9. The PEIS fails to disclose that on May 22, 2000 _ two months before the release of the Draft PEIS _ NASA informed USDOE that it intended to utilize the Sterling generator technology, which reduces the demand for Pu238 dramatically.

2.10. The PEIS fails to disclose that production of 5 kilograms of Pu238 per year would be a rate supporting an incredible space mission once every eight months _ which is far in excess of any reasonable forecast of Congressional approval of future space missions.

2.11. If the demand for Pu238 is greatly reduced, it can be met with a reasonable alternative of purchases from Russia, and a second reasonable alternative of purchases combined with production of smaller quantities (and not necessarily in every year) at USDOE facilities. These alternatives are reasonable and must be fully considered in the PEIS.

2.12. The justification for the consideration of the restart of the FFTF reactor is eliminated, and the alternative must be dropped, if the reactor is not under consideration for a primary mission of research medical isotopes; production capacity exists at ATR and other USDOE facilities and in the private sector (nationally and internationally) for commercial isotopes; ATR has capacity to produce medical isotopes if it is either not producing Pu238 or is producing much less than 5 kilograms per year; and, if NASA's actual reasonably forecast requirement is much less than five kilograms of Pu238 per year.

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does encourage the commercial sector to privatize the production of medical isotopes in certain instances. DOE does this by turning over production of certain isotopes to commercial entities once DOE has established that commercial production is economically viable. Even so, DOE continues to produce about 90 percent of the isotopes at its facilities.

6.0: This issue is addressed in the response to Overview Comment e.

11.5, paragraph 7, sentence 3: For Alternative 1 options, the PEIS assumes that the operational facilities referenced by the commentor (i.e., Radiochemical Processing Laboratory ([Building 325] and Building 306-E) are adequate to support material storage, target fabrication, and medical isotope processing activities. The alternative does not consider construction of new facilities and such costs are therefore not included under Alternative 1 in the Cost Report.

1707-6: This PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR 1500 through 1508 and 10 CFR 1021, respectively). While it is true that Washington State agencies are governed by SEPA in making decisions regarding issuance of environmental permits for activities at Hanford, DOE's responsibilities with regard to environmental impact analysis are dictated by NEPA and not SEPA. DOE will comply with State regulations, including SEPA, as appropriate.

In accordance with NEPA and the cited regulations for implementation, DOE provided legally adequate notice for the public hearings and conducted the public hearings in accordance with established procedures. Specifically, notice of scheduled public hearings was provided via the means and in the timeframe outlined in governing CEQ and DOE regulations (i.e., 40 CFR 1503.1, 1506.6, and 10 CFR 1021.313, respectively). Based on the feedback from participants in previous public hearings, DOE used a public hearing format according to established procedures in order to facilitate equal participation and representation. The format for the hearings was presented in the Notice of Availability (65 FR 46443 et seq.) for the Draft NI PEIS. As a federal NEPA action, this PEIS is not subject to the Tri-Party Agreement Community Relations Plan (CRP) which

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3. The Advanced Test Reactor (ATR) at Idaho National Engineering and Environmental Laboratory (INEEL) could meet projected medical isotope demands, including the same kind of isotopes that FFTF backers claim FFTF would produce for 5 to 10 years even under USDOE's wildly overoptimistic forecasts of medical isotope demand growth.

4. Using the Advanced Test Reactor to make Plutonium 238 has total startup costs of just \$50 million. FFTF startup costs with processing facility start up is \$430 million.

* USDOE is only supposed to be basing the decision for restart on Plutonium 238 and nuclear energy research missions _ not commercial medical isotope production.

* USDOE can extend its contract to buy Pu238 from Russian and meet demand from NASA for at least seven years. This is far cheaper than other alternatives for Pu238, but Office of Nuclear Energy made clear they want an American source.

* The PEIS must disclose the technology differences for Pu238 requirements in NASA missions, and what the need would be with currently Congressionally approved and reasonably foreseen missions utilizing the new Sterling space generator after 2004.

* At the 5 kg per year production need claimed in the PEIS and by Office of Nuclear Energy _ which drives the size of their facilities and their claim for using FFTF _ Office of Nuclear Energy officials have stated would provide enough Pu238 for NASA to send a new mission into space every 8 months!!! This has never been authorized by Congress and is extremely unlikely _ yet, USDOE is proposing to make a massive capital investment based on meeting this unapproved level of space missions.

* If NASA does not need 5 kg, but only 1 to 3 kg per year, then the Advanced Test Reactor could make both Pu238 and some medical isotopes.

5. The PEIS has two accelerators lumped together in its "accelerator alternative". One is a low energy accelerator, which could make both research and commercial isotopes (but not the neutron rich isotopes that FFTF, or ATR or a high energy accelerator would make). The cost of the low energy accelerator is just \$35 million ___ less than one year's cost of keeping FFTF on standby!!!

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primarily has as its focus cleanup decisions under the Tri-Party Agreement. Nevertheless, the public participation process implemented for the PEIS meets or exceeds procedures outlined in the CRP to include provision of a public comment period on the Draft NI PEIS in excess of 45 days.

The PEIS does consider site specific impacts on waste management and treatment facilities. For example, Sections 4.3.1.1.13 and 4.3.3.1.13 of the PEIS assess the impacts of FFTF restart coupled with target fabrication and processing in the 300 Area and in FMEF, respectively. The analysis includes quantification of the impacts of projected waste generation on treatment, storage, and disposal facilities.

1707-7: Current domestic and global producers of radioisotopes include governments that operate reactors and accelerators at national laboratories or institutes, and private sector companies that own and operate accelerators. There are also many partnership arrangements wherein companies lease irradiation space in government reactors or operate processing facilities in coordination with the government. A few universities also produce radioisotopes, but their ability to provide reliable and diverse supplies are generally limited by the small-scale capabilities or operating schedules of their facilities.

The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum 99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

Although other manufacturers produce medical radioisotopes, DOE remains the key provider for a large number of radioisotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially

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5.2. The cost of USDOE's high energy accelerator in the PEIS is \$700 million. USDOE presents the accelerator option as being \$1 billion by lumping the two accelerators together and then adding to this another \$218 million, which they claim is the cost of shutting down FFTF. Essentially USDOE claims that the cost of shutting down FFTF is a cost of every alternative except for the alternative of restarting FFTF. Under the restart alternative, the cost of shutting down FFTF is never incurred.

5.3. The USDOE proposed high energy accelerator was sized just to make at least 5kg of Plutonium per year. It could be greatly reduced in size and cost if it was built just for nuclear research and medical isotopes. Under this reasonable alternative, which USDOE must consider, USDOE could buy the Pu238 from Russia or use the ATR reactor for Plutonium 238, while still having a nuclear energy research accelerator. Experts agree that it could do everything for nuclear research that FFTF could do, and do more.

5.4. The PEIS must be changed to include a reasonable range of accelerator alternatives that are not solely sized to produce 5 kilograms of Pu238 per year. A steady neutron source accelerator in the Northwest, for example, with reduced size would also have greatly reduced operating costs than those presented in the Cost Report, because accelerator operating costs are largely determined by electricity costs. Another reasonable alternative that the Department must discuss and consider are variations on the Department's own proposed Advanced Neutron Source accelerator proposed for Oak Ridge.

6. USDOE improperly and illegally excluded from the PEIS consideration of costs and impacts on its clean_up (Environmental Management) budget from disclosed proposed and related actions. By publishing a separate report on costs _ which was not disseminated for public review until after the public hearings were over in the Northwest, USDOE illegally and improperly prevented the public from reviewing and commenting on these issues. The sole cure for this will be disclosure and consideration in one document (the PEIS) of costs and budgetary impacts on the cleanup program, and holding an additional round of hearings and comment opportunities.

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experimental, these isotopes are not generally purchased in large enough quantities to make their production financially attractive to private industry. However, supplies of many research isotopes are not readily available from existing domestic or foreign sources, causing a number of medical research programs to be terminated, deferred, or seriously delayed. See Section 1.2.1 of Volume 1 for more detail.

1707-8: The NI PEIS evaluates the environmental impacts of a range of reasonable alternatives to fulfill the requirements of the proposed action, which includes the production of medical and industrial isotopes, the production of plutonium-238 for future NASA missions, and civilian nuclear research and development. DOE acknowledges that there are other manufacturers of medical radioisotopes, including the University of Missouri and International Isotopes Incorporated (which has constructed a linear accelerator from assets purchased from the former Superconducting Super Collider Project), and the domestic production capabilities of these facilities have been considered in the development of the NI PEIS. While some existing facilities may possess the capacity to support production of small quantities of research isotopes, NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000, recommends that:

“Plans for acquiring a dedicated radioisotope production reactor should be initiated so that both the cyclotron and reactor radioisotope production facilities will meet the radioisotope needs of the U.S. research community by 2010.” The report further states:

“It is important that contingency planning be performed and implemented by Isotope Programs that act to guarantee isotope supplies in the long term. This must include consideration of facility retirement and/or redirection, potentially major changes in the agreements underlying parasitic production, successful consolidation of processing capabilities, and the timing and uncertainties of bringing new, dedicated facilities online.”

1707-9: The PEIS fully considers the availability of DOE facilities to meet the proposed action. As stated in Section 1.2.1 of Volume 1, currently, approximately 50 percent of DOE's isotope production capability is

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6.2. In the context of this PEIS and the related decisions that the PEIS considers, costs of alternative actions involve the irretrievable commitment of resources, and certain aspects of what USDOE calls "cost" (which are really budget considerations involving tradeoffs in intradepartmental budgets) considerations have direct environmental impacts (including impacts on Hanford Clean_Up and the national Environmental Management Program).

6.3. "irreversible commitment of resources" includes the impacts of using USDOE's limited funding for new production missions on the USDOE's legal obligations to cleanup contamination at Hanford and other facilities. USDOE has officially stated that its limited budget requires it to cap "target" cleanup (Environmental Management, "EM") budgets through 2006, including Hanford's cleanup budget. USDOE has officially forecast that it will fall over \$200 million short in 2002 of the funding required for essential safety work and cleanup under the Hanford Clean_Up Agreement and applicable environmental laws.

6.4. Use of USDOE's limited funding for FFTF startup and use of future Hanford EM budgets for such related actions as storing, treating or disposing of wastes from FFTF and Plutonium processing startup, therefore, has a direct environmental impact on Hanford Clean_Up.

6.5. USDOE has made this a direct impact by agreeing in the 1995 amendments to the Hanford Clean_Up Agreement to shutdown the reactor and use the funds saved from shutdown for cleanup and reducing the so-called cleanup funding "compliance gap". USDOE's own words in 1995 committed the Department to use the funds saved for higher priority environmental management activities. At that time, it was costing the Hanford EM budget \$30 million a year to maintain the reactor. USDOE is legally required to consider in the PEIS the environmental benefits from meeting its 1995 commitment to shutdown the FFTF reactor and to use the funds saved for cleanup.

6.6. The PEIS is legally required to consider how the maintenance of the reactor on hot standby for the new proposed missions cost the Hanford cleanup budget at least \$30 million a year from fiscal years 1996 through 1998, and the related USDOE decision to ask

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being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions basic energy sciences or defense). Section 2.6.1 has been expanded to included a discussion on the capacity at ATR and HFIR.

The Isotope Production Facility (IPF) at Los Alamos National Laboratory produces radioisotopes using the Los Alamos Neutron Science Center's (LANSCE) half-mile accelerator that delivers medium-energy protons. Among other isotopes, the IPF's three major products include germanium-68, strontium-82, and sodium-22. As a result of changing DOE missions, the production of radioisotopes at target area "A" of the LANSCE has been rendered inoperable. In order to replace the level of production lost due to this change, DOE is completing a new and more efficient IPF that would allow DOE to continue to produce most of these same isotopes in an effort to meet existing demand. As addressed in Section 2.6.1 of the NI PEIS, IPF at LANSCE was considered but dismissed from further evaluation because, although it can be used in tandem with the Brookhaven Linac Isotope Producer (BLIP) located at the Brookhaven National Laboratory to supply near-term isotope requirements, it is not certain that these facilities could accomplish reliable, increased isotope production at the level needed to support projected needs.

1707-10: There currently is little room for growth of medical isotope production at ATR. The neptunium-237 targets for plutonium-238 production will compete for space in the reactor. There are potential negative impacts to the private company that leases reactor space for the production of radioisotopes due to being assigned less desirable irradiation space. If less than 5 kilograms of plutonium-238 production per year are required, the potential for negative impacts to the private company is reduced.

DOE estimates (Section 1.2.2 of Volume 1) that NASA will require between 2 to 5 kilograms of plutonium-238 per year. In response to comments 2.8, 2.9, and 2.11, DOE recognizes that a 5 kilogram per year production rate for plutonium-238 could theoretically yield an SRPS every eight months. However, DOE chose a 5-kilogram per year production rate as an upper bound due to uncertainties in the SRPS

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Congress to directly move \$30 million out of the Environmental Management budget and into the Nuclear Energy budget to continue to fund hot standby for the current proposed missions. Enough money was wasted on hot standby of FFTF to pay the full costs of the two years of retrieval of liquid High_Level Nuclear Wastes from Single Shell Tanks that USDOE illegally suspended due to a lack of funding during this same period. This is an example of the direct environmental and health impact of related funding and cost decisions that must be examined in the PEIS.

6.7. The presentation of costs in the Cost Report is biased and ludicrous, as described below.

6.8. In the report, every alternative is assigned the cost of shutdown and cleanup of the FFTF reactor _ inflating each of the other alternatives by \$218 million. This is nothing more than a transparent attempt to bias the report in favor of FFTF restart. This cost must be removed from those alternatives, since USDOE has a preexisting legal commitment in the Hanford Clean_Up Agreement to shutdown the reactor and use the funds saved (compared to continued standby) for cleanup. If the decision is made to shut FFTF, that legal commitment will automatically effective in the Agreement. The cost of shutdown is not a cost of other alternatives.

6.9. The cost of eventually shutting and decommissioning the FFTF must be added to the cost presented for the FFTF restart alternative. The PEIS must disclose the full life cycle cost of the proposal to restart the reactor _ including the cost to deactivate and clean it up.

6.10. The cost of cleaning up currently uncontaminated facilities (and the environmental impacts from contaminating them), such as FMEF, must be fully disclosed and considered.

6.11. The impact on USDOE's current proposals for accelerated cleanup of Hanford's 300 Area from the proposed operation of the 325, 306 and other contaminated facilities in the 300 must be fully disclosed and considered _ including the additional cost likely to be incurred from continuing to operate these facilities while attempting to cleanup the surrounding area (especially given the fact that these facilities have contributed to, and continue to contribute to, the contamination of the soil, air, sewer lines, and

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technology development requirements for backup units, and variability in the amount that may be needed for each of the units to meet NASA's power requirements.

While DOE can select a combination of alternatives, it does not prevent it from selecting FFTF for restart.

- 1707-11:** A forecast for future demand for medical isotopes and the expected growth rate of medical isotope use during the next 20 years is provided in Section 1.2 of Volume 1. The growth projections were adopted by DOE as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. DOE does agree that ATR could meet some selected medical isotope demands for the next 6 to 10 years as described in Section 2.5.3 of the Final PEIS.
- 1707-12:** DOE notes the commentor's comments regarding relative startup costs of the alternatives and the assertion that a decision regarding the restart of FFTF should only be based on plutonium-238 production and nuclear energy research missions. However, the purpose of the NI PEIS is to evaluate the environmental impacts of reasonable alternatives to enhancing DOE's existing nuclear facility infrastructure to support production of isotopes for medical, research, and industrial uses, production of plutonium-238 for use in future NASA space exploration missions, and U.S. nuclear research and development needs for civilian application. The Record of Decision for the PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

DOE agrees that it could purchase plutonium-238 from Russia to satisfy its responsibility to supply NASA with the necessary fuel to support future space exploration missions. Under the current contract set to expire in 2002, the United States is authorized to purchase up to 40 kilograms of plutonium-238, with the total available for purchase in any one year limited to 10 kilograms. Any purchase

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groundwater in the surrounding 300 Area). The impact on the ability to cleanup the 300 Area must be fully disclosed.

6.12. USDOE's proposed "Done in A Decade" Plan for accelerated cleanup of the 300 Area explicitly calls for the cleanup to result in unrestricted public access to the 300 Area _ which would be a high environmental benefit. However, if there are continuing nuclear operations _ as proposed for FFTF restart support missions for buildings such as the 325 and 306 facilities _ then this entire Area can not be released for public access, even if it is successfully remediated. This is unacceptable. USDOE must commit now to close these facilities and clean them up. It is also unacceptable that the Office of Nuclear Energy ignored the USDOE's proposal for cleanup of the 300 Area in this PEIS, and failed to disclose the adverse impact the proposed operations in the 325 and 306 buildings would have on both the goal of unrestricted public access and the cost of cleanup.

6.13. The cost report and PEIS clearly assume that the operation of the 325 and 306 buildings will be subsidized by the Hanford landlord budget _ which is the cleanup (Environmental Management) budget _ at a cost of \$11 million per year. This subsidy will harm cleanup, and its impacts must be disclosed or eliminated by adding the full cost of maintaining the facility into the operating costs disclosed for FFTF related operations.

6.14. The Hanford Clean_Up budget already subsidizes the FFTF standby _ documents show that Battelle / Pacific Northwest National Lab agreed to take over the standby at the urging of the Director of the Office of Nuclear Energy, and that Battelle clearly pitched that a benefit would be its ability to use its administrative and overhead accounts to improperly subsidize FFTF standby. We urge the Secretary to have the Inspector General review this and the propriety of other contract related decisions for FFTF standby and proposed operation.

6.15. USDOE's cost report _ even with its overt bias in favor of FFTF restart _ puts the total construction and startup costs for meeting USDOE's claimed demand for research medical isotopes, and some commercial isotope production, with an accelerator at \$106.3 million.

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beyond what is currently available to the United States would likely require renegotiation of a new contract (including purchase price), and may require additional NEPA review. In addition, for supply reliability reasons and concerns about nuclear nonproliferation, see Section 1.2 of Volume 1 of the PEIS. DOE's preference is to establish a domestic plutonium-238 production capability.

The PEIS states (Section 1.2.2 of Volume 1) that NASA will require between 2 to 5 kilograms of plutonium-238 per year. DOE recognizes that a 5-kilogram per year production rate for plutonium-238 could theoretically yield an SRPS every eight months. However, DOE chose a 5-kilogram per year production rate as an upper bound due to uncertainties in the SRPS technology development requirements for backup units, and variability in the amount that may be needed for each of the units to meet NASA's power requirements. Section 1.2.2 has been revised to reflect these technology differences.

DOE agrees with the comment that the ATR could make both plutonium-238 and some medical isotopes.

1707-13: DOE notes the commentor's observations regarding costs associated with Alternative 3 (Construct New Accelerator[s]). The commentor's observations regarding the costs associated with permanent deactivation of FFTF are correct. FFTF would be permanently deactivated should a decision be made to select any alternative other than Alternative 1, Restart FFTF. The Cost Report is not biased in favor of FFTF. The Cost Report was structured to clearly identify the implementation costs of the various alternatives so the Secretary of Energy would have this information along with other data for consideration. For Alternatives 2 through 5, deactivation of FFTF is part of the implementation cost for these alternatives. In the same manner that HFIR and ATR deactivation costs are not included for Alternative 2, the FFTF deactivation costs are not included in Alternative 1. The Cost Report correctly assigns costs in the alternative evaluations.

1707-14: The commentor is correct in his observation that the proposed high energy accelerator was sized to make at least 5kg of plutonium-238 per year and that it could be greatly reduced in size, cost of construction, and operating costs if the plutonium-238 production mission were not

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Whereas, restarting FFTF and construction and startup of the ancillary mission facilities at Hanford are estimated in the report to cost \$423 million (not even adding in shutdown costs for FFTF and cleanup of the FMEF). Operating costs for the accelerator and its processing support would cost \$10 million a year less than USDOE wastes on FFTF standby annually now _ and, \$2.4 billion less than FFTF over 30 years. (USDOE costs) 6.16. USDOE previously estimated the cost to startup FFTF at \$554 million. SEE 4/17/97 Unified Field Budget Request. The difference is inexplicable, although this figure included mission related restart costs, which may have changed slightly with the dropping of the Tritium proposal. USDOE must use its own prior approved budget baselines for this PEIS disclosure of costs.

6.17. The claimed cost of shutdown of FFTF is artificially inflated _ the validated and USDOE approved budget baseline from 4/7/99 reveals a cost of just \$152 million to shutdown, and even this must be considered a high estimate that failed to consider the proposal to accelerate shutdown. The 1996 approved baseline budget for shutdown _ before Hanford began jockeying the figures to justify restart _ was just \$89 million. SEE RDS No. R95T006 at 7.

6.18. USDOE failed to disclose that it was building a new accelerator at the time this PEIS was released, and its cost was half that disclosed in the cost report. USDOE fails to disclose how this would affect need for other facilities.

6.19. Not one cent is assigned to the costs of storing, treating and disposing of the wastes from FFTF and related mission proposed operations at Hanford, like Plutonium processing.

6.20. In its Tank Waste EIS, USDOE assigned a huge cost for evaporation services, vitrification and ultimate disposal of vitrified waste in Yucca Mountain. NEPA requires disclosure and consistency in the use of costs.

7. The total cost to the Hanford Clean_Up Budget from the proposed restart and actions at Hanford is likely to exceed \$1 billion _ the impacts of adding these costs to the already inadequate Hanford Clean_Up budget must be fully disclosed, along with the cumulative impacts of the costs of Hanford storing, treating, disposing and monitoring wastes from other pending

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pursued and the accelerator were designed and constructed only to support the nuclear research and development and medical and industrial isotope production missions.

The commentor also proposed that DOE consider alternatives in the PEIS combining elements of two or more alternatives. As stated in Volume 1, Section 2.5.4 of the PEIS, DOE can select any alternative or combination of alternatives or elements of alternatives in the Record of Decision associated with this NI PEIS. Alternative 3 is a prime example of an alternative that could be split and combined with an other alternative. The evaluations presented in the NI PEIS are structured to enable the Secretary of Energy to make these types of tradeoffs during the decision process.

The commentor proposed that DOE consider variations to the Advanced Neutron Source at the Oak Ridge National Laboratory (ORNL). The commentor is referring to the Spallation Neutron Source (SNS) facility accelerator presently under construction at ORNL. The SNS is a spallation neutron source facility designed to provide a high-flux, short pulsed neutron source that would give the United States' scientific and industrial research communities a much more intense source of pulsed neutrons than is currently available. As indicated in Table 2-4, SNS was considered and dismissed as a candidate irradiation source to support the NI PEIS missions because the facility's full capacity has been dedicated to support planned mission by the primary user of the facility. Modification of the SNS to accommodate the NI PEIS missions would compromise the ability of the facility to meet the requirements of the SNS planned missions.

1707-15: The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected. FFTF restart would not impact the schedule or available funding for existing cleanup activities.

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USDOE decisions, including related decisions by the Office of Nuclear Energy that would add wastes to Hanford's existing burdens.

7.2. The Hanford site currently charges less than 50% of the marginal cost of disposal for newly generated wastes or offsite wastes shipped for disposal, and the Hanford Clean_Up budget picks up all the remaining costs (i.e., the already inadequate Hanford Clean_Up budget pays at least half of the marginal cost of \$1046 per cubic meter of Category 1 Low_Level Waste buried in Hanford's Low_Level Burial Grounds). The direct impact of waste additions from non_cleanup work must be fully disclosed, along with the life cycle costs and cumulative impacts from other USDOE proposed waste additions to Hanford.

7.3. Of course, the environmental impacts (including cumulative risk increase from transport due to related decisions that are pending _ not just the transport increment of actions in covered in this PEIS) of waste additions to Hanford's soil column / vadose zone must be analyzed and disclosed. At this time, because USDOE has refused to follow the advice of its own Hanford Advisory Board to stop the addition of non_cleanup wastes to Hanford's Low_Level Burial Grounds and to investigate the vadose zone and groundwater for potential releases, USDOE can not adequately analyze and disclose the impacts of adding additional Low_Level radioactive wastes to these burial grounds. The same is true for the proposal that the wastes from FFTF and related operations would be disposed at the commercial Low_Level Waste Dump operated on the Hanford Nuclear Reservation pursuant to the Northwest Low_Level Waste Compact. That site is subject to a RCRA release investigation, which is pending and a separate EIS on its continued operation _ a fact that the PEIS and Waste Minimization Plan failed to disclose. The cumulative impacts of all waste additions to Hanford's soil column / vadose zone and total potential load of contaminants reaching groundwater _ whether from the commercial site or the USDOE operated site _ must be considered in this PEIS. The Office of Nuclear Energy illegally attempts to avoid this analysis by claiming a preference (illegal and violative of USDOE policy, including the Department's Offsite Commercial Disposal

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DOE assessed the cumulative impacts of the proposed Hanford alternatives in Section 4.8 by combining the impacts of other present, and reasonably foreseeable Hanford Site activities, including the impacts of waste management.

DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This Agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Public meetings were held on this formal milestone change. The proposed actions delineated in the PEIS would not have an impact on Hanford cleanup activities. DOE remains committed to the cleanup mission at Hanford.

The Hanford Site funding maintains the burial grounds in a ready to serve configuration. Emplacement costs are borne by the generator. Any waste received in the execution year from offsite generators reduces the Hanford Site allocation to disposal.

Closure costs for the burial grounds are borne by Hanford. As it is unknown what sort of cap will be placed on the burial grounds, there is no detailed estimate to provide.

Forecasted volumes of wastes planned to be received are on the internet at http://www.hanford.gov/docs/ep0918/sw_navil.htm

1707-16: The Cost Report is not biased in favor of FFTF. The Cost Report was structured to clearly identify the implementation costs of the various alternatives so the Secretary of Energy would have this information along with other data for consideration. For Alternatives 2 through 5, deactivation of FFTF is part of the implementation cost for these alternatives. In the same manner that HFIR and ATR

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Policy) for using an undisclosed commercial site for burial. However, the only theoretically legally available site would be right back on the Hanford Nuclear Reservation.

7.4. Pending related decisions that would result in additional burial of wastes in Hanford's soils must be disclosed and the cumulative impacts considered, including long_term impacts on groundwater and the Columbia River. It is not legally adequate to state that Hanford has capacity (as in land area available for disposal) for the wastes that are proposed to be generated by this action(s). The Low_Level Burial Grounds have operated in violation of Washington State's Dangerous Waste laws, illegally burying hazardous wastes barred from land disposal within the past five years. There has been no investigation of the Burial Grounds, which are formally considered to be illegal dangerous waste soil disposal sites that lack liners, vadose zone monitoring, leachate collection systems, etc...

7.5. The PEIS fails to consider cumulative impacts across the board, but especially in regard to related pending actions to import more waste to Hanford and bury or store more wastes at Hanford. The PEIS is required to consider impacts from "actions which have relevant similarities, such as common timing, impacts...media...in the same general location." 40CFR1502.4 (c). All proposals to add non_ Hanford cleanup wastes to Hanford's soil or storage facilities fall into this category of cumulative impacts of related decisions.

7.6. USDOE claims that it has all the money it needs for funding the restart of the FFTF reactor on a fast track, so it does not include continued costs for standby and maintenance (at \$40 million per year) over any stretched out period in the costs for restart. However, USDOE claims that because it lacks the money to meet its legal obligation to shutdown FFTF, it will add \$80 million to the deactivation costs over two years for continued maintenance _ artificially inflating the cost of shutdown to \$218 million.

7.7. The PEIS fails to even disclose chemical or radioactive hazards of projected waste streams. E.g: Not all "Low_Level" wastes are low radioactivity. Many "mixed wastes" are barred from disposal in landfills in Washington (or elsewhere if generated in Washington). The PEIS and Waste Minimization Report fail to disclose how they

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deactivation costs are not included for Alternative 2, the FFTF deactivation costs are not included in Alternative 1. The Cost Report correctly assigns costs in the alternative evaluations.

The commentor's reference to DOE's standing obligations under the Tri-Party Agreement (TPA) is not correct. In October 1997, a tentative agreement was reached among the U.S. EPA, Washington State Department of Ecology, and DOE Richland Operations (DOE RL) to delete the FFTF's M-81 milestones (for both standby and transition activities) from the TPA. This followed the January 1997 decision to place FFTF in standby. This Class I TPA modification was the specific focus of the TPA-required public review and comment period, which ran from November 24, 1997, to February 20, 1998. As a result of comments from the public, the milestones were placed in abeyance (temporary suspension), as opposed to being deleted, until such time as a decision is made by DOE regarding the future of FFTF. In August 1999, DOE-RL, Washington State Department of Ecology, and the U.S. EPA signed Tri-Party Agreement Change No. M-81-98-01 agreeing to the abeyance of FFTF's M-81-00 series milestones. Should the Secretary of Energy decide to return FFTF to operation, the TPA signatories have agreed that the aforementioned milestones will be considered deleted. Should the Secretary of Energy decide to permanently shut down FFTF, the signatories have agreed to either negotiate a new FFTF TPA transition milestone series within 120 days of receipt of DOE RL's proposed changes or allow reinstatement of the M-81 milestones if the 120-day timeframe is not met.

Clean-up cost allocation is addressed in the response to 1707-15.

1707-17: The 300 Area Revitalization Plan provides for continued multi program R&D operations in the 300 Area, including operation of various laboratories, office facilities, and services. It also provides for consolidation (but not complete elimination) of radiological operations, with support for Hanford Site facility transition and environmental restoration efforts. The plan does not require closure of the 325 and 306-E buildings as long as they are needed for active research projects. Operation of these facilities would not violate any existing agreements between DOE and stakeholders or other legal obligations,

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would be treated, and where. A site specific EIS will legally be required to follow this PEIS to disclose and consider these types of impacts _ after disclosing the nature of the wastes. In regard to costs, USDOE has totally failed to disclose the waste, required treatments, and disposal sites _ much less disclose in the cost estimate for restarting FFTF what the costs will be from storing, treating and disposing of the wastes from startup of FFTF and Plutonium / isotope processing at Hanford.

8. Processing Plutonium 238 at Hanford (whether at FMEF or elsewhere) does create liquid "high activity waste" that has to be stored in a tank and vitrified _ just like liquid High_Level Nuclear Waste!!! The Office of Nuclear Energy is just calling it something different to try to escape our criticism. The PEIS must fully disclose where, how and when these wastes will be stored, treated and disposed. Incredibly, the PEIS fails to disclose any of this. Nor is it legally adequate to claim it is disclosed in a separate "Waste Minimization Report", which was not available for public review. (in any event it is legally required to disclose this in the one document, the PEIS). The PEIS fails to disclose the following:

8.2. The cumulative impacts from adding any additional high activity or liquid High_Level Nuclear Wastes to Hanford's existing non_compliant tank farm system (including the cumulative risks of waste transfers) must be disclosed 8.3. The cumulative impacts of adding additional high activity or High_Level Nuclear Wastes to the total amount of waste requiring vitrification and long term storage at Hanford (including disclosure of the storage costs, and, if the waste were to be sent to the proposed and inadequately sized Yucca Mountain Repository, the full costs of disposal).

8.4. The illegality of the proposed long_term storage of newly created wastes in tanks in FMEF (see Waste Minimization Plan) with no treatment path, and the improbability of having such storage permitted.

8.5. The environmental impacts of displacing existing wastes in Hanford's High_Level Nuclear Waste tanks from treatment in the vitrification plant, if the newly created wastes are to be treated there.

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nor would it affect ongoing or planned environmental restoration and facility transition activities.

The "Done in a Decade" (<http://www.bhi-erc.com/library/doerl/r19922.pdf>) plan addresses the shoreline and 300 Area and is consistent with the 300 Area Revitalization Plan (<http://www.hanford.gov/docs/rl-2000-62/>).

1707-18: The comment is incorrect. If DOE decides to use buildings 325 and 306 for the missions stated in the PEIS, the Office of Nuclear Energy, Science and Technology (NE) would fund the annual operational cost of those facilities, thereby having no impacts on funding for Hanford cleanup.

1707-19: DOE notes with the commentor's view. However, the existing Pacific Northwest National Laboratory (PNNL) contract (DE-AC06-76RL01830, Modification M255) with DOE has a provision C-3.h which states that if the decision is made to restart the FFTF for production and/or testing mission, then startup and future operational responsibilities may be assigned to the Contractor by the DOE, including the direct incorporation of the FFTF facility activities and staff as part of the Laboratory under this Contract. That provision is solely at the discretion of the DOE. At no time did, as the commentor states, Battelle as the operator of PNNL propose or "pitch" "that a benefit would be its ability to use its administrative and overhead accounts to improperly subsidize FFTF standby."

1707-20: The Cost Report is not biased in favor of FFTF. A separate Cost Report was prepared to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the range of alternatives presented in the NI PEIS. The information provided in the report is not required by NEPA and CEQ regulations to be included in the NI PEIS. The Cost Report was mailed to interested parties on August 24, 2000 and made available on the NE website (<http://www.nuclear.gov>) and in the public reading rooms. For information purposes, about 730 people were mailed the Cost Report. DOE has provided a summary of the Cost Report in this Final NI PEIS. These cost estimates are accurate based on currently envisioned needs and contingencies, as appropriate, including those for Alternative 1 options and permanent deactivation of FFTF.

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8.6. The environmental impacts from creation of the new high level nuclear wastes / high activity wastes if Hanford does not have a vitrification plant built and operating within a decade or 15 years, or even a lifetime.

8.7. The PEIS (and cost report) fail to disclose the cost of disposal of the vitrified waste produced from the operations proposed for FMEF or elsewhere at Hanford which create liquid High_Level Nuclear Wastes / high activity wastes. That cost should be consistent with USDOE's costs used in prior Hanford High_Level Nuclear Waste Tank Waste Remediation System EIS. The prorata cost of building the vitrification capacity and long term storage and monitoring costs must also be disclosed. These add millions of dollars to the cost estimate for FFTF and must be disclosed.

9. To avoid our criticism that FFTF and Plutonium and medical isotope production wastes would be harmful to Hanford Clean_Up efforts, Office of Nuclear Energy claims that they will send the wastes to commercial disposal sites, instead of to Hanford. They claimed to be unaware of the DOE's Commercial Waste Disposal Policy, which Senator Wyden, Congressman Smith and the States of Oregon and Washington worked so hard to protect two years ago. That policy says USDOE should not send waste to commercial disposal sites except under the most unusual circumstances. The Energy Secretary made strong commitments to Congress regarding this policy being preserved.

* USDOE personnel have also claimed that they could say the wastes would not be stored "at Hanford" because FFTF would not be "at Hanford" any longer if it is restarted. We doubt that this claim will pass the laugh test for the Secretary or for a federal court.

10. The PEIS fails to analyze safety in event of accidents or chemical/radiation releases based on actual likely public exposure and actual current conditions, including public access to the areas proposed for nuclear operations.

10.2. E.g: in calculating whether ERPG (emergency guidelines for acceptable levels of public or worker exposure in event of accident) limits will be violated for chemical releases at FMEF, the PEIS assumes that the nearest member of the public is either 4.4 miles or 4.5 miles distant. In fact, USDOE has relaxed access restrictions

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DOE assumes that the commentor's reference to new accelerator construction concerns the Isotope Production Facility (IPF) at Los Alamos National Laboratory. This facility produces radioisotopes using the Los Alamos Neutron Science Center's (LANSCE) half-mile accelerator that delivers medium-energy protons. Among other isotopes, the IPF's three major products include germanium-68, strontium-82, and sodium-22. As a result of changing DOE missions, the production of radioisotopes at target area "A" of the LANSCE has been rendered inoperable. In order to replace the level of production lost due to this change, DOE is completing a new and more efficient IPF that would allow DOE to continue to produce most of these same isotopes in an effort to meet existing demand. As addressed in Section 2.6.1 of the NI PEIS, IPF at LANSCE was considered but dismissed from further evaluation because, although it can be used in tandem with the Brookhaven Linac Isotope Producer (BLIP) located at the Brookhaven National Laboratory to supply near term isotope requirements, it is unlikely that these facilities could accomplish reliable, increased isotope production at the level needed to support projected needs. Therefore, this facility was considered but dismissed from further evaluation as shown in Table 2-4 of the Draft NI PEIS.

As noted by the commentor, waste management costs were not presented in the Cost Report. Neither NEPA nor the CEQ regulations for implementing NEPA require the inclusion of a cost analysis, including for waste generation. Wastes would be generated by all alternatives and all sites including for the implementation of Alternative 1, Restart FFTF at Hanford, which makes these costs not a particularly useful discriminator among the alternatives considered. Also, the ultimate disposition of some of these wastes in terms of acceptable waste form, disposal site (onsite or offsite commercial, etc.), etc. have yet to be determined. This adds an additional uncertainty to any attempt to quantify waste costs, thus, making any estimates highly presumptive and speculative at best.

The use of proposed alternative facilities associated with reprocessing of neptunium-237 targets would have no impact on schedules or available funding for high-level radioactive waste programs at either Hanford or the INEEL sites. At INEEL the tanks would not be used

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and even invites the public to come to the gate of the FFTF reactor, and has even staged bicycle races and public events from the FFTF reactor parking lot. The PEIS fails to disclose and consider the impacts of restricting access back to the site boundary (and the costs of controlling such access now that the site has allowed open, unescorted public access for several years). The public is currently allowed closer than the 500 meters or 2000 meters, at which distance the public would be exposed to chemical releases above what USDOE considers acceptable. However, the PEIS fails to disclose either current actual conditions allowing public access and, therefore, exposure, or disclose that DOE's own risk guidelines would be violated for chemical release accidents deemed to be quite possible.

10.3. Unacceptable levels of public health PEIS at 4_148, 149 and 4_83 harm occur from a postulated nitric oxide release which "reach(es) the level of concern" at 500 meters and 2000 meters, depending on weather.

10.4. The proposed operations in the 300 Area (for 325 and 306) can not meet ERPG guidelines under current or USDOE's officially proposed public access conditions.

10.5. USDOE's calculations for dose are based on unsupportable (and nonexistent plans for) claims that the public will be evacuated and crops interdicted in order to keep doses from drops of FFTF spent fuel assemblies and casks, Plutonium 238 targets or medical isotope targets within USDOE's own overly weak and unprotective guidelines. SEE: "Evaluation of Selected Ex_Reactor Accidents Related to The Tritium and Medical Isotope Production Missions at the Fast Flux Test Facility". The PEIS failed to use available data on frequency of postulated accidents and potential impacts. The PEIS fails to consider the potential for drop or releases from medical isotope targets transported to the 300 Area, where there would be unlimited public access in the Area and along the River.

10.6. Accidents with a likelihood of occurrence as high as one in one hundred per operational year, and a potential for a probability of occurrence as high as 30% over 35 years of operations, include Iodine 125 Target damage, solid waste cask drop, etc.... Neither the consequences for the exposed individuals, or the

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although certain facilities at the Idaho Nuclear Technology Engineering Center (INTEC) would be used to treat the wastes resulting from processing the irradiated targets. These are reliable systems that would process a maximum of 1,050 cubic meters of low level radioactive waste over the 35-year nuclear infrastructure operational period. The higher activity waste would be treated as a solid form via a stand-alone vitrification system, separate from any tank waste treatment system. The costs for this vitrification facility was included in the cost analysis for this NI PEIS. At Hanford, the existing high-level radioactive waste facilities would also not be used, and as analyzed in the PEIS, no existing or planned high-level radioactive waste facilities would be used to treat the wastes resulting from processing the irradiated targets.

1707-21: Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

DOE Order 435.1 "Waste Management" gives responsibility to the DOE Field Element Managers to approve exemptions for use of non DOE facilities for the storage, treatment or disposal of DOE radioactive waste based on certain requirements. One of these requirements is that the facility must have the necessary permits, licenses, and approvals for the specific waste.

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frequency, are disclosed in the PEIS. Other potentially devastating accidents include a large sodium spill and burn.

10.7. For many of these accidents, USDOE makes the ridiculous assumption that the "receptor is assumed to be evacuated after 2 hours" _ despite the lack of a track record of notification of accidents by Hanford management, the lack of an evacuation plan adequate to meet the assumption, and the failure to consider that the public includes people far closer than the postulated site boundary. Id at 50.

10.8. The PEIS fails to disclose the extensive accident history at FFTF and the growth in frequency of events caused by unanticipated problems, or "The Procedure was intentionally not used." SEE WHC_SP_0432.

10.9. The PEIS fails to consider and disclose that "severe accidents in FFTF have not been assessed using state of the art methods developed since the reactor began operation. ... (E.g.): uncertainties in post_accident heat removal, in the evolution of fission products from the molten core debris..." National Research Council. National Academy Press, "Safety Issues at the DOE Test and Research Reactors", 1988 at 67. The FSAR, on which PEIS claims are based, was based on oxide fuel, not a metal fuel as used. A hydrogen explosion or long term pressurization "might result in containment rupture" concluded the National Research Council in 1988. As a result, modifications theoretically will vent radioactive gases building up in the reactor _ which is not disclosed.

11. The proposal for FFTF restart, and alternative one in the PEIS, unconscionably and illegally rely on use of contaminated buildings in Hanford's 300 Area for isotope processing.

11.2. Both the 325 and 306 Buildings are contaminated with Beryllium _ which the PEIS fails to disclose.

11.3. The PEIS must disclose the risks to worker health and safety from starting new, long_term operations in the 325 and 306 buildings.

11.4. The PEIS fails to disclose that use of the 306 and 325 buildings for commercial isotope vendor support will violate CERCLA requirements that forbid the reuse or lease of facilities to

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As discussed in DOE's "Commercial Disposal Policy Analysis for Low-Level and Mixed Low-Level Wastes" dated March 9, 1999, there are three commercial low-level radioactive waste disposal facilities (i.e., Envirocare of Utah; Barnwell, South Carolina; and US Ecology, Richland, Washington) which are currently operating and licensed to received low-level radioactive waste. Envirocare of Utah also has a permit to receive RCRA hazardous wastes. DOE has and is currently disposing of low-level radioactive waste and mixed low level radioactive waste at Envirocare of Utah and has sent low-level radioactive waste to Barnwell, South Carolina. In June 1995, US Ecology submitted an unsolicited proposal to DOE for the disposal of DOE waste at the US Ecology facility. In November 1995, the State of Washington informed US Ecology and DOE that the State would allow the disposal of DOE waste at the facility subject to certain conditions.

The trenches (i.e., Hanford Site's 200 Area's Low-Level Waste Burial Ground) are regulated by DOE under the Atomic Energy Act of 1954, as amended, and under DOE Order 435.1, Radioactive Waste Management. The 200 Area's Low-Level Burial Ground also contain the following three active permitted mixed waste trenches whereby mixed low-level waste is both stored and disposed of: (1) Trench 31 is a permitted, lined Subtitle C disposal trench that is currently utilized for greater than 90-day storage of mixed low-level radioactive waste; (2) Trench 34 is permitted, lined Subtitle C disposal trench currently utilized for the disposal of mixed low-level radioactive waste that has been treated and is compliant with Land Disposal restrictions; and (3) Trench 94 is a permitted, unlined disposal trench utilized for the disposal of decommissioned naval reactor components. Use of Trench 94 for naval reactor compartments is authorized under a special exemption from the State of Washington Department of Ecology (Ecology). Currently, the Low-Level Burial Ground has a Part A Permit approved by Ecology under the State of Washington Dangerous Waste Regulations, State of Washington Administrative Code (WAC) 173-303, and, as such, is an interim status treatment, storage, and disposal (TSD) unit under the Resource Conservation and Recovery Act (RCRA). The permitted active and future mixed waste units of the Low-Level Burial Ground meet all regulatory requirements of WAC 173-303 and RCRA and will be incorporated into the Hanford Site RCRA Facility

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private entities while the facility and area are still contaminated. Pursuant to CERCLA, EPA has a duty to preclude the proposed uses due to their interference with pending CERCLA cleanup of the 300 Area.

11.5. The contamination in the 325 and 306 Buildings, and their contribution to surrounding contamination, is not disclosed:

* As early as 1979, USDOE documents reveal that USDOE knew that all sewer lines from the 306 building are likely to be contaminated and sources of release to the environment. Continued use of these sewers is not legal or conscionable. The PEIS fails to disclose this contamination.

* Multiple fires and leaks throughout 306 caused contamination levels at 20,000 to 80,000 cpm;

* In 1987, contamination was spread up to 100,000 disintegrations per minute throughout the building;

* There have been repeated instances of windblown contamination outside 306 from unknown sources;

* Sanitary drains and sewers from 325 are suspected to be contaminated with radioactive Mercury and Uranium 235;

* In 1977, Plutonium 238, 239 and 240 were spread outside a glovebox at up to 120,000 dpm;

* Plutonium "inadvertently left in a low level waste collection area" resulted in Plutonium spread of 5 million disintegrations per minute (dpm). Not only does the PEIS fail to disclose this, it fails to analyze the health threats from 35 years of work in these facilities, and the harm to cleanup efforts from continued operations. The PEIS and costs for Alternative one must reveal the costs of this alternative to include new facilities, and reveal their impacts. The PEIS fails to reveal known fire risks, risks of chemical usage, and the fact that if similar accidents have happened before from handling Plutonium or similar chemicals, they must be considered as "likely" to recur.

The PEIS fails to disclose that other USDOE documents reveal a catastrophic radiation dose from very real risks of fires in the 325 building. USDOE's budget and risk data sheets reveal risks of 91 Rem to onsite persons (which could be the public and children, under USDOE's current 300 Area proposal). This is 670 times

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Part B Permit and will operate under final status regulations. In early June 2000, a working draft of the Hanford Site RCRA Facility Part B Permit application was submitted to Ecology.

Cumulative impacts, including waste impacts, are addressed in Section 4.8 of the NI PEIS.

1707-22: The estimates in the Cost Report assume that a decision is made at the end of calendar year 2000 and include the total costs required to restart the FFTF (Alternative 1) and the total costs to permanently deactivate FFTF (Alternatives 2-5). In both cases, implementation of the Record of Decision (ROD) commences immediately after the ROD announcement and continues until the respective objectives are achieved.

1707-23: Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

Costs are not within the scope of the PEIS. However, costs are considered for the Record of Decision.

The DOE Manual 435.1. Radioactive Waste Management defines high-level radioactive waste as "the highly radioactive waste material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid material

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higher than the dose to the public claimed in the PEIS as a maximum for the public from a fire. See Tables 4_28 and 31. Under NRC rules, and even under USDOE's weak guidelines, the calculated dose to onsite persons _ which will include the public (although the PEIS fails to disclose this) _ exceeds allowable limits and the nuclear processing operations proposed for the 306 and 325 buildings would not be allowable.

12. Plutonium 238 processing will involve the same chemical processes _ with an undisclosed risk of explosion and releases _ as the chemical process used previously for Pu239 in Hanford's Plutonium Finishing Plant (PFP) and elsewhere in the USDOE complex and other locations throughout the world.

12.2. This risk includes the risk of explosion (in DOE parlance, self_sustaining exothermic reaction) from chemicals similar to "red oils"; i.e., heating of Plutonium Nitrate solutions mixed with Tri_Butyl Phosphphate, solvents and with impurities present which may serve as an oxidizer. When the risk of such an explosion was first disclosed by Heart of America NW to USDOE regarding the proposed restart of the PFP, USDOE claimed it did not exist _ but later instituted administrative controls, declared an unresolved safety question and admitted the issue had to be fully disclosed and considered in an EIS.

12.3. Pu238 operations will also utilize the chemical hydroxylamine nitrate _ the same chemical that exploded inside PFP in 1997, and blew holes in the roof and caused a relase to the environment which harmed the health of workers. The PEIS fails to disclose this and consider the likelihood of similar future explosions _ including from Hanford workers' repeated failure to follow safety rules and _ at PFP _ a history of deliberately violating procedures. The likelihood that procedures will be violated at Hanford _ especially so long as USDOE claims FFTF and related processing operations are exempt from external nuclear safety regulation _ must be fully considered. So must the cumulative risks and impacts of ongoing chemical processing and nuclear operations given the site's history and existing problems (i.e._ lack of a sitewide chemical management plan that includes wastes; history of violating Emergency Planning and Community Right to Know requirements).

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derived from such liquid waste that contains fission products in sufficient concentrations; and other highly radioactive material that is determined, consistent with existing law, to require permanent isolation.” DOE has prepared an implementation guide to DOE M 435.1 to assist in implementing the requirements contained in that manual. For this particular “requirement,” the definition of high-level radioactive waste, the guide is intended to facilitate the classification of indefinite waste as to whether or not they are high-level radioactive waste. It is recognized that the definition of high-level radioactive waste is not precise and is essentially a source-based definition that also alludes to concentrations of a given waste stream. Page II-8 of this guide notes that “For the purpose of managing high level waste under DOE M 435.1-1 [sic], spent nuclear fuel includes spent driver elements and/or irradiated target elements that contain transuranium elements.” This statement was included in the guide because the concentrations of long-lived isotopes are likely to be somewhat high during reprocessing and it also meets the source based definition. As a result of reviewing this guide and to address the comments raised, DOE is considering whether the waste from processing of irradiated neptunium-237 targets should be classified as high-level radioactive waste and not transuranic waste. As a result, the Waste Management sections (i.e., Sections 4.3.1.1.13; 4.3.2.1.13; 4.3.3.1.13; and 4.4.3.1.13) of this NI PEIS have been revised to reflect this different classification from what was assumed in the draft NI PEIS. As discussed in these revised sections, irrespective of how the waste is classified (i.e., transuranic or high-level radioactive waste), the composition and characteristics are the same and the waste management (i.e., treatment and onsite storage) for this NI PEIS would be the same. In addition, even if the waste is managed as high-level radioactive waste it would have no impact on the existing high-level radioactive waste management infrastructure (e.g., high-level waste storage tanks), since the high-activity waste from processing of the targets would be initially stored and vitrified within the processing facility (i.e., FMEF, REDC, or FDPF).

1707-24: In accordance with DOE Order 435.1, “Waste Management,” radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. If DOE capabilities are not practical or cost effective, exemptions may be approved to allow use

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13. USDOE has failed to consider the reasonable alternative of honoring its own commitment to have operation of the FFTF reactor and related nuclear processing operations subject to independent, external nuclear safety regulation and licensing by the Nuclear Regulatory Commission. In 1996, the Secretary of Energy committed to Congress, in a highly publicized statement, that within five years all nuclear energy research facilities of the Department would be fully subject to such regulation. She used the word "commit".

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13.2. The PEIS must disclose the difference in standards that would be applied, and processes used, if USDOE honored its commitment to have FFTF and related processing operations subject to external regulation. The environmental benefits of external regulation were noted by the Secretary, and USDOE can not claim now that this is either an unreasonable alternative or that there are no significant differences between its continued use of its own standards and self_oversight and the standards and regulatory oversight of the NRC.

Failure to cure these massive deficiencies will inevitably result in legal action if the Department chooses to pursue restart of the FFTF reactor.

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The deficiencies in disclosure in this PEIS will require a site specific EIS to be conducted, if USDOE pursues restart of FFTF and Plutonium / isotope processing at Hanford. A site specific EIS will be needed to disclose where USDOE _ and how _ plans to treat, store and dispose of wastes. Similarly, a site specific EIS is necessary to disclose the risks from using the proposed contaminated facilities, and the cumulative impacts on the region and on Hanford Clean_Up from FFTF restart. Of course the claims for costs and timeline of restart fail to include the \$40 million per year from additional years of study (and from a successful challenge of this PEIS as well). USDOE should close FFTF and honor its commitment to use the funds saved from shutdown of FFTF for Hanford Celan_Up.

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of non-DOE facilities for the storage, treatment, or disposal of DOE radioactive waste. DOE Order 435.1 gives responsibility to the DOE Field Element Managers to approve exemptions for use of non-DOE facilities for the storage, treatment or disposal of DOE radioactive waste based on certain requirements. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. DOE has no plans to disassociate the FFTF from the Hanford Site.

1707-25: The accident analysis presented in the NI PEIS provides a basis for making comparisons between the consequences and risks of accidents associated with facilities identified in each of the alternatives and options presented in the NI PEIS. The accident analysis evaluated the consequences and risks to maximally exposed individuals, both workers and members of the public, during postulated accident scenarios. It would not be necessary to conduct further analyses to determine the specific consequences and risks to an individual member of the public located closer to the source of an accident than that already evaluated in the NI PEIS. Any individual member of the public located in close proximity, regardless of distance, would be expected to experience consequences of a postulated accident that are more severe than the consequences to the general public. In fact, the closer an individual gets to the accident the more severe the consequence. However, the probability that a member of the public would be in close proximity to the facility would be relatively low and the associated risk to that individual would be bounded by the MEI risk.

The NI PEIS evaluates potential health effects, in terms of risks and consequences, resulting from a complete spectrum of accidents for FFTF, RPL/306E, and FMEF. The spectrum of radiological and hazardous accidents considered for the NI PEIS includes irradiation and processing facility related accidents, including accidents related to medical isotope target damage, cask drops, and processing accidents. Accident frequencies were derived from current sources, including the current FFTF Final Safety Analysis Report and RPL Safety Analysis Report. The consequences and risks to the maximally

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Notes: a)Proposals referenced orally or in the Waste Minimization Plan to utilize commercial disposal sites (sites which were, improperly, not disclosed) for disposal of FFTF and Plutonium / Isotope processing wastes generated at Hanford violate USDOE's own "Requirement on Use of Non_DOE Facilities for Low_Level Waste and Mixed Low_Level Waste"; 64 FR 12161. "DOE will continue its policy of disposing its LLW and MLLW at the site at which it is generated... or...at another DOE disposal facility." None of the impacts of violating this policy were considered in the Draft PEIS _ nor was the existence of the Policy revealed. Impacts of violating the policy. The cumulative impact of the equivalent of two additional years of operation of either the USDOE Low_Level Burial Grounds or the commercial site at Hanford is significant and must be fully disclosed and analyzed. The 5,000 cubic meters of additional Low_Level Waste that the proposals would generate at Hanford are roughly equivalent to the full continued operation of either of these two dumpsites for an additional two years. b) Safety: PEIS repeatedly references GENII, 1988, for source of dose calculations. However, USDOE declared Unusual Occurrence in 1989 when it was discovered that the software had wind directions off by 180 degrees _resulting in dose calculations off by a factor of two. If 1988 version was relied upon, all dose calculations must be redone. In any event, they must be redone with appropriate exposure scenarios for public.

Note to USDOE for the official record: This version of our comments replaces the version mailed by USPO on September 15, 2000. Please utilize the attachments that were mailed with that set of comments.

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exposed individual, surrounding population, non-involved worker, and involved worker are presented in Sections 4.3.1.1.10 and I.1.7 of the NI PEIS.

All of the proposed medical isotope targets were screened for each postulated accident to determine which isotope would result in the highest consequences. The I-125 target resulted in the highest consequences during a postulated fire accident at a processing facility. The I-125 fire analysis is presented in Section I.

The FFTF, RPL/306E, and FMEF accident analyses in the NI PEIS conservatively assumed no evacuation of the surrounding population. Individual members of the public located onsite concurrent with a postulated accident were assumed to be exposed to the hazardous release for up to two hours. The analyses did assume that crops and foods would be condemned or interdicted in accordance with EPA Protective Action Guides. The potential for drops or releases from spent fuel assemblies, plutonium-238 targets, and medical isotope targets transported within the Hanford Site are addressed in Section J 5.3 of the NI PEIS.

The FFTF operated safely from 1982 until 1990 when it was placed in standby. There have been no serious nuclear-related accidents or accidental releases of hazardous or radioactive materials at FFTF during its lifetime. Section 3.4.9.4 of the NI PEIS has been updated to provide information specific to FFTF's accident history.

The methodologies used for the respective accident analyses were developed to model the radiological consequences of nuclear facility accidents and are considered applicable to the analysis of accidents associated with the production of plutonium-238 and other proposed isotopes. The severe reactor accident in the NI PEIS is based on the most current available information. The reactor fuels (MOX and HEU) proposed for the FFTF are oxide forms. If a decision is made to restart FFTF, the status and condition of all safety systems will be assessed and appropriate actions taken, as necessary, prior to startup. This includes updating the Final Safety Analysis Report and completing a Probabilistic Risk Analysis using state-of-the art methodologies.

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1707-26: There was no proposal to restart FFTF in the Draft NI PEIS. Alternative 1, Restart FFTF, is one of a range of reasonable alternatives evaluated for environmental impacts and for accomplishing the objectives described in Section 1.2 of Volume 1. At the time that the Draft NI PEIS was published, no preferred alternative had been selected. None of the alternatives examined in the NI PEIS is illegal or would require illegal activities.

Use of the 306 and 325 facilities for the PEIS missions would be consistent with their historical and planned uses at Hanford. The facilities were designed and constructed for the types of activities that would be conducted there if they were chosen to implement the PEIS missions. Buildings 325 and 306-E are currently used for activities that are not associated with the nuclear infrastructure alternatives described in Section 2.5 of Volume 1. According to the Hanford Beryllium Fact Sheet (www.hanford.gov/safety/beryllium/fctsheet306-e.htm) Building 306-E contains beryllium in Rooms 165 and 180 including the interior of the exhaust ducts that service these rooms, and the interior of the beryllium wire/component storage cabinet in Bay 2. But surveys conducted in 1999 showed levels were below method detection limits. In Building 325, the risk of beryllium exposure has been identified as low. Small risks are associated with work activities that would expose interior areas of older ductwork that may have residual beryllium contamination (Hanford Beryllium Fact Sheet -www.hanford.gov/safety/beryllium/fctsheet/325.htm). The PEIS missions would not be expected to result in worker exposures to beryllium, although some areas of the facilities contain residual beryllium contamination. If work in contaminated areas of the facilities were necessary, appropriate protective measures would be used to prevent worker exposures.

Worker safety (radiological protection) is a key element of the DOE's Radiological Health and Safety Policy (DOE P 441.1, April 26 1996) This policy states in part that DOE facilities must "conduct radiological operations in a manner that controls the spread of radioactive materials and reduces exposure to the workforce and the general public and that utilizes a process that seeks exposure levels as low as reasonably achievable." Each DOE site, including Hanford, is required to implement a radiological control program with the intent to

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meet this policy goal. Based on the assessment of worker health impacts for all of the alternatives and options presented in the NI PEIS that make use of facilities in the 300 Area at Hanford, the most likely impact of the use of these facilities is no increase in cancer fatalities among the facility workers. This assessment is based on operational data collected at the facilities during recent operation. For example in Alternative 1, Option 1, target irradiation and processing occur FFTF and the RPL. As shown in Section 4.3.1.19 of the PEIS, no fatal cancers would be expected to result from implementation of the alternative.

- 1707-27:** The 300 Area Revitalization Plan, which can be found at <http://www.bhi-erc.com/library/doerl/r199-22.pdf>, provides for continued multi program R&D operations in the 300 Area, including operation of various laboratories, office facilities, and services. It also provides for consolidation (but not complete elimination) of radiological operations, with support for Hanford Site facility transition and environmental restoration efforts. The plan does not require closure of the 325 and 306-E buildings as long as they are needed for active research projects. Operation of these facilities would not violate any existing agreements between DOE and stakeholders or other legal obligations, nor would it affect ongoing or planned environmental restoration and facility transition activities.

If work is planned for any of the contaminated areas (chemical or radiological) in these facilities, the area would be cleaned up or work would be conducted with appropriate protective measures in place (e.g., protective clothing, respiratory protection, administrative controls). In any case, the planned activities would comply with all regulatory standards for exposure of workers to hazardous or radioactive materials.

The NI PEIS evaluates occupational and public health and safety for the proposed activities during routine operations, accidents, and transportation for each of the alternatives (e.g., Sections 4.3.1.1.9, 4.3.1.1.10, and 4.3.1.1.11 for the FFTF restart alternative, Option 1).

- 1707-28:** It is difficult to address the commentor's concerns as no specific citations were provided. Volume 1, Chapter 3 (Section 3.4.9.4) provides information regarding the accident history at Hanford. This

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discussion specifically identifies events that have occurred more recently than those brought forth in this comment. Specific documentation of the alleged contamination events could not be found after a review of DOE records dating back to 1973. However, records of similar events were reviewed and, in all cases, the contaminated areas were cleaned and there was no indication of significant contamination of staff working in or near these areas. The current impact of these earlier events would be seen in the site data collected for the site environmental reports, both for exposure to the public and for worker exposure. Information from the Hanford Site Environmental Report for 1998 and the Occupational Radiation Exposure, 1998 Report (DOE/EH-0608) has been presented in Chapter 3 for the Hanford site.

This PEIS has provided an estimate of the incremental potential human health impacts associated with each of the alternatives proposed (including the use of Area 300 facilities) for the production of isotopes for medical uses and research and development. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. In all cases, the analysis shows that the most likely impacts from the use of the Area 300 facilities are no additional cancer fatalities among the population surrounding the Hanford facilities. [See for example Section 4.3.1.1.9 and 4.3.2.1.9 and the summary Tables in chapter 2 of Volume 1 of the NI PEIS.]

Worker safety (radiological protection) is a key element of the DOE's Radiological Health and Safety Policy (DOE P 441.1, April 26, 1996) This policy states in part that DOE facilities must "conduct radiological operations in a manner that controls the spread of radioactive materials and reduces exposure to the workforce and the general public and that utilizes a process that seeks exposure levels as low as reasonably achievable." Each DOE site, including Hanford, is required to implement a radiological control program with the intent to meet this policy goal. Based on the assessment of worker health impacts for all of the alternatives and options that make use of Hanford facilities, the most likely impact of the use of these facilities is no increase in cancer fatalities among the facility workers. For example in Alternative 1 option 1, all of the activities (target irradiation and

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processing) occur at Hanford facilities, including Area 300 facilities. As shown in Sections 4.3.1.1.9 and 4.3.2.1.9, the expected consequences are less than one additional fatal cancer among the workforce; that is, no additional fatal cancers are expected.

The NI PEIS also provides information regarding 300 Area (and Hanford) water resources (i.e., surface water, process sewer system, groundwater) and the potential impacts from the proposed activities in sections 3.4.4. and 4.3.1.1.4, respectively. As discussed, there would be little or no measurable increase in water use to support target fabrication and processing in 300 Area, negligible changes in the quantity or quality of process and sanitary wastewater, and no radiological liquid effluent to the environment under normal operations. More specifically, operations at RPL would result in an increase of less than 1 percent in process waste water discharge and this would be from equipment washing of nonradiological target materials. Additionally, building 306-E would not provide support to NI PEIS activities involving radiological materials.

DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

1707-29: The NI PEIS considered plutonium-238, neptunium-237, medical isotopes, and all hazardous chemicals during processing and irradiation to arrive at a set of accidents whose risks and consequences bound the potential public and worker health and safety impacts of all potential accidents. The resulting risks and consequences for a currently operating processing facility, such as RPL, pertain to the proposed action and do not include the risks and consequences from non-infrastructure missions. Section I.1.4.2.1 specifically addresses previous fires at the Hanford Site.

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DOE notes the commentor's concern for potential explosions and release of materials. The solvent extraction process involving the use of tributyl phosphate in hydrocarbon to separate and produce plutonium nitrate solution has been used extensively for years in the United States as well as in Japan, England, Germany, etc. Under a combination of off-normal conditions, there can be a reaction between nitric acid or nitrates and tributyl phosphate degradation products at higher than normal operating temperatures. Such a reaction could only occur in a heated evaporator or concentrator if there is excess tributyl phosphate impurity or residual in the plutonium nitrate liquid. This scenario will be analyzed as a potential design basis accident in developing the safety authorization basis and associated technical safety requirements for the chemical processing option chosen by DOE.

- 1707-30:** On February 19, 1999, Secretary Bill Richardson sent a letter to the Senator John Warner, Chairman of the Committee on Armed Services to inform him of DOE's efforts in exploring a potential move toward the external regulation of DOE's nuclear facilities. Secretary Richardson reported that, based on DOE's analysis, many of the potential benefits that were expected from external regulation had not been demonstrated, and appear to be outweighed by associated costs and difficulties raised in the pilot projects. As a result, DOE had determined that submittal of legislation to exempt certain facilities from Departmental regulations was premature. It should be noted that FFTF meets all safety requirements established by DOE and that the DOE requirements are consistent with those established and applied by other regulatory agencies such as the Nuclear Regulatory Commission.
- 1707-31:** DOE notes the commentor's opposition to the restart of FFTF. DOE, as required by NEPA, CEQ and DOE Regulations, has fully described the environmental impacts associated with the alternatives described in Section 2.5 of Volume 1.
- 1707-32:** A site-specific EIS would not be required should Alternative 1 (Restart FFTF) be selected in the Record of Decision. This NI PEIS presents a thorough analysis of site-specific information on the environmental conditions prevailing at Hanford, that could potentially

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affect or be affected by the proposed actions, to include a comprehensive analysis of the associated environmental and health risks of implementing the proposed actions. Specifically, Chapter 4 of the NI PEIS discusses the proposed treatment, storage, and disposal of all wastes generated from the use of proposed Hanford facilities including FFTF (Sections 4.3.1.1.13 and 4.3.3.1.13); the public and occupational health risks from normal operations and postulated accidents associated with use of Hanford facilities (4.3.1.1.9, 4.3.1.1.10, 4.3.3.1.9, 4.3.3.1.10); and the cumulative impacts of waste management activities at the Hanford Site (Section 4.8.3.4). In compliance with NEPA, DOE analyzed each environmental resource area in a consistent, unbiased manner across all the alternatives to allow for a fair comparison among the various alternatives and among the candidate sites. The NI PEIS also considers previous NEPA analyses that bear on the decisions to be made including the Environmental Assessment for FFTF shutdown. No fundamental factors relating to purpose and need, the alternatives under consideration, or the associated environmental impact analyses have changed relative to the decisions to be made since the Draft NI PEIS was published. Therefore, all of the environmental information relevant to expanding civilian nuclear energy research and development and isotope production missions in the United States has been acquired and analyzed in the NI PEIS. The Cost Report did not include \$40 million per year for additional years of study because if FFTF restart is selected, implementation would be immediate.

- 1707-33:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 1707-34:** On March 11, 1999 (64 FR 12161), DOE announced its decision to continue "its current policy of relying on DOE waste disposal facilities and of using commercial (non-DOE) facilities by exemption when DOE disposal is not practical."

In accordance with DOE Order 435.1, "Waste Management," radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. If DOE capabilities are not practical or cost effective, exemptions may be approved to allow use of non-DOE facilities for the storage, treatment, or disposal of DOE radioactive waste. DOE Order 435.1 gives responsibility to the DOE

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Field Element Managers to approve exemptions for use of non-DOE facilities for the storage, treatment or disposal of DOE radioactive waste based on certain requirements. Section 4.3 of Volume 1 has been revised to clarify DOE's position on waste disposal.

Section 4.8 of the NI PEIS provides information on the cumulative impacts, including the cumulative amounts of waste generated at Hanford. This information has been revised from the draft to include capacities for the treatment, storage and disposal facilities at the Hanford Site. In reviewing this information, the cumulative waste generation for low-level radioactive waste is (existing site activities plus nuclear infrastructure) about 100,681 cubic meters over the 35 year nuclear infrastructure operations and low-level radioactive waste disposal capacity at Hanford is about 1,970,000 cubic meters.

1707-35: The 1988 reference to the GENII code is a reference to the documentation associated with the code, i.e., the code description and user's manual. The version of the code used in the analysis is Version 1.485 dated December 1990.

The appropriate exposure scenarios were used in the analysis of normal operation impacts. As stated in Appendix H, the plume exposure data is that recommended by the NRC in Reg Guide 1.109.

Commentor No. 1708: Margaret Macdonald Stewart

Ms. Colette Brown
DOE
Office of Space and Defense Power Systems (NE-50)
19901 German town Road,
Germantown, MD 20874-1290

18 September 2000

Dear Ms. Colette,

My name is Margaret Macdonald Stewart and the following are my comments on the Department of Energy's *Draft Programmatic Environmental Impact Statement for Accomplishing Expanded Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the role of the Fast Flux Test Facility (FFTF)* – otherwise known as the Infrastructure PEIS.

I find this document completely inadequate for its lack of substantiating evidence for the need for any additional infrastructure for the production of PU-238 for medical or research programs. And I am outraged about the total lack of cost and proliferation assessments in the EIS, which I understand is a violation of the National Environmental Policy Act (NEPA). The fact that both cost and proliferation documents were finally published and made available to the public *AFTER* public hearings clearly shows the DOE's "high regard" for both public comment and for non-proliferation issues. NOT.

Why is there no mention of what to do with the high-level waste that will be the end result of the PU-238 production process? Call it processing or reprocessing, or anything you choose, there will still be approximately 288,000 gallons of liquid high-level waste with no place to go in your EIS. Regardless of its name, it is still liquid and dangerously radioactive and is the most difficult of all nuclear waste to confine and isolate from the environment. Monstrous volumes of like liquids are the most serious and massive environmental problem in the DOE complex today, and yet this plan calls for even greater volumes to be added to at least one of the planet's most contaminated places. I am confused about priorities. Perhaps cleanup should be the plan.

I will not go into the cost analysis problem except to say that it should have been an integral part of the EIS, not an add-on. And it should have been publicly available *before* public hearings. Way to go, DOE, always thinking about the input from your # One business partner, the public. Again, I am confused about priorities.

The non-proliferation analysis should absolutely have been an integral part of the EIS and available with the EIS, not *after* public hearings were held. What is the problem here?? The administration in 1992 declared that the United States would no longer engage in reprocessing nuclear materials because of the proliferation risk and the wrong message it sends to other countries. Did I miss something here? Do we no longer care

Response to Commentor No. 1708

1708-1: DOE notes the commentor's opposition to expanding DOE's existing nuclear facility infrastructure. Consistent with its mandates under the Atomic Energy Act, DOE is proposing this expansion for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Plutonium-238 would not be used for medical or research programs; it would be used for NASA space exploration missions.

The NI PEIS provides an estimate of waste generation impacts associated with each of the alternatives proposed for the production of medical, industrial and research isotopes, plutonium-238, and nuclear research and development. Any additional wastes generated in support of these missions would be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. The proposed action would not have an impact on the cleanup missions at the candidate sites.

A separate Nuclear Infrastructure Nonproliferation Impacts Assessment was prepared to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. The information provided in the report is not required by NEPA and CEQ regulations to be included in the NI PEIS. For information purposes, the Nuclear Infrastructure Nonproliferation Impacts Assessment was mailed to approximately 730 interested parties on September 8, 2000 and made available on the NE website (<http://www.nuclear.gov>) and in the public reading rooms. DOE has provided a summary of the Nuclear Nonproliferation Impacts Assessment in the Final NI PEIS.

1708-1

1708-2

1708-3

1708-2

1708-4

**Commentor No. 1708: Margaret Macdonald Stewart
(Cont'd)**

about the security of the world by increasing the proliferation risks? And do we no longer care about sending that same message around the world – in an age when EVERYONE watches and listens to what the United States does and says? I've already mentioned the incredible environmental risks involved with this entire process. I am confused about the priorities.

The need for more PU-238 is never justified in this draft PEIS. We have been receiving PU-238 from Russia for 10 years or so at quite a good price, and they have plenty to sell. Canada is an excellent source of medical isotopes. Why does the United States suddenly need more than these two countries can offer? And NASA has said it does not need – emphasis on 'DOES NOT NEED' – additional PU-238 for its space needs. Is anyone out there listening? Again, I am confused about priorities.

Concerning the restart of the Fast Flux Test Facility at the Hanford Nuclear Reservation for this entire proposal is never justified. It is, however, quite blatantly the reason for this whole scheme. Interesting that DOE's own advisory panel said in an April 2000 report that the "FFTF will not be a viable source of [medical] research radioisotopes," and that production would not be cost effective. Yet this report is not included in the draft EIS. WHY? Confusing priorities, again.

There are many more issues I have with this draft EIS, but these are among the most serious. The glaring environmental and proliferation risks of this proposal to produce more PU-238 are enough to stop it dead right now. I say, cancel the project, we're doing a miserable job as it is, trying to clean up the mess already created for us by the past production of nuclear materials. The last thing we need is a bigger mess – one created by a process that has no scientific, medical, social, or environmental justification at all. If you must flog this deadly proposal, then rewrite the draft PEIS and answer the questions raised – honestly.

Sincerely,



Margaret Macdonald Stewart
Box 2404, Ketchum, ID 83340

I reject this Draft PEIS
as inadequate.

1708-4

1708-5

1708-6

1708-1

Response to Commentor No. 1708

- 1708-2:** The costs and nuclear nonproliferation impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such ancillary documents need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed these documents to more than 730 interested parties on August 24 and September 8, 2000, respectively. Both reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided summaries of the Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment in Appendixes P and Q, respectively, in the Final NI PEIS.
- 1708-3:** Sections 4.3.1.1.13; 4.3.2.1.13; 4.3.3.1.13; and 4.4.3.1.13 were revised to clarify the waste management approach for waste resulting from processing of target materials for plutonium-238 production. The use of proposed alternative facilities associated with processing of neptunium-237 targets would have no impact on schedules or available funding for high-level radioactive waste programs at either Hanford or INEEL. At INEEL, the tanks would not be used although certain facilities at the Idaho Nuclear Technology Engineering Center (INTEC) would be used to treat the wastes resulting from processing the irradiated targets. These are reliable systems that would process a maximum of 1,050 cubic meters of low-level radioactive waste over the 35-year nuclear infrastructure operational period. The higher activity waste would be treated as a solid form via a stand-alone vitrification system, separate from any tank waste treatment system. At Hanford, the existing high-level radioactive waste facilities would not be used, and as analyzed in the PEIS, no existing or planned high level radioactive waste facilities would be used to treat the wastes resulting from processing the irradiated targets.
- 1708-4:** The technology that would be used to produce plutonium-238, medical and industrial radioisotopes uses chemical separation from targets whereas reprocessing chemically separates weapons grade plutonium-239 from spent nuclear fuel. As discussed in the Nuclear

***Commentor No. 1708: Margaret Macdonald Stewart
(Cont'd)***

Response to Commentor No. 1708

Infrastructure Nonproliferation Impact Assessment (September 2000) use of this technology to produce plutonium-238 from irradiated targets will not create a nonproliferation threat. DOE is committed to full compliance with and support of the U.S. policy prohibiting reprocessing. The proposed action in this EIS represents an example to the world of the U.S. supporting and enhancing civilian use of nuclear energy such as: medical radioisotopes, industrial radioisotopes, and radioisotopes for deep space exploration.

1708-5: A May 22, 2000, correspondence from NASA to DOE identified that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

The United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

***Commentor No. 1708: Margaret Macdonald Stewart
(Cont'd)***

Response to Commentor No. 1708

1708-6: The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost-efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

DOE has taken the Expert Panel and NERAC report recommendations under consideration in developing the range of alternatives evaluated in the NI PEIS. These reports were made available to the public at the NI PEIS public information centers and on the Internet at www.nuclear.gov.

Commentor No. 1709: U.S. Representative Deborah Pryce

Congress
of the
United States
House of Representatives

September 18, 2000

DEBORAH PRYCE
OHIO
15th DISTRICT



Collette E. Brown
U.S. Department of Energy
NE-50
19901 Germantown Road
Germantown, MD 20874-1290

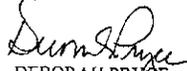
Dear Ms. Brown,

I am writing to support the re-start of the Fast Flux Test Facility (FFTF) in Washington state, specifically based on the benefits it offers to cancer patients.

As you know, research using medical isotopes is showing great promise in developing treatments for childhood cancers. In fact, my daughter, Caroline, who was diagnosed with neuroblastoma in 1998, participated in a clinical trial at Memorial Sloan Kettering Cancer Center in which medical isotopes were used. Unfortunately, my daughter succumbed to her disease just more than one year ago, but we simply must do all we can to ensure that the cutting edge research underway to help children like Caroline continues. More than 12,000 children are diagnosed with cancer annually, and some 2,300 will lose their lives to this disease in the year 2000. This is unacceptable. The key to survival for these innocent victims is research. The demand for medical isotopes is increasing. It is my understanding that the FFTF has the capacity to produce two to three times more medical isotopes than all other reactors in the nation combined. Re-starting the FFTF would stabilize the supply of medical isotopes to help ensure continued progress toward successful treatment of cancer and other diseases.

I hope the Department of Energy will consider the great potential to be found in medical isotopes for the thousands of children and their families who are in the fight for their lives. Thank you for your consideration of my views. If I can provide additional information regarding my comments, please do not hesitate to let me know.

Sincerely,


DEBORAH PRYCE
Member of Congress

221 CANNON HOUSE OFFICE BUILDING
WASHINGTON, D.C. 20515
(202) 225-2015
Email: pryce.oh15@mail.house.gov
http://www.house.gov/pryce/

 Printed on Recycled Paper

500 S. FRONT STREET
ROOM 1130
COLUMBUS OHIO 43215
(614) 469-5614

Response to Commentor No. 1709

1709-1

1709-1:

DOE notes the commentor's support for Alternative 1, Restart FFTF. Under the proposed action and consistent with its mandates under the Atomic Energy Act, DOE would enhance its existing nuclear facility infrastructure to, among other things, more effectively support production of radioisotopes for medical applications and research. While restarting FFTF would result in greater availability of medical isotopes, it would not produce two to three times more medical isotopes than all other reactors in the nation combined, as stated by the commentor. For nearly 50 years, DOE's use of its unique technologies and capabilities to develop isotopes for civilian purposes has enabled the widespread application of medical isotopes seen today.

1709-1

**Commentor No. 1710: James A. Lake/Andrew C. Kadak
American Nuclear Society**



AMERICAN NUCLEAR SOCIETY

Washington Office
805 15th Street, NW
Suite 700
Washington, DC 20005

Tel: 202/312-7400
E-Mail: dwasiti@bakerd.com
<http://www.ans.org>
Fax: 202/312-7401

September 18, 2000

Secretary Bill Richardson
Department of Energy
1000 Independence Avenue, SW
Room 7A-257
Washington, DC 20585-0117

Subject: Fast Flux Test Facility

Dear Secretary Richardson:

We have reviewed the Draft Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, including the Role of the Fast Flux Test Facility. Based on this review and in consideration of the NERAC Long Term Research and Development Plan and the Corradini Report entitled, "The Future of University Nuclear Engineering Programs and University Research & Training Reactors", we conclude that the FFTF should be restarted as soon as possible.

In our letter of August 18, 1999, the American Nuclear Society's position on the restart of FFTF was conditional on the basis that the funding not affect other future-looking nuclear energy programs. We also questioned the restart of FFTF since there was not an integrated national research and development strategy in which its mission could be defined. Additionally, we had concerns that the apparent justification for restart, as identified in the PNNL report, was the production of isotopes for which the economic basis was questionable.

In the intervening year several important events took place. The United States has lost another major research reactor facility due to the untimely shutdown of the Brookhaven High Flux Beam Reactor. It is also expected that DOE will shutdown the Brookhaven medical research reactor. This continual erosion of the U.S. research reactor capability severely damages our ability to develop technologies of the future and maintain the infrastructure necessary for U.S. leadership in nuclear science and technology. The NERAC long term R&D plan has been issued as has the Corradini Report which identifies the important research work that needs to be done and how the national laboratories can interface with universities to renew the interest of students in this field.

Based on the draft EIS, the Fast Flux Test Facility is the single facility that already can meet the needs of PU238 production for the space program, provide many isotopes for medical and industrial application, and be used for basic research for both fast and thermal flux applications. Although facility modifications would be required to perform these new tasks, the facility has unique attributes that allow such modifications without significant impact in performance. The other attraction of the utilization of the FFTF is that it already exists and therefore will not negatively impact the research missions of other facilities that are identified in the EIS.

Leaders in the development, dissemination and application of nuclear science and technology to benefit humanity

Response to Commentor No. 1710

|| 1710-1

1710-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

|| 1710-1

Commentor No. 1710: James A. Lake/Andrew C. Kadak American Nuclear Society (Cont'd)

Although costs were not identified in the EIS for the FFTF or other alternatives, the previous PNL report identifies costs for restoring the FFTF to service. DOE has promised that these funds will not be diverted from other DOE missions, which is an important concern of ANS and other commentors regarding restart. ANS believes the restart of the FFTF, when compared to other options for satisfying the many missions defined, will be the low cost alternative. This is based on the assumption that building any new facility is, in general, more expensive than modifying an existing facility for specific purposes.

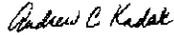
ANS also believes the Hanford reservation has other unique assets that could be used in support of the DOE mission of research and development and isotope production which provides an added incentive to restart. As the DOE begins to look to the long term future, nuclear technologies for sustainable energy production will undoubtedly focus on fast spectrum reactors. The FFTF is the only U.S. facility that has the capability to perform such large scale research should the national political and technical consensus conclude that the future sustainable technology require such reactors.

For all these reasons, the American Nuclear Society supports restart of the Fast Flux Test Facility.

Sincerely yours,



James A. Lake
President - 2000/2001



Andrew C. Kadak
President - 1999/2000

C: James J. Duderstadt, Chairman of NERAC
William Magwood, IV, Department of Energy
ANS Board of Directors
Colette E. Brown, Document Manager NI-PEIS

Senator Slade Gorton
Senator Patty Murray
Representative Jay Robert Inslee
Representative Jack Metcalf
Representative Brian Baird
Representative Richard Hastings
Representative George Nethercutt
Representative Norman Dicks
Representative James McDermott
Representative Jennifer Dunn
Representative Adam Smith
Senator Pete Domenici
Senator Harry Reid
Representative Peter Visclosky
Representative Ron Packard
Board of Directors

1710-2

1710-1

Response to Commentor No. 1710

1710-2: DOE notes the commentor's view on the cost of restarting FFTF.

**Commentor No. 1711: A. Kuhaida, Jr., Mayor,
City of Oak Ridge**

Response to Commentor No. 1711

Sent by: CITY OF OAK RIDGE DS 4234828355

09/18/00 8:17PM Job 796

Page 1/2

CITY OF
OAK RIDGE



City of Oak Ridge

September 18, 2000

Ms. Colette E. Brown, NE-50
U. S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

Comments on DOE Draft Programmatic Environmental Impact Statement (PEIS) for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility (FFTF) [DOE/EIS-0310SD, July 20-00]

Dear Ms. Brown,

Enclosed are the comments of the City of Oak Ridge Environmental Quality Advisory Board on the subject PEIS.

At its regular meeting today, September 18, 2000, the Oak Ridge City Council unanimously approved the transmittal of these comments as the official comments of the City of Oak Ridge.

Very truly yours,

A. Kuhaida, Jr.
Mayor

jb

Enclosure

Commentor No. 1711: A. Kuhaida, Jr., Mayor, City of Oak Ridge (Cont'd)

Sent by: CITY OF OAK RIDGE DS 4234826355

09/18/00 8:18PM Job 796

Page 2/2

**City of Oak Ridge Environmental Quality Advisory Board (EQAB) Comments on
DOE Comments on DOE Draft Programmatic Environmental Impact Statement (PEIS) for
Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production
Missions in the United States, Including the Role of the Fast Flux Test Facility (FFTF) [DOE/EIS-
0310D, July 2000]**

Due to the length and complexity of the PEIS, EQAB was unable to complete a detailed review of the technical merits of this EIS and the proposed action. Instead, EQAB has chosen to offer only general comments.

EQAB is aware that several other organizations have publicly alleged inaccuracies in the stated *Purpose and Need for Agency Action*. These issues are not addressed in this review.

1. This PEIS appears to be unnecessarily lengthy and complex. Many tables, charts, and much information is many-times redundant. This makes the document overly large and difficult to read. Additionally, a large amount of irrelevant, albeit interesting, information has been included. For instance, the specific location of a target in a reactor is not information germane to the topic of the EIS.
2. The complexity could also be decreased by characterizing some of the options listed under different alternatives that are essentially the same. Addressing the common issues – transportation, irradiation, processing – individually instead of including them in each of the potential combinations would have saved the reader time and effort. The time to assess the options in combination is in the epidemiological charts and comparative discussion.
3. The epidemiological assumptions and assertions are not always clear, nor are they concisely stated. Often, these assumptions were in a different location in the document. There was not always a clear association between the area demographics and the accident risk analyses. The epidemiological summaries do not appear to be consistent with some of the individual analyses.
4. Cost is a major factor in a program of this scope. It is recommended that estimated cost be presented in the PEIS rather than in an ancillary document.

EQAB appreciates the opportunity to comment on this document. However, we recommend that a longer comment period be automatically provided for any document that is longer than a pre-determined number of pages (for example, 500 pages).

These concerns notwithstanding, EQAB feels that the work described in the PEIS can be safely performed on the ORR.

1711-1

1711-2

1711-3

1711-4

1711-5

Response to Commentor No. 1711

1711-1:

The size and complexity of the NI PEIS is attributable to the complexity of the proposed action and the range of reasonable alternatives. DOE included illustrative material, such as target locations within reactors, to help readers visualize and understand the text. Although some options within an alternative are similar, they are not identical and would result in different environmental impacts. Options under the alternatives are required to present the full range of environmental impacts for each alternative. Redundancy was reduced by referencing earlier sections of the NI PEIS where the environmental evaluation yielded similar results. In addition, extraneous information has been eliminated and some sections of the PEIS have been reorganized to improve readability.

1711-2:

Epidemiological assumptions are stated in Appendixes H and I of Volume 2. As a convenience for the reader, shorter versions of these assumptions are stated in Sections 4.2-4.6 of Volume 1. In the Final NI PEIS, text was added to Appendix I describing the meteorological data, population data, and evacuation information used for each facility evaluation.

1711-3:

DOE provided a summary of the Cost Report in Appendix P of the Final NI PEIS.

1711-4:

DOE notes the commentor's suggestion.

1711-5:

DOE notes the commentor's support for those alternatives and options that involve the use of facilities on the ORR.

Commentor No. 1712: Ray K. Robinson

Response to Commentor No. 1712

Sep 18 00 01:23p Ray K. Robinson, Inc. 509-627-6141 p. 1

1-877-562-4592



Jack Briggs

Al Corrado, M.D.

Richard Giever, M.D.

Suzanne Heaston

Floyd Ivey, P.S.

Mike Lawrence

Wanda Munn

Haakon Ragde, M.D.

Ed Ray

Ray Robinson, Sc.D.

Robert Schenter, Ph. D.

Citizens for Medical Isotopes
Benton Franklin Title Bldg.
3315 W. Clearwater Ave.
Kennewick, WA 99336
Amy Evans
(509) 737-6463
fax: (509) 737-9524
cmf@owt.ccm
www.medicalisotopes.org

September 18, 2000

Mr. Bill Richardson, Secretary of Energy
Department of Energy, Office of the Secretary
Forrestal Building
1000 Independence Avenue, S.W.
Washington, DC 20585

Dear Secretary Richardson:

I have talked at length with hundreds of cancer survivors and families of cancer victims, too many who were friends or members of my own or my spouse's family.

My company, RKKL, has discussed the medical isotopes situation with senior executives and technology managers of over forty (virtually all) major radiopharmaceutical and medical isotopes companies in the United States.

I have met with and discussed the medical isotopes situation with over 20 of the 54 senior staffers and members of the appropriation committees in the House and Senate responsible for funding the National Institutes of Health and the Department of Energy and with OMB.

I have discussed the medical isotopes situation with dozens of the leading physicians and scientists in the world who are at the cutting edge of medical science's interface with terminal diseases.

One of our medical isotopes non-profits teamed with the prestigious Society of Nuclear Medicine and its thousands of board-certified nuclear medicine physicians and technologists seeking more federal support for nuclear medicine/medical isotopes R&D.

I have given countless talks and seminars to U.S. citizens who are concerned about how medical isotopes might help them, their families and their friends deal with dreaded diseases such as cancer, rheumatoid arthritis and coronary artery disease. The most recent of these talks was to a large group living and working in our state's capitol.

Commentor No. 1712: Ray K. Robinson (Cont'd)

Sep 18 00 01:23p Ray K. Robinson, Inc. 509-627-6141 p.2

2/3 9/18/2000

Based on the above interactions and inputs, I request that you consider the following in your decision making process:

1) The promise and potential of medical isotopes, and the positive impacts they can have on the quality, effectiveness and cost of health care in the U.S., are rapidly becoming more apparent and better understood by patients, practitioners and politicians across the U.S. The problems associated with the lack of a reliable U.S. supply of medical isotopes are becoming more apparent to these same groups. Support for restarting FFTF is widespread and increasing.

2) A critical need exists now for a highly reliable U.S. source of reactor-produced medical isotopes with the capability to produce large, pharmaceutical-quantity amounts of many different types of high specific activity medical isotopes. This large production-volume capability must be a U.S. government source and is vital now for the following reasons:

- The early and high-risk R&D investments necessary for major health breakthroughs involving medical isotopes will not be made without an assured domestic supply of large quantities of the same isotopes proven effective in clinical research. Both private sector and government R&D and clinical trial programs are and will continue to be severely constrained without an assured, highly reliable, large U.S. reactor capable of producing large amounts of many varieties of high-quality medical isotopes.
 - The private sector is constrained without a predictable path and assured capability to transition from R&D to full-scale production of radiopharmaceuticals. Without an assured supply, the substantial costs, time and other risks inherent in bringing a radiopharmaceutical to market are unacceptable.
 - Government R&D is constrained because the research community's motivation/capability is frequently stifled by the high cost and/or unavailability of medical isotopes or the concern that there is no path forward to market even if their research is promising.
- The private radiopharmaceutical sector in the U.S. will buy irradiation time and space in a government-owned/operated reactor but they will not own/operate reactors themselves. They believe that the supply of reactor-produced medical isotopes, especially for the large quantities needed for therapy, is a critical role that the U.S. government must fulfill, a role mandated by the U.S. Atomic Energy Act. Note there is not a government-competition-with-private-sector issue here. The issue is just the opposite. The need is for a reliable government capability to produce for a fee the large quantities of medical isotopes that the private sector will then convert into commercial radiopharmaceuticals.

1712-1

1712-2

Response to Commentor No. 1712

1712-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

1712-2: DOE notes the commentor's support for U.S. reactor-produced medical isotopes.

Commentor No. 1712: Ray K. Robinson (Cont'd)

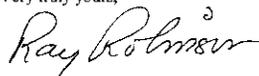
Sep 18 00 01:23p Ray K. Robinson, Inc. 509-627-6141 P.3

3/3 9/18/2006

3) FFTF is the newest, largest and best reactor the U.S. government has in its infrastructure for long-term production of large quantities of medical isotopes. In addition, FFTF can make high specific-activity isotopes and has the flexibility to tailor its irradiation characteristics to produce the wide variety of isotopes needed. Its unique characteristics make it the ideal candidate to produce some research isotopes. In conjunction with other federal civilian missions, FFTF can be cost-competitive in producing small amounts of many different research isotopes.

It is essential that FFTF be restarted. Please do not let the U.S. lose this tremendously valuable asset. Many of us believe FFTF's actual and potential benefits far outweigh its costs and potential risks. In light of our aging U.S. population and rising health care costs, and our aging nuclear infrastructure, FFTF could well be one of the U.S.'s best health insurance policies.

Very truly yours,



Ray K. Robinson, Co-Founder and
Volunteer Board Member (Co-Chair)

cc: Ms. Colette Brown, DOE

1712-1

Response to Commentor No. 1712

**Commentor No. 1713: Norman A. Mulvenon
Local Oversight Committee, Inc.**

SEP-18-2000 11:03 FROM LOCAL OVERSIGHT COMMITTEE TO 13014280145 P.02



September 18, 2000

Ms. Colette E. Brown, NE-50
Office of Nuclear Energy, Science and
Technology
U. S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

Subject: Citizens' Advisory Panel Comments on the Draft Programmatic Environmental Impact Statement (PEIS) for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility (FFTF) [DOE/EIS-0310D, July 2000]

Dear Ms. Brown:

The Citizens' Advisory Panel (CAP) of the Oak Ridge Reservation (ORR) Local Oversight Committee, Inc., (LOC) is pleased to submit comments on the subject draft PEIS. However, we were hampered in evaluating the PEIS due to the non-simultaneous release of the related documents, *Nuclear Infrastructure Nonproliferation Impact Assessment (DOE/NE-0119)* and *Cost Report for Alternatives*.

The need for the federal action(s) covered by this PEIS is weak. The Office of Nuclear Energy, Science and Technology (NE) seems to be paving the way to restart the FFTF through the use of overly optimistic assumptions for growth in demand for medical isotopes and dismissal of realistic alternatives for their production. The projections of isotope demand should include bounding high and low estimates. The other two purposes in the PEIS, plutonium-238 production for space missions and nuclear energy research and development for civilian applications, can be easily accomplished through the use of existing facilities. Additionally, recent decisions by NE are inconsistent with the stated concerns about regarding isotope and Pu-238 production (see Comment 2 in attached detailed comments).

The CAP opposes the No Action Alternative based on the non-proliferation issues that the current course of action raises. Additionally, the cost for indefinitely maintaining FFTF in standby mode is unacceptable. Neither the No Action Alternative nor Alternative 5 address the national needs laid out in the PEIS.

Anderson • Meigs • Rhea • Roane • City of Oak Ridge • Knox • Loudon • Morgan

136 S. Illinois Avenue, Suite 208 • Oak Ridge, Tennessee 37830 • Phone (423) 483-1333 • Fax (423) 482-6572 • E-mail: loc@icx.

Response to Commentor No. 1713

1713-1: CEQ (40 CFR 1500 et seq.) and DOE (10 CFR Part 1021) implementation regulations do not require inclusion of cost and nonproliferation studies in an environmental impact statement. The basic purpose of the NI PEIS is to describe the alternatives under consideration for implementation (Section 2.5 of Volume 1) and the environmental impacts that would occur if these alternatives were implemented (Chapter 4 of Volume 1). Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. The associated cost report and nonproliferation report were made available to the public on August 24, 2000, and September 8, 2000, respectively. DOE mailed this document to approximately 730 interested parties, and these reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in public reading rooms.

1713-2: DOE notes the commentor's views. Consistent with its mandates under the Atomic Energy Act, DOE is proposing this expansion for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. As opposed to the commentor's assertion, these objectives are in no way inconsistent with recent decisions by DOE's Office of Nuclear Energy, Science, and Technology (NE).

DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert committees. In 1998, an Expert Panel convened to forecast future demand for medical isotopes estimated that the expected growth rate of medical isotope use during the next 20 years will range between 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by DOE's Nuclear

1713-1

1713-2

1713-3

1713-4

1713-5

Commentor No. 1713: Norman A. Mulvenon (Cont'd)
Local Oversight Committee, Inc.

SEP-18-2000 11:03 FROM LOCAL OVERSIGHT COMMITTEE TO 13014280145 P.03

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The CAP opposes the restart of FFTF (Alternative 1) on the basis of the huge cost likely to be incurred, when significantly less funding would be required to upgrade existing facilities at Oak Ridge National Laboratory (ORNL) and Idaho National Engineering and Environmental Laboratory. These upgraded facilities could then easily fulfill realistic projections of national demand for medical isotopes. A major deficiency of the PEIS is that existing facilities at INEEL and ORNL are not considered for the medical isotope production mission; these options should be considered in the final PEIS.

1713-6

As noted in the Summary document, stakeholders in Tennessee and Idaho are supportive of bringing the proposed work to their respective facilities, while many stakeholders in the Pacific Northwest are opposed to restarting the FFTF. From an equity standpoint, DOE should seriously consider upgrading facilities at ORNL and INEEL in lieu of the FFTF restart at Hanford.

1713-7

Of the alternatives presented, the CAP prefers Alternative 2, Options 1 and 7, and recommends that this alternative be expanded to include upgrading ATR and/or HFIR for isotope production. This alternative is to use only existing operational facilities, and these options are for use of ATR and/or HFIR for the irradiation facility and REDC for the Pu-238 storage and target fabrication and processing facilities. These are also advantageous with respect to non-proliferation issues as well as the cost.

1713-8

The CAP notes that several options involve restart of currently non-operational facilities for target fabrication and processing. Restart of either the Fluorine Dissolution Process Facility (FDPF) or Fuels and Materials Examination Facility (FMEF) would involve a significant degree of technical risk, unlike utilization of the currently operational facilities.

The CAP would support Alternative 4, Construct New Research Reactor, as a long-term solution, should projections of medical isotope demand be met. However, Alternative 3, Construct New Accelerator(s), is unacceptable due to the huge expense and relatively limited types of isotopes that an accelerator is capable of producing.

1713-9

The CAP is supportive of expanding ORNL's mission, consistent with sound scientific and policy decisions. ORNL has had long historical involvement in the production and distribution of medical isotopes, a mission that was cut back due to concerns about competing with the private sector. Now ORNL's historic strength has enabled Oak Ridge to leverage such production into related industrial development. The first tenant of Horizon Center, the new industrial park on DOE land leased to the Community Reuse Organization of East Tennessee, is Theragenics, a company that formulates medical isotope implants. Additionally, the CAP supports bringing a new mission, that of Pu-238 production, to ORNL.

The LOC is a non-profit regional organization funded by the State of Tennessee and established to provide local government and citizen input into the environmental management and operation of the DOE's ORR. The Board of Directors of the LOC is composed of the elected and appointed officials of the seven surrounding counties and the City of Oak Ridge, and the Chair of the CAP. The CAP has up to 20 members with

Response to Commentor No. 1713

Energy Research Advisory Committee (NERAC), established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. The growth projections were also adopted by DOE as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. The NI PEIS analyses assume growth at the high-end of this range in order to bound the potential environmental impacts that could result from implementing the proposed action. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings.

For nearly 50 years, DOE's use of its unique technologies and capabilities to develop isotopes for civilian purposes has enabled the widespread application of medical isotopes seen today. While its market share is a small fraction of total world radioisotope production, DOE remains the key provider for a large number of isotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially experimental, these isotopes are not generally purchased in large enough quantities to make their production financially attractive to private industry.

The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum 99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. Further, supplies of many research isotopes are not readily available from existing foreign or domestic sources, causing a number of medical research programs to be terminated, deferred, or seriously delayed. As such, reliance on these other sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their

Commentor No. 1713: Norman A. Mulvenon (Cont'd)
Local Oversight Committee, Inc.

SEP-18-2000 11:04 FROM LOCAL OVERSIGHT COMMITTEE TO 13814280145 P.04

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diverse backgrounds representing the greater ORR region; the CAP studies problems in depth and provides advice to the LOC Board and other governmental agencies.

This letter lays out the policy considerations underpinning the attached detailed comments. These comments are submitted by the CAP only and have not been reviewed or approved by the LOC Board. If you have any questions regarding the CAP's comments, please feel free to contact me at (865) 483-1333.

Sincerely,



Norman A. Mulvenon,
 Chair, Citizens' Advisory Panel

Enclosure

cc: LOC Document Register
 LOC Board
 LOC CAP
 Earl Leming, Director, TDEC DOE-O
 Joe Sanders, General Counsel, TDEC
 Pat Halsey, FFA Administrative Coordinator, DOE ORO
 Leah Dever, Manager DOE ORO
 Carol Borgstrom, Director, Office of NEPA Policy and Assistance, DOE HQ
 William Magwood, Assistant Secretary for NE, DOE HQ
 Luther Gibson, Chair, ORSSAB
 Stan Hobson, Chair, INEEL Citizens Advisory Board
 Chair, Hanford Advisory Board

Response to Commentor No. 1713

use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Although research to identify other potential fuel sources to support these space exploration missions has been conducted, no viable alternative to using plutonium-238 has been established. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost.

Clean, safe, reliable nuclear power continue as a viable component of the United States' energy portfolio. In recognition of this need, the Administration and Congress have initiated nuclear energy research and development programs to address potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) and to ensure that current nuclear power plants can continue to deliver adequate and affordable energy supplies. An enhanced DOE nuclear facility infrastructure is required to support such nuclear energy research and development for civilian applications. The Nuclear Energy Research Advisory Committee (NERAC) Subcommittee on Long-term Planning for Nuclear Energy Research, an independent expert panel established by DOE, has set forth a recommended 20-year research and development plan to guide DOE's nuclear energy programs in areas of material research, nuclear fuel, and reactor technology development. This plan stresses the need for DOE facilities to sustain the nuclear energy research mission in the years ahead. Such nuclear research and development initiatives requiring an enhanced DOE nuclear facility infrastructure fall into the three basic categories of materials research, nuclear fuel research, and advanced reactor development.

1713-3: The commentor's opposition to the no action alternative based on nonproliferation issues is noted.

**Commentor No. 1713: Norman A. Mulvenon (Cont'd)
Local Oversight Committee, Inc.**

SEP-18-2000 11:04 FROM LOCAL OVERSIGHT COMMITTEE TO 13014280145 P.05

Citizens' Advisory Panel (CAP) Comments on the *Draft Programmatic Environmental Impact Statement (PEIS) for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility (FFTF)* [DOE/EIS-0310D, July 2000]

1. The PEIS uses as part of the justification for need for agency action the shutdown of the High Flux Beam Reactor at Brookhaven National Laboratory and the Cyclotron Facility at Oak Ridge National Laboratory (ORNL). The former facility was shut down due to political pressure over tritium contamination of groundwater, an issue unrelated to the age or safety of the reactor. ORNL's Isochronous Cyclotron was shut down due to mission changes for the Hollifield Radioactive Ion Beam Facility that made it unnecessary. Neither of the facilities produced isotopes in any significant quantity, nor were they used for nuclear energy research. It is unclear why they are mentioned in this document.
2. The PEIS assumes a projected large increase in demand for medical isotopes, which effectively forces the decision to restart the FFTF. This assumption is not supported by the following information obtained from senior personnel in the Research Reactors Division at ORNL:
 - The High Flux Isotope Reactor (HFIR) at ORNL projects isotope usage to plan its own medical isotope production schedule. HFIR's projections do not anticipate significant growth in demand.
 - Other professional nuclear-related organizations such as the American Nuclear Society don't project a growth rate for medical isotope demand nearly as large as DOE has suggested.
 - The United States currently subsidizes the cost of isotope production.
 - Russia produces and sells many isotopes much cheaper than the United States can. The availability of cheap Russian isotopes has significantly reduced current demand for U.S.-produced isotopes. Indeed, during the same period of time when NE was planning and preparing this PEIS for expansion of U.S. isotope production capacity, NE decided to end production of stable isotopes at the Beta 3 calutron facility at Oak Ridge's Y-12 plant due to low demand, and scheduled the facility for transfer to Environmental Management for decontamination and decommissioning. The stable isotopes produced by the Beta 3 facility are used as sources for other medical and industrial isotopes; there is no guarantee that Russia will keep prices low or even continue to produce them.
 - DOE refused a request by the Advanced Test Reactor (ATR) at Idaho National Engineering and Environmental Laboratory (INEEL) for funding to upgrade the facility for medical isotope production by adding a "rabbit" system that would allow samples to be inserted and retrieved while the reactor is running.
3. The alternatives under consideration reject the obvious and most cost-effective option, that of upgrading existing facilities such as HFIR in Oak Ridge and ATR at INEEL. As mentioned under comment 2 above, ATR can be modified to produce short-lived medical isotopes by addition of a rabbit system. HFIR can be upgraded to

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1713-7

Response to Commentor No. 1713

- 1713-4:** DOE notes the commentor's opinion. As stated in the Notice of Intent (64 FR 50064), one of the purposes of the proposed action is to determine the future role of FFTF.
- 1713-5:** DOE notes the commentor's statement. The No Action Alternative is required by CEQ regulations (40 CFR Section 1502.14 (d)). The No Action Alternative is intended to provide a benchmark that enables the decision-maker to better evaluate the environmental impacts of the action alternatives; it need not meet the stated purpose and need of the PEIS. Alternative 5 was added to the analysis as a result of scoping comments provided by the public.
- 1713-6:** As stated in Section 2.5.3 of Volume 1 of the NI PEIS, the currently operating DOE reactors, HFIR and ATR, cannot fully meet the projected long-term need for medical isotope production and nuclear research and development, with or without the plutonium-238 production mission. The Final NI PEIS, Section 2.6.1, has been revised to discuss upgrades at HFIR and ATR that would increase their isotope production capability. Facility modifications such as the installation of rapid radioisotope retrieval systems and power upgrades at both HFIR and ATR would enhance their ability to produce isotopes. This enhancement, however, would only delay the point in time at which the United States' reactor isotope production capacity is reached.
- 1713-7:** DOE acknowledges the commentor's view that the stakeholders in Tennessee and Idaho are supportive of bringing the medical isotope production work to their facilities (ORNL and INEEL) and that many stakeholders in the Pacific Northwest are opposed to the restart of FFTF. As discussed in the Final NI PEIS, Section 2.6.1, facility modifications such as the installation of rapid radioisotope retrieval systems and power upgrades at both HFIR, located at ORNL, and ATR, located at INEEL, would enhance their ability to produce isotopes within the limitations imposed by other missions such as those of the DOE Office of Naval Reactors at ATR. This enhancement at both HFIR and ATR, however, would not be adequate to meet the future demand for isotope production.
- 1713-8:** DOE notes the comment. DOE considered and dismissed upgrading ATR and HFIR for isotope production. Refer to discussions in Volume 1, Section 2.6.1. The technical risks for restart of FDPF and FMEF are not evaluated in the NI PEIS. DOE has determined the technical risks for the restart of these facilities are acceptable. The

Commentor No. 1713: Norman A. Mulvenon (Cont'd)
Local Oversight Committee, Inc.

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its full design power of 100 megawatts more easily and quickly than stated in the PEIS. The primary requirements for upgrading HFIR involve paperwork changes to procedures and safety documentation. HFIR management estimates the upgrade could be accomplished with less than a month's downtime, comparable to current 7 to 10 day outages, which would have a minimal impact on its science mission.

4. The cost of restarting the FTFF is likely to be far in excess of that projected. The FTFF was built for a single mission and is costing about \$50 million per year to keep in standby. Its reactors have been in standby mode for ten years and will cost a great deal to bring up to current standards. Experts in the Research Reactors Division at ORNL estimate that \$250 million to \$300 million will be required to upgrade the equipment and safety documentation at FTFF.
5. A technical problem that has not been adequately considered is that although the MOX fuel required by the FTFF can be obtained free from Germany, there is no U.S. plant that can refabricate this fuel into elements that fit FTFF.
6. Regarding the Neptunium-237 processing to create Plutonium-238 for space mission fuel—ORNL has an appropriate technology to accomplish this and would be a logical location for this mission. HFIR can irradiate sufficient Np-237 to produce 40% of the amount needed annually, and the adjoining facility at Radiochemical Engineering Development Center is capable of both the target fabrication and chemical processing required for separation of the Pu-238. ATR is capable of producing up to 5 kg of Pu-238 annually. A combined alternative with both locations irradiating Np-237 would satisfy projected national needs.
7. With respect to the materials irradiation mission, the following comments apply:
 - There are currently eight sites available for this purpose at the HFIR and several more at the ATR. Currently most of these irradiation sites are not utilized at all or are only partially utilized.
 - Since almost all current and future power reactors being discussed for use in the United States have a thermal spectrum, the Fast Flux Test Facility, which uses a fast neutron spectrum, is not a suitable facility for testing materials for use in these reactors.

Response to Commentor No. 1713

risks of restarting non-operational facilities are addressed as cost, schedule, and technical assurance uncertainties during the Record of Decision process.

1713-9: DOE notes the comment.

1713-10: DOE notes the commentor's concern, and has modified Section 1.1 of Volume 1. The High Flux Beam Reactor at BNL and the Cyclotron Facility at ORNL are identified in this section to simply highlight recent examples of lost DOE infrastructure, as both facilities had produced some isotopes in the past.

1713-11: The NI PEIS is a programmatic document that looks at the nuclear infrastructure across the DOE complex and addresses national needs for medical isotope production. DOE realizes that the prediction of precise future needs of particular isotopes is very difficult. Because of this difficulty, DOE has sought independent analysis of trends in the use of medical radioisotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it has established two expert committees. The first, a thirteen-member Expert Panel convened in 1998 to forecast future demand for medical isotopes, included academicians from leading medical universities and schools of public health, and professional affiliations ranging from the National Cancer Institute to manufacturers of radiopharmaceuticals. The second consists of a subcommittee of DOE's Nuclear Energy Research Advisory Committee (NERAC), established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. The members of this Subcommittee were selected based upon their expertise and experience in the production, processing, distribution, and application of stable and radioactive isotopes in the biological and physical sciences, and in medicine. The members included basic and clinical scientists, administrators, and users of isotopes from academia, industry, and the federal government.

The Expert Panel estimated that the expected growth rate of medical isotope use during the next 20 years will range between 7 to 14 percent per year for therapeutic applications and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by the NERAC Subcommittee, and adopted by DOE as a planning tool for evaluating the potential capability of the existing

Commentor No. 1713: Norman A. Mulvenon (Cont'd)
Local Oversight Committee, Inc.

Response to Commentor No. 1713

nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings.

For nearly 50 years, DOE's use of its unique technologies and capabilities to develop isotopes for civilian purposes has enabled the widespread application of medical isotopes seen today. While its market share is a small fraction of total world radioisotope production, DOE remains the key provider for a large number of radioisotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially experimental, these isotopes are not generally purchased in large enough quantities to make their production financially attractive to private industry.

The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, supplies of many research isotopes are not readily available from existing domestic or foreign sources, causing a number of medical research programs to be terminated, deferred, or seriously delayed. Under the NI PEIS proposed action and consistent with its mandates under the Atomic Energy Act, DOE would enhance its existing nuclear facility infrastructure to, among other things, more effectively support production of radioisotopes for medical applications and research.

The commentor stated that the Beta 3 calutron facility at Oak Ridge's Y-12 plant is being transferred to Environmental Management because there is a low demand for stable isotopes. It is true that NE decided to end production of stable isotopes at the Beta calutron facility. However, the calutron facility does not produce radioisotopes which is the mission that is addressed in the NI PEIS. Stable isotope production is not included in the NI PEIS.

The commentor's concerns about upgrading the Advanced Test Reactor (ATR) by adding a "rabbit" system are currently being addressed at INEEL. INEEL has privatized the production of medical and industrial isotopes through contracting with a commercial entity. International Isotopes Idaho, Inc. (I4) was selected in October 1996 as the commercial business for conducting these business

Commentor No. 1713: Norman A. Mulvenon (Cont'd)
Local Oversight Committee, Inc.

Response to Commentor No. 1713

operations. I4 specializes in producing isotope targets for irradiation in ATR and processing and distributing commercial-grade isotopes to its customers. Incremental investments have been identified for ATR that would make it a more versatile and capable reactor for isotope production. I4 and another commercial company are in the discussion phase of investing in ATR to install an isotope shuttle (rabbit) system for the production of short-lived radioisotopes. Although INEEL cannot justify this upgrade with government funds, it supports the commercial investment and venture. Many of the short-lived radioisotopes that would be produced by this system are expected to be in growing demand for various cancer therapies.

In response to the commentor's statement that HFIR's projections do not anticipate significant growth, HFIR's main mission is neutron scattering research, not radioisotope production. However, a "rabbit system" is being installed at HFIR, but is privately funded.

- 1713-12:** The cost of maintaining FFTF in standby was estimated in the cost report to be \$40 million per year in 1999 dollars. Total modification/construction and startup costs for restarting FFTF were estimated to be \$314 million in 1999 dollars. See also Response to Comment Number 1713-1 above.
- 1713-13:** As stated in Section 2.3.1.1.3 of Volume 1 of the PEIS, the German MOX fuel would be reconfigured into assemblies suitable for irradiation at FFTF before shipment to the United States.
- 1713-14:** DOE notes the commentor's support for the use of facilities at ORNL (HFIR and REDC) and INEEL (ATR) for the production of plutonium-238, that is, Option 7 of Alternative 2, Use Only Existing Operational Facilities.
- 1713-15:** The available irradiation sites in ATR and HFIR are factors that will be considered in the DOE decision making process. It should be noted that ATR and HFIR have limited available capacity due to their current mission commitments. For this reason, they were limited to plutonium-238 production. While it is true that current and future power reactors in the United States have a core thermal neutron spectrum, a significant fast neutron flux is also generated in these reactors. Over time, this fast neutron flux affects the material properties of reactor vessel internal components and the reactor

Commentor No. 1713: Norman A. Mulvenon (Cont'd)
Local Oversight Committee, Inc.

Response to Commentor No. 1713

vessel itself. A fast flux nuclear reactor like FFTF can simulate the equivalent fast neutron fluence in a nuclear power plant from 40 to 60 years of operation in a much shorter time period of FFTF operation.

Commentor No. 1714: Lee Thornton and Karen Grant Columbia Basin College



Pasco Campus

3600 North 20th Ave.
Pasco, WA 99031-3399

telephone:
(509) 547-0511

FAX:
(509) 546-0401

<http://www.cbcc2.org>

Richland Campus

1011 Northgate
Richland, WA 99352-3540

telephone:
(509) 946-9609



Ms. Colette E. Brown
NE-50, Office of Nuclear Science
Energy and Technology
19901 Germantown Road
Germantown, MD 20874

Dear Ms. Brown:

This letter is in response to a request for input regarding the restart of the Fast Flux Test Facility (FFTF) located at Hanford in southeastern Washington.

We strongly advocate the restart of FFTF. There are many arguments in favor of this, among them being the ability of the reactor to produce plutonium 238 for use as an electrical power source in the NASA deep space program and the use of FFTF for important nuclear fuels and materials research programs which will advance civilian power generation and other applications. We could also mention the jobs FFTF operation will generate in the Tri-Cities economy. FFTF has also been used to study breeder reactor technology. Breeder reactors make their own fuel and that is a technology we may eventually need very badly in the coming years of fossil fuel shortages, etc.

But by far and away, the most important reason to restart FFTF is its capability of making 60 or more different medical isotopes which are absolutely crucial for stopping or slowing the progress of many important types of cancer, for diagnosing and detecting heart disease and blood flow problems (especially in premature infants), for detecting osteoporosis, for brain imaging and treatment of schizophrenia and dementia, and for relieving pain and even some kinds of arthritis. There is a national urgency involved because specific isotopes are used as "magic bullets" to target very specific types of illness and the supply of these isotopes doesn't come close to meeting the need. Treatment with these isotopes is called "radioimmunotherapy". A monoclonal antibody is attached to the radioisotope and the combination is then directed at a particular antigen or cancer cell. This is much easier on the patient because the cancer cells are selectively destroyed without causing the damage to healthy surrounding tissue that is usually seen with conventional radiation therapy. There are fewer side effects and cancers, which do not lend themselves to a surgical solution (like cancers of the liver and pancreas), can be treated in this manner.

The National Association of Cancer Patients has said "One thousand five hundred cancer patients die EVERY DAY in this country. This is the equivalent of three fully loaded Boeing 747s crashing to the earth every single day, killing every one on board." "Medical isotopes could be a therapy for an estimated one million of the 1.3 million Americans who will be diagnosed with cancer this year, and who could benefit from this kinder, gentler treatment." Cancer patients everywhere are being refused treatment because the isotopes are back-ordered. As Geral De Nardo, M.D., Professor, University of California at Davis School of Medicine, has said, "It becomes impossible to look a patient in the eye when unsure whether the isotope would arrive and in sufficient amount."

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Response to Commentor No. 1714

1714-1

1714-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

**Commentor No. 1714: Lee Thornton and Karen Grant
Columbia Basin College (Cont'd)**

Last year there was an American Chemical Society Speaker Meeting in which Dr. Robert Schenter from PNNL gave a talk on medical isotopes and radiopharmaceutical applications. While we were not naive about some of these applications, we were astounded to see how many isotopes have been discovered and the diversity of illnesses for which they have been found to be effective. More are being discovered every day. But there are not enough available. FFTF is a unique facility which can generate many of these isotopes, some of which are not available from any other source. For this reason, Boston Children's Hospital, The National Association of Cancer Patients, and many other organizations and companies have called for the restart to FFTF. The operation of the reactor will not result in the generation of any significant amount of high-level waste. Only very small amounts of low-level waste that is easily treated will be generated. Beyond that, the reactor has been very carefully monitored according to strict NRC regulations and environmental standards.

In conclusion, we hope we have convinced you that FFTF should definitely be restarted as soon as possible and we appreciate your consideration of our input on this very important matter.

Sincerely,



Lee Thornton
President



Karen Grant
Interim Dean
Math/Science Division

**1714-1
(Cont'd)**

Response to Commentor No. 1714

Commentor No. 1716: Mike Steckline
Columbia Basin Manufacturing Services, Inc.

Response to Commentor No. 1716

Draft PEIS Comment Form

The potential for a new and bright future is at hand for the Tri-City community and our United States if we focus on the FFTF and the distinct infrastructure of people, educational attainment, and direct benefits of Nuclear Medicine.

The Hanford Site is being cleaned up & the need for skilled workers will migrate to other regions within our country as in the past years of this project.

But the focus of a win-win can be obtained by re-deploying our area resources that in turn, make good business sense in utilizing this incredible National Asset.

Mike Steckline

1716-1

1716-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure.PEIS@hq.doe.gov

Name (optional): Mike Steckline
 Organization: Columbia Basin Manufacturing Services Inc.
 Home/Organization Address (circle one):
1607 Sanford Ave.
 City: Richland State: WA Zip Code: 99352
 Telephone (optional): 509-943-6998
 E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Collette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20834
 toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure.PEIS@hq.doe.gov



7/12/00

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

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P

Commentor No. 1717: Diana Fassino

Diana Fassino
PO Box 4313
Ketchum
Idaho 83340

dianaf@micron.net

September 4 2000.

Dear Ms. Brown,

Though I suspect that the voices of ordinary citizens go unheard and ignored in today's 'democracy', conscience obliges some of us continue to write our letters and voice our views in the faint hope that enough of us might one day make a tiny, miraculous difference.

My letter today concerns grave concern over the proposed use of Building 666 at the INEEL to produce unnecessary and highly dangerous Plutonium-238. Building 666 should be decommissioned in the least hazardous way possible and this plan should be abandoned.

Please use your influence to discourage this dangerous idea.

Yours sincerely,



Diana Fassino.

Response to Commentor No. 1717

1717-1

1717-1: DOE policy encourages effective public participation in its decision making process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

1717-2

1717-2: Building CPP-666 is divided into two parts, the Fuel Storage Facility and the Fluorinel Dissolution Process Facility (FDPF). The FDPF is under consideration in this PEIS for storage of neptunium-237 oxide, preparation of neptunium-237 targets, and separation of plutonium-238 from irradiated targets. DOE believes that this facility will meet, with further analysis and/or minor modifications, the criteria to safely conduct these processes.

Commentor No. 1718: Helen Wheeler Hastay

Olympia WA
 July 16, 2000

Heart of America NW
 1305 - 4th Ave. Suite 208
 Seattle WA 98101-9409

Att: Pamela Taylor

One bit of scientific information that I find unforgettable is, "like the fresh water Earth will soon have, it no longer!"

So why are the people and agencies who have the means to control the purity of our water so intent on depleting it the Columbia, one of the great rivers of the world?

The British company hired to clean up the mess left by the manipulation of plutonium during World War II, has polluted up and down river. Now billions of dollars poured and another waste disposal site. The Russians proposed to dump on more polluted materials will start up the first few months. It compounds the degradation already inflicted on this once beautiful land, its resources.

When our shore and waters were on the banks of the Columbia, pure water was there for drinking, swimming and boating. Freshwater shapies beach have been seen. To what cause? All the pure water flows into the ocean, never? The stunning water we find out where you consider that even when natural water is 19 ft. all day in sandy ocean.

North Washington's clean shoreline almost was once known to the best fruit orchards and vineyards in the state. They grew the golden apples, the big apples, pears, plums, cherries, apricots and grapes - many a variety of such. For them they were approved. But, still of which went to the banger, and that too against the law.

When ten people were swimming, the river, Newport, the 10th and the 11th, walked the river. God forbid, they were every products. I went to look at the destruction.

Sincerely yours
Helen Wheeler Hastay

1718-1

Response to Commentor No. 1718

1718-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford and the risk of contamination to the Columbia River. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. DOE intends to meet its tank waste cleanup commitments despite the departure of one contractor. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

No food or water restrictions are currently in place outside the Hanford Reservation as a result of Hanford activities.

Draft PEIS Comment Form

I support the selection of the FFTF as the preferred alternative to meet the pressing United States needs for research and medical isotopes.

1719-1

1719-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): *Wilson E. Murray*

Organization: _____

Home/Organization Address (circle one): *151 N. Bishop Ave.*

City: *Clifton Heights* State: *Pg* Zip Code: *19018*

Telephone (optional): *610 623 4365*

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free telephone: 1-877-562-4593 • Toll-free fax: 1-877-662-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00



Commentor No. 1720: Jean MacGregor

Jean MacGregor
533 Olmstead Lane SW
Olympia, WA 98512

September 11, 2000

Colette E. Brown, NE-50,
US Dept. of Energy
19901 Germantown Rd.
Germantown, MD 20874

Dear Ms. Brown,

I am writing regarding the proposed restart of the Fast Flux Test Facility at the Hanford Nuclear Reservation. I would like to go on record supporting Option 5, "to permanently deactivate the FFTF with no new missions."

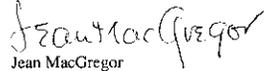
It strikes me that the financial investment by the federal government in this unneeded facility amounts to little more than a "jobs bill." If the federal government wants to pump more money into the Tri-Cities area of Washington State, it should fund additional clean-up, not another dangerous reactor of highly questionable need. It is widely known that Hanford is the most highly contaminated nuclear site in the western world – why not clean it up?!

Restarting FFTF would produce new high level radioactive waste streams. Permanently shutting down the FFTF is part of the 1989 Tri-Party Agreement between USDOE, EPA and WA Ecology – why go back on that to restart the FFTF? Just keeping the FFTF on hot standby for four years has cost over \$40 million per year, money deeply needed for clean-up.

Knowledgeable groups such as The Washington State Medical Association, WA Academy of Family Physicians and the Physicians for Social Responsibility/National have all passed resolutions opposing the restart of the FFTF. Who is the constituency who wants this FFTF and why? No compelling case can be made for the need for it, other than "jobs." Surely, the federal government can find pork barrel projects that are safer than the FFTF.

The legal mission of Hanford is and should continue be environmental clean-up. Any option besides Option 5 would represent a HUGE step backward.

Sincerely,


Jean MacGregor

1720-1

1720-2

1720-3

1720-2

1720-4

1720-2

Response to Commentor No. 1720

1720-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

1720-2: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in

Commentor No. 1720: Jean MacGregor (Cont'd)

Response to Commentor No. 1720

abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Public meetings were held on this formal milestone change.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

1720-3: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35 year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. High-level radioactive waste would not be generated from merely operating FFTF. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

1720-4: DOE notes the commentor's opinion that there is no need to restart FFTF. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research,

Commentor No. 1720: Jean MacGregor (Cont'd)

Response to Commentor No. 1720

and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action. Socioeconomic impacts associated with the restart of FFTF, including those related to jobs, are discussed in Section 4.3 of Volume 1.

Commentor No. 1721: Mary Susan Zotter

Response to Commentor No. 1721

Draft PEIS Comment Form

I am opposed to restart of the FFTF at Hanford because Hanford is a mess already & the worst toxic waste site in the Western Hemisphere. The US DOE must live up to its promise to shut FFTF for good and use funds saved on cleanup.

FFTF is not considered a viable, long-term source for medical research, radioisotopes, according to the Department's own medical advisory committee. There are other sources available. And NASA has no need to purchase Plutonium 238 for space missions, used to justify restarting FFTF.

Citizens of the Northwest have voiced their concerns about FFTF over & over and have made it clear that Hanford must be shut down and cleaned up!

1721-1

1721-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1721-2

1721-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

1721-3

1721-4

1721-2

1721-3: The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost-efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): Mary Susan Zotter

Organization: _____

Home/Organization Address (circle one): _____

2403 SW Thomas

City: Portland State: OR Zip Code: 97221

Telephone (optional): _____

E-mail (optional): SUSZOT@aol.com

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Collette E. Brown, NE-60
U.S. Department of Energy • 19501 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 1721: Mary Susan Zotter (Cont'd)

Response to Commentor No. 1721

1721-4: The May 22, 2000, correspondence from NASA to DOE identifies that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium 238 needed for large RTG may be maintained as a backup.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Commentor No. 1722: K. K. S. Pillay

Dr. Colette E. Brown
NE-50
Office of Nuclear Energy, Science and Technology
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

September 12, 2000

Dear Dr. Brown:

Subject: Draft NI PEIS

The Draft Programmatic Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production in the United States is a welcome sign. The issues discussed in this document have been the topics of public discussion for the past two decades and various Departments of DOE have conducted numerous studies that are collecting dust. Among the most recent are a report prepared by DOE/EM in 1999 (Nuclear Material Integration - Master Materials Management Plan) and another report to the U.S. Congress in June 2000 by the Secretary of Energy ("A Strategic Approach to Integrating the Long-Term Management of Nuclear Materials.") It is the ardent hope of many in the technical community that this PEIS does not suffer the indignities of all previous efforts to get DOE to move forward on issues identified in the title to the PEIS.

The DOE has rightly addressed in detail the need for isotopes for medical applications, which is most popular among the public and the problem that needs immediate attention. A judicious combination of alternatives 1 and 4 are sensible choices and are in the best interests of the nation. The restart of FFTF has significant importance to the future of nuclear science and technology in the U.S. and it would be the proper use of investments already made in FFTF and the adjacent "Secure Automated Fuel Fabrication Facility.. The construction of new accelerator facilities dedicated for isotope production at Los Alamos and Brookhaven National Laboratories are also appropriate measures to meet the demands of some special isotopes. However, reactor-produced isotopes are the bulk of isotopes used in the U.S. and immediate remedies are necessary to fill the growing needs in this area. This is where a proper combination of alternatives 1 and 4 becomes most desirable.

In addition to these facilities required for isotope production, the DOE should simultaneously initiate an effort to identify and preserve a number of valuable nuclear materials within the weapons complex that are identified as excess to national security. These include certain medical isotopes, a variety of sealed sources (used in metrology,) and high curie-content separated fission product sources. Specifically, it is essential to identify and store the following materials for future use: (1) aged purified natural thorium, (2) aged purified ²³³U, (3) aged highly enriched ²³⁵U, (4) ²²⁹Ra, (5) certain sealed sources and standards, (6) most of the high curie-content ¹³⁷Cs and ⁹⁰Sr.

Response to Commentor No. 1722

1722-1

1722-1: DOE notes the commentor's support for a combination of Alternative 1, Restart FFTF and Alternative 4, Construct New Research Reactor. As noted in Section 1.3 of Volume 1, DOE could choose to combine components of different alternatives in selecting the most appropriate strategy. The commentor should also note that if the Alternative 1 is selected in the Record of Decision, the Fuels and Materials Examination Facility (i.e., Secure Automated Fuel Fabrication Facility could also be used, depending on which option is selected. The FMEF could also be utilized for a number of other alternatives/options (see Table 2-3).

1722-2

1722-2: DOE notes the commentor's concern for identifying and preserving valuable nuclear materials for future use, although this issue is beyond the scope of this Nuclear Infrastructure PEIS. DOE recently made a decision to use a facility at ORNL to retain the uranium-233 inventory to be used for extraction of useful isotopes.

Commentor No. 1722: K. K. S. Pillay (Cont'd)

Dr. Colette E. Brown
NE-50

September 12, 2000

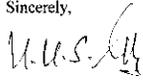
Page-2

Office of Nuclear Energy, Science and Technology

Another unmet need addressed in the PEIS is the need for a reliable source of ^{238}Pu . The need for ^{238}Pu as a reliable source of thermoelectric power for extended space missions and a variety of terrestrial applications are mentioned in the PEIS. This problem can be solved by creatively using two other isotopes available within the DOE complex— ^{237}Np and ^{241}Am —that are considered excess to national security. Both these isotopes can be readily converted into ^{238}Pu via neutron irradiation. FFTF or a new high-flux reactor facility are the ideal choices for meeting this national need. Relying on potential supplies from outside the U.S. is certainly not a good alternative or a defensible national strategy.

The Draft PEIS contains several references to opposition from the Hanford Community to reopen FFTF and other communities for establishing new facilities and operations. This is solely due to the past record of DOE in not being a responsible environmental steward. It is also true that during the late 80's DOE made many negotiated agreements with the States and they are considered obstacles to restarting or using facilities. Recognizing the past performance of DOE, it is essential to develop a new strategy to take the community into confidence and make them an integral part of decision making. This strategy, combined with open discussions of the benefits of nuclear technologies can go a long way in achieving the goals of the NI PEIS.

Sincerely,



(K. K. S. Pillay)
369 Cheryl Avenue
Los Alamos, NM 87544

1722-3

1722-4

Response to Commentor No. 1722

1722-3: DOE notes the commentor's support of creating a U.S. capability to produce plutonium-238 and not relying on foreign sources. DOE prefers the use of neptunium-237 for conversion into plutonium-238 for technical and cost reasons.

1722-4: DOE notes the commentor's views and observations. DOE is committed to discharging its responsibilities in an open and unbiased manner and providing the public with comprehensive environmental reviews of its proposed actions. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

Commentor No. 1724: May Hays

Response to Commentor No. 1724



Draft PEIS Comment Form

Dear Sir,

Please restart
FFTE for medical isotopes.
We need this for our
country. Sincerely,
May Hays
1915 Dupont Circle
Washington, DC, USA
775

509-943-9023

1724-1

1724-1: DOE notes the commentor's support for Alternative 1, Restart FFTE.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): _____

Organization: _____

Home/Organization Address (circle one): _____

City: _____ State: _____ Zip Code: _____

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19501 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Commentor No. 1725: Carl M. Clemons

September 9, 2000

Colette E. Brown, NE_50 U.S. Department of Energy Office of Nuclear Energy, Science and Technology 19901 Germantown Road, Room A_270 Germantown, MI) 20874

To Ms. Brown, Sec. Richardson, and members of the Nuclear Infrastructure PEIS Team:
Comments on the draft NI PEIS:

I support Alternative 5, the complete and permanent deactivation of the FFTF, for the following reasons:

The Hanford Nuclear Reservation is already a site highly contaminated with nuclear waste. The only mission for Hanford should be the cleanup of the existing nuclear contamination. No new production of nuclear materials at Hanford should be considered in light of the past history of problems with leakage of waste at that site; some experts have stated that Hanford can never be completely cleaned up. Plutonium has been accidentally released into the air twice since 1997 at Hanford; tests have confirmed this, even though the DOE initially denied it. This poses an unacceptable risk, especially in light of the fact that there are major population centers downwind of Hanford.

Restarting the FFTF will undoubtedly involve draining funds from the cleanup budget, even though some DOE officials have said that this won't happen. The reality is that the DOE does not have an unlimited budget, so the funds have to come from someplace. Restarting the FFTF is by itself a violation of the Tri-Party Agreement to deactivate, decommission, and clean up Hanford, but if cleanup funds were used to finance the restart that would constitute an additional violation of the agreement.

Owing to its proximity to the Columbia River and the Hanford Reach National Monument with its rich biological diversity, including important salmon spawning grounds, Hanford is an extremely poor location for a nuclear facility. There are other DOE nuclear facilities

1725-1

1725-2

Response to Commentor No. 1725

1725-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

1725-2: The commentor's concerns regarding the existing cleanup mission at Hanford are noted. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

DOE does not conceal releases of radioactive or hazardous materials at the Hanford Site or any other site under DOE's authority. No radioactive materials were "released" in the Hanford Wildfires of 2000. Wildfires did resuspend some materials already in the environment. The amount of resuspended materials were slightly above natural background levels. Because the amount of suspended material was so small, several days of analysis to required to quantify the amount. As discussed in Chapter 4 of Volume 1, implementation of the alternatives described in Section 2.5 of Volume 1 would pose no significant risk to human health or the environment.

Hanford Site cleanup is funded through the Environmental Management Program Office. The stated missions considered in this PEIS would be funded through the Office of Nuclear Energy, Science and Technology, which has no funding connection to cleanup activities. Implementation of Alternative 1, Restart FFTF, would have no effect on funding for the Hanford Site cleanup.

A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Prior public meetings were held on this formal milestone change. FFTF restart would not impact ongoing cleanup missions at Hanford.

The commentor's concerns about the Columbia River and the Hanford Reach National Monument are noted. As discussed in

Commentor No. 1725: Carl M. Clemons (Cont'd)

that are much better situated and far safer, and are therefore much better choices for the production of nuclear materials.

**1725-2
(Cont'd)**

Many other DOE facilities are only running at 50% capacity, so arguments that the FFTF at Hanford is needed to fill any present or projected demand for medical isotopes, Plutonium_238 for space missions, or any other nuclear materials, simply do not hold up.

1725-3

I support NASA and the exploration of space, but not at the expense of the environment here on Earth. If NASA had to scrap space missions because Hanford was not producing Plutonium_238, then so be it; however, that scenario is highly unlikely since other DOE facilities or foreign sources can fill the need.

1725-4

Medical isotopes are commercially available and are being produced at medical facilities and universities that have such production capability, including many in Canada. The DOE's projected demand for such isotopes is highly inflated, especially considering that non_nuclear alternatives to cancer treatment are being developed and are expected to become available very soon.

1725-5

The FFTF at Hanford is poorly suited for the production of research radioisotopes. Such isotopes are typically produced in small quantities at irregular intervals; the FFTF cannot do this cost effectively, since it was not designed for that type of production, but rather for large_scale, continuous production.

Thank you for the opportunity to comment on the draft NI PEIS.

Sincerely,

Carl M. Clemons
47100 SE Pheasant Meadow Rd.
Sandy, OR_97055

Response to Commentor No. 1725

Chapter 4 of Volume 1 and Appendixes H and I, implementation of the Alternatives would pose no significant threat to the Columbia River or the Hanford Reach National Monument.

The commentor's position on using sites other than Hanford for the production of plutonium-238 and other isotopes is noted.

1725-3: Currently, approximately 50 percent of DOE's medical isotope production capacity is being used. Much of the remaining medical isotope production capacity is dispersed throughout the DOE complex. This capacity supports secondary missions, but cannot be effectively used for medical isotope production due to the operating constraints associated with the facilities' primary missions (basic energy sciences or defense). The 50 percent capacity does not refer to plutonium-238 production or nuclear research and development needs.

1725-4: DOE notes the commentor's opposition to the production of plutonium-238 at Hanford for use in NASA space missions. As observed by the commentor, DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

1725-5: DOE acknowledges the difficulty in reliably predicting isotopic needs for future uses in research and medicine. DOE has sought independent analysis of trends in the use of medical radioisotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it has established two expert committees. The first, a thirteen-member Expert Panel convened in 1998 to forecast future demand for medical isotopes, included academicians from leading medical universities and schools of public health, and professional affiliations ranging from the National Cancer Institute to manufacturers of radiopharmaceuticals. The second consists of a subcommittee of DOE's Nuclear Energy Research Advisory Committee (NERAC), established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. The members of this

Commentor No. 1725: Carl M. Clemons (Cont'd)

Response to Commentor No. 1725

Subcommittee were selected based upon their expertise and experience in the production, processing, distribution, and application of stable and radioactive isotopes in the biological and physical sciences, and in medicine. The members included basic and clinical scientists, administrators, and users of isotopes from academia, industry, and the federal government.

In 1998, the Expert Panel estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

In ongoing clinical testing, therapeutic isotopes have proven effective in treating cancer and other illnesses by cell-directed localized radiation therapy (i.e., deploying antibodies or carriers of radioisotopes to seek and destroy invasive cancer cells). This directed therapy can minimize adverse side effects (e.g., healthy tissue damage, nausea, hair loss), making it an effective, attractive alternative to traditional chemotherapy or radiation treatments.

The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum 99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements.

Commentor No. 1725: Carl M. Clemons (Cont'd)

Response to Commentor No. 1725

Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost-efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

Commentor No. 1726: Gene and Marilyn Derig

Dear Ms Brown: 9/13/00
 5:11 PM

It seems that every few months we have to write our Senators or Representatives or the Head of a Department and ask that FFTF be shut down.

The arguments for restarting FFTF don't stand up at all against contrary evidence.

Rather than write down the reasons for not starting FFTF again, we will just say our position is: "Close It Down". You know the reasons, we know the reasons.

Thank you for your time.

Sincerely,


 GENE and MARILYN DERIG
 P.O. Box 341
 Anacortes, WA 98221

1726-1

Response to Commentor No. 1726

1726-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 1728: Heather Hopkins

Response to Commentor No. 1728

Draft PEIS Comment Form

Doing anything at the Hanford site besides the clean-up that was agreed to is a crazy idea.

Everything that you propose is frivolous, unnecessary and serves only your interests. We the people DEMAND that you choose:

Alternative #5
 SHUT DOWN FFTF

Thank you,
 Heather Hopkins

1728-1

1728-1: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

1728-2

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Although research to identify other potential fuel sources to support these space exploration missions has been conducted, no viable alternative to using plutonium-238 has been established. Based on NASA guidance

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Heather Hopkins

Organization: _____

Home/Organization Address (circle one): PO Box 891

City: The Dalles State: OR Zip Code: 97058

Telephone (optional): _____

E-mail (optional): zejila@hotmail.com

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free telephone: 1-877-562-4593 • Toll-free fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 1728: Heather Hopkins (Cont'd)

Response to Commentor No. 1728

to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

In January 1997, President Clinton tasked his Committee of Advisors on Science and Technology (PCAST) to evaluate the current national energy research and development portfolio and to provide a strategy that ensures the United States has a program to address the Nation's energy and environmental needs for the next century. In its November 1997 report responding to this request, the PCAST Energy Research and Development Panel determined that restoring a viable nuclear energy option to help meet our future energy needs is important and that a properly focused research and development effort to address the potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) was appropriate. The PCAST panel further recommended that DOE reinvigorate its nuclear energy research and development activities to address these potential barriers. Section 1.2.3 provides information on the nuclear energy research and development mission.

1728-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 1729: Dorothy Perry

Dear MS Brown.

I am a long time resident of the City of Richland, WA. I am totally in favor of restarting the FFTF reactor. It would be a total waste of government funds not to use this reactor for what ever purposes that it can be used for. To make Medical Isotops to fight cancer would be wonderful. Cancer is such a dreadful disease. Chemo Threapy is almost as bad as the disease.

Sincerely,,



1729-1

Response to Commentor No. 1729

1729-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1730: Andrea Faste

Andrea M. Faste
7713 11th Ave. NW
Seattle, WA 98117

Sept. 12, 2000

Colette E. Brown
US Department of Energy
NE-50
19901 Germantown Road
Germantown, MD 20874-1290

Dear Ms. Brown:

Please listen to the many citizens of Washington State who are appalled at the idea of restarting the Fast Flux Reactor at Hanford. We are very frustrated that the clean-up effort so necessary at the existing plants keeps getting side-tracked as plans are put forth to bring yet more high level waste to the Hanford reservation. We are concerned that the EIS for the restart fails to take into account the availability of nuclear isotopes from other sources for medical research, and that we have plenty of plutonium already. What worries us is the inability of the DOE to get on with the clean-up, which was promised, even signed into agreement with the State of Washington, years ago. Now there are reports that leaks from the old Hanford are creeping into the ground water and heading toward the Columbia River.

Let us turn from the false hope of good jobs if the region is put in environmental jeopardy. Noone wants to see the future of central Washington turn as bleak as that of the fields surrounding Chernobyl.

Sincerely,



Andrea Faste
(a concerned citizen west of the Cascades)

|| 1730-1
|| 1730-2
|| 1730-3
|| 1730-4
|| 1730-2

Response to Commentor No. 1730

1730-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1730-2: The commentor's concerns regarding the existing cleanup mission at Hanford are noted. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site.

A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Prior public meetings were held on this formal milestone change. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

As discussed in Chapter 4 of Volume 1, implementation of the alternatives described in Section 2.5 of Volume 1 would have no significant effect on groundwater at candidate sites or the Columbia River.

1730-3: Sections 4.3.1.1.13; 4.3.2.1.13; 4.3.3.1.13; and 4.4.2.1.13 were revised to clarify the waste management approach for waste resulting from processing target materials for plutonium-238 production.

1730-4: The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably

Commentor No. 1730: Andrea Faste (Cont'd)

Response to Commentor No. 1730

Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. Further, supplies of many research isotopes are not readily available from existing foreign or domestic sources, causing a number of medical research programs to be terminated, deferred, or seriously delayed. As such, reliance on these other sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Commentor No. 1731: Wallace P. Howell

1507 Putnam St.
Richland, WA 99352
Sept 11, 2000

Ms. Colette Brown
DOE Office of Space and Defense Power Systems
19801 Germantown Road
Germantown, MD 20874-1290

Dear Ms. Brown:

Re: FFTF EIS

I strongly support the restart of the FFTF reactor facility, both for the production of medical and space mission isotopes, and for whatever other research missions might be suitable for this, our newest and most advanced nuclear reactor. It greatly distresses me that we are spending so much time and money in dealing with the latter-day Luddites who are opposing this.

I am a 79-year-old retired Certified Health Physicist who worked at Hanford from 1947 until 1986. That's 39 years, all of it in operational health physics. I was one of the original members of the Health Physics Society. I am profoundly disturbed by the sad disuse of nuclear technology in this country, while we still have the knowledge and a few outstanding facilities, like the FFTF, which can bring us enormous benefits, at moderate cost. The situation completely baffles me!

As I look at the technical situations around the world, I see other countries busily putting into practice technology which we invented. The vitrification and disposal of high-level nuclear waste readily comes to mind. We developed the technology thirty years ago, and it has been in use in France and Sweden since the mid-1970s. In the meantime, we sit on our National thumb, debating what to do with ours!

It's hard to believe that this is the same country that developed most nuclear technology, that went to the Moon a dozen times, that conceived and implemented the Internet, and that is now engaged (with Russia) in building an International Space Station.

That's how it looks from here, in the real world, not Foggy Bottom, Ms. Brown. I hope that you and your colleagues can help to bring the vision of the people in Foggy Bottom somewhat nearer to that of the real world, and help to get us back into real accomplishment in the nuclear field.

Yours Truly,



Wallace P. Howell, CHP

Response to Commentor No. 1731

1731-1

1731-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

1731-2

1731-2: DOE notes the commentor's concerns. It is DOE policy to encourage public input on matters of regional, national and international importance as part of its commitment to facilitate a public participation process that is open and unbiased.

Commentor No. 1732: Carol Sinclair

Heart of America Northwest

From: Carol Sinclair <carolsin@kcls.org>
To: <office@heartofamericanorthwest.org>
Sent: Thursday, August 24, 2000 4:23 PM
Subject: Attn: Danielle

I want to add my voice to those at the hearing on August 30 calling for the Department of Energy to abandon its latest plans in regard to the Hanford nuclear facility.

1) There is not a need to restart the FFTF. There is danger in the plutonium already found in the soil, and in trace amounts found in firefighters after the recent wildfire.

2) It is too risky to transport large amounts of nuclear waste by truck through the densely-populated urban area around Seattle. Do you know how impossible our traffic congestion is right now?

Please do the right thing, which is to put the safety concerns of our citizens first.

Sincerely,
Carol Sinclair
Seattle, WA

1732-1

1732-2

1732-3

Response to Commentor No. 1732

1732-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF. The need for the proposed action is addressed in Section 1.2 of Volume 1 of the PEIS. The role of FFTF in fulfilling that need is addressed in Section 2.5.2 of Volume 1.

1732-2: No radioactive materials were "released" in the Hanford Wildfires of 2000. Wildfires did resuspend some materials already in the environment. The resuspended materials were low, slightly above natural background levels. The low levels required several days of analysis to quantify.

No firefighters working the Hanford wildfires of 2000 tested positive for radioactive material uptakes.

1732-3: It is not anticipated that wastes from the proposed facilities would be transported through the Seattle area. However, any waste transported from candidate sites would be subject to regulation by the U.S. Department of Transportation (DOT) and the U.S. Nuclear Regulatory Commission (NRC). Population densities and traffic congestion are factors that were considered during the development of the DOT and NRC regulations that apply to transportation of radioactive and hazardous materials.

Commentor No. 1733: Jean T. Carpenter

September 12, 2000

Colette Brown
Office of Space & Defense Power Systems
US Dept of Energy
19901 Germantown Rd
Germantown MD 20874

Dear Colette Brown,

I realize that there have been hearings about the possibility of restarting the FFTF in Hanford, WA.

I realize, too, that there is a great need for jobs, the economic situation in Central Wa is perhaps far from great -- we're certainly struggling greatly with lack of work & business opportunities here in Okanogan Cty -- but the LAST way I see as doing anything positive is creating still more poisonous wastes in a place that is already so polluted that it seems no one has the knowledge or the will or whatever it takes to really take hold and do something about it.

I ask that you use your position for the well-being of not only this entire area, but of the whole community of life, to prevent the FFTF from being restarted, to keep any kind of polluting wastes from being stored and Hanford, and to put whatever resources are needed to clean up once and for all a place that threatens the health of us all.

Thank you for doing your best to act on this urgent issue.

Sincerely,



Jean T Carpenter
514 S Ash
Omak WA 98841
509-826-6742

1733-1

1733-2

Response to Commentor No. 1733

- 1733-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 1733-2:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

More specific to the DOE missions in the NI PEIS, the environmental impacts associated with operation of the FFTF and support facilities at Hanford during normal operations and from postulated accidents are presented and discussed in Section 4.3 of Volume 1 of the NI PEIS. All impacts to human health and to ecological resources would be small in the immediate area of the Hanford Site and negligible at all distant locations.

In regards to waste, the NI PEIS addresses the environmental impacts due to the treatment, storage, and disposal of the waste generated for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and appropriate DOE orders.

Commentor No. 1734: Catherine Pearsall



Catherine Pearsall
711 Riverside Drive
West Richland, Washington 99353

September 9, 2000

Ms. Colette Brown
Department of Energy
19901 Germantown Road
Washington DC 20874

Dear Ms. Brown,

RESTART OF FAST FLUX TEST FACILITY (FFTF) FOR PRODUCTION OF MEDICAL ISOTOPES

I am a constituent in Eastern Washington State. I truly believe the Fast Flux Test Facility (FFTF) should be restarted by the Department of Energy (DOE) for production of medical isotopes. It can uniquely provide a wide variety of high-grade isotopes, some of which cannot currently be produced in the U.S. In addition, FFTF has the capacity to produce 2-3 times more medical isotopes than all other reactors in the nation combined. We need to be ready to supply large quantities of medical isotopes to cancer centers around the nation. At a minimum many of our fellow citizens are suffering with cancer and doctors need these products to help in curing or developing a cure for cancer.

So, lets use this operational facility, not throw it away as we have done so many others (i.e. the Supercollider) just for the sake of political capital. I know there is much opposition from Western Washington State, however, I believe much of what they don't want has to do with the fact they are making judgements based on inaccurate publicity and not sound science.

Please restart the FFTF. It would be a great tragedy if we allowed this resource to be permanently shutdown.

Sincerely,


Catherine Pearsall
Richland, WA

Response to Commentor No. 1734

1734-1

1734-1: DOE notes the commentor's support for Alternative 1, Restart FFTF. The commentor should note that while the FFTF has a large volume available for the production of isotopes, it cannot produce 2 to 3 times more medical isotopes than all other reactors in the nation combined.

1734-1

Commentor No. 1735: Anonymous

September 15, 2000

Ms. Colette Brown,
PEIS Document Manager,
Office of Nuclear Energy, Science and Technology,
U.S. Department of Energy
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

Please accept the attached document for the record of the PEIS on isotope production. Canadian production of isotopes and the ability of Canadian sources to meet U.S. needs should be fully discussed in the final PEIS and should bear on any decision to restart the FFTF, a reactor not designed for efficient production of medical isotopes.

As the U.S. Department of Energy, via Argonne National Laboratory, is working with MDS Nordion to convert its medical production reactors at Chalk River, Canada from highly enriched uranium (HEU) to low-enriched uranium (LEU), the role of Argonne in isotope production worldwide should be included in the final PEIS. Argonne's work with Nordion and Atomic Energy of Canada Ltd. has a direct bearing on U.S. isotope use and should be fully discussed in the final PEIS.

For further information on MDS Nordion, go to <http://www.nordion.com>.

1735-1

Response to Commentor No. 1735

1735-1: The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirement. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs. DOE's assistance to Canada in reactor conversions is not within the scope of the NI PEIS.

DOE acknowledges that the FFTF's large size and configuration are not particularly well suited for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of the FFTF for the production of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report, "NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000," states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production". In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates use of the FFTF when coupled with the other proposed missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without disturbing the existing missions of these facilities.

Commentor No. 1737: Richard B. Parkin
U.S. EPA



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

SEP 19 2000

Reply To
Attn Of: ECO-088

Ref: 00-004-DOE

Colette E. Brown, NE-50
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

Dear Ms. Brown:

We have reviewed the draft programmatic Environmental Impact Statement (EIS) for *Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility* (CEQ# 000258) in accordance with our responsibilities under the National Environmental Policy Act and §309 of the Clean Air Act. The draft EIS addresses a mission to increase the availability of medical and industrial isotopes to accommodate future projected needs in diagnostic and therapeutic medicine, the space program, and civilian energy research and development. Alternatives presented in the draft EIS include the no action, restarting the Fast Flux Test Facility (FFTF) at Hanford, using existing DOE facilities, constructing new accelerator(s), constructing a new research reactor, and permanently deactivating the FFTF.

We have rated the draft EIS, EC-2 (Environmental Concerns-Insufficient Information) We have attempted to weigh the benefits that would arise from adopting action alternatives against the environmental consequences occurring with their adoption when assigning our rating. To a large extent, a lack of information in the draft EIS was the basis for our environmental concerns.

Information we found lacking in the EIS includes

- a compelling case that a need will arise in the future for plutonium-238 and medical and industrial isotopes;
- site-specific impacts from proposals to construct and operate accelerator(s) or a research reactor (the absence of this information prevents us and other readers from judging the environmental acceptability of these proposals);
- a demonstration that proposed action would be consistent with achieving the future land use designations that are directing Superfund clean-up efforts, especially in the 300 area in Hanford;
- assurances that funding for these proposals would not be from monies presently earmarked for clean-up; and
- the rationale for including an alternative for decommissioning the FFTF since it does not appear to address the stated purpose and need.

We are also concerned that the cost and non-proliferation reports were not made available to the public until well into the comment period on the draft EIS. We believe that the Department of Energy (DOE) should have released this information as part of the draft EIS and that its late release limits the ability of the public to comment on elements important to this decision. Moreover, we are concerned that DOE released cost and non-proliferation reports late in the draft EIS process on its

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Response to Commentor No. 1737

1737-1: The commentor's views are noted. Sections 1.2.1 and 1.2.2 of Volume 1 provide a description of the need for production of medical and industrial isotopes and plutonium-238, respectively. DOE could purchase plutonium-238 from Russia to satisfy its near-term responsibility to supply NASA with plutonium-238 to support future space exploration missions. Under the current contract set to expire in 2002, the United States is authorized to purchase up to 40 kilograms of plutonium-238, with the total available for purchase in any one year limited to 10 kilograms. However, DOE does not stockpile large quantities of Russian plutonium-238 long in advance of needs due to budget constraints and the additional processing required to remove decay products that occur following extended storage of the material. To date, DOE has purchased approximately 9 kilograms of plutonium-238 under this contract. The environmental impacts associated with procurement of plutonium-238 from Russia are evaluated as an element of the No Action Alternative. Nonproliferation issues are addressed in a separate report, "Nuclear Infrastructure Nonproliferation Impact Assessment," September 2000.

Through a Memorandum of Understanding with NASA, DOE provides isotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions would be in jeopardy.

DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its

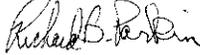
Commentor No. 1737: Richard B. Parkin (Cont'd)
U.S. EPA

2

last EIS, *The Treatment and Management of Sodium-Bonded Spent Nuclear Fuels*. We recommend that this information accompany the release of the draft EIS for future DOE projects.

Our rating and a summary of our comments will be published in the Federal Register. I have enclosed a copy of the rating system used in our review for your reference. I have enclosed a copy of the rating system used in our review for your reference and our detailed comments. I encourage you to contact Chris Gebhardt of my staff at (206) 553-0253 if you have any questions. Thank you for the opportunity to review this draft EIS.

Sincerely,



Richard B. Parkin, Manager
 Geographic Implementation Unit

enclosures

1737-6
(Cont'd)

Response to Commentor No. 1737

mandates under the Atomic Energy Act. In doing so, it established two expert committees. In 1998, an Expert Panel convened to forecast future demand for medical isotopes estimated that the expected growth rate of medical isotope use during the next 20 years will range between 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by DOE's Nuclear Energy Research Advisory Committee (NERAC), established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. The growth projections were also adopted by DOE as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings.

The United States currently purchases approximately 90% of its medical isotopes from foreign producers, most notably Canada. Although other manufacturers produce medical isotopes, DOE remains the key provider for a large number of isotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially experimental, these isotopes are not generally purchased in large-enough quantities to make their production financially attractive to private industry. However, supplies of many research isotopes are not readily available from existing domestic or foreign sources, causing a number of medical research programs to be terminated, deferred, or seriously delayed. Under the NI PEIS proposed action and consistent with its mandates under the Atomic Energy Act, DOE would enhance its existing nuclear facility infrastructure to, among other things, more effectively support production of isotopes for medical applications and research. DOE's intent is to complement commercial sector capabilities to ensure that a reliable supply of isotopes is available in the U.S. to meet future demand, and to encourage the commercial sector to privatize the production of isotopes that have established applications to a level that would support commercial ventures.

1737-2: DOE notes EPA's concerns. DOE used the generic site approach for Alternatives 3 and 4 in the absence of specific siting alternatives. This level of analysis is appropriate for a PEIS. Projected

Commentor No. 1737: Richard B. Parkin (Cont'd)
U.S. EPA

EPA's Detailed Comments on the Draft Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the U.S., Including the Role of the Fast Flux Test Facility

Consistency of Alternatives with Land Use Designations

We understand that the Hanford 300 area and the majority of potential sites for the proposed accelerator(s) and research reactor are on Superfund's National Priority List (NPL) and are undergoing clean-up. Clean-up activities are oriented toward meeting future land use designations. EPA, as overseer of Superfund activities on these sites, is concerned that proposals may inhibit efforts to clean-up Hanford's 300 area or other sites on the NPL to standards consistent with their designated future land uses. We strongly recommend that the EIS state whether alternatives occur in sites on the NPL, describe future use designations directing clean-up activities, and demonstrate that action alternatives are consistent with existing Superfund efforts to meet future land uses.

1737-3

Budget Concerns

EPA is concerned about restarting the FFTF and building and operating an accelerator(s) or a research reactor because funds used for these new activities could potentially reduce the level of funding for clean-up at DOE sites. EPA fears that funding to operate the FFTF, and to an even greater extent, to construct and operate a new accelerator(s) or research reactor could divert clean-up funds from DOE's limited funding base. EPA, therefore, recommends that the EIS demonstrate that sufficient funding exists outside the clean-up budget to fund action alternatives one through four and that the Record of Decision commit to not using funds allocated for clean-up to implement action alternatives one through four.

1737-4

Not Siting Proposed Accelerator and Research Reactor Prevents Assessing Impacts

The draft EIS does not specify where the proposed accelerator(s) and research reactor in alternatives three and four, respectively, would be located and the document consequently lacks an assessment of impacts to ground water, surface water, and air resources, among others. We believe that the absence of site specific information for these two alternatives prevents DOE from considering them as viable options when the type and extent of environmental and health impacts is unknown. We therefore recommend that the final EIS drop alternatives three and four or specify a location for siting the proposed accelerator(s) and research reactor and include a full discussion of impacts with their adoption.

1737-2

No Compelling Demonstration of the Need for the Project

The EIS does not present a compelling case that a need exists to ensure the production of plutonium-238 for space missions, and to a lesser extent, the isotopes for medical and industrial purposes in 5-10 years. Currently, DOE is purchasing needed plutonium-238 from Russia and isotopes for medical and industrial purposes from other sources, including Canada. The EIS does not demonstrate that DOE cannot continue to meet the demand for these materials in the future.

1737-1

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construction and operational data on nonradiological air emissions, water use, radiological and chemical releases, and waste generation are provided at a level of detail commensurate with that provided for the existing facilities under consideration. Should one of these alternatives ultimately be selected on the basis of its technical merit for accomplishing the stated missions and the assessment of environmental impacts, subsequent NEPA reviews would be conducted to include an analysis of siting alternatives and associated site-specific impacts.

1737-3: Information on the NPL status is provided in the NI PEIS Waste Management sections of Chapter 3 (i.e., Sections 3.2.11.1, 3.3.11.1, and 3.4.11.1). In addition, as noted in the Land Use sections in Chapter 4 for each of the proposed alternatives, the proposed activities are consistent with the current land use plans for those facilities under consideration in this NI PEIS.

1737-4: DOE shares the EPA's concern about adequate funds for the cleanup of Hanford and other DOE sites. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2 of Volume 2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

1737-5: DOE acknowledges that Alternative 5, Permanently Deactivate FFTF with No New Missions, does not meet the purpose and need of the proposed action. This alternative was added to the analysis as a result of stakeholder input, and specifically focuses on the permanent deactivation of FFTF coupled with no new missions.

1737-6: CEQ (40 CFR 1500 et seq.) and DOE (10 CFR Part 1021) implementation regulations do not require inclusion of cost and nonproliferation studies in an environmental impact statement. A basic purpose of the NI PEIS is to describe the alternatives under consideration for implementation (Section 2.5 of Volume 1) and the

Commentor No. 1737: Richard B. Parkin (Cont'd)
U.S. EPA

Moreover, the current practice of purchasing plutonium-238 from Russia is not only more cost effective than restarting the FFTF or constructing and operating new accelerator(s) or a research reactor, it also appears to address nonproliferation concerns. This practice places Russian-produced nuclear material in U.S. hands which, in light of the political scene in Russia, is currently a more secure option and it gives Russia much needed funding to manage the nuclear stockpiles that exist there.

Decommissioning the FFTF Appears to be Outside the Purpose and Need

Although we support decommissioning the FFTF and recognize it as consistent with the Hanford Agreement, we question how this alternative meets the purpose and need included in the EIS of producing plutonium-238 and isotopes for medical and industrial purposes. This alternative does, however, address the question of what DOE should do with inactive reactors and accelerators (especially the FFTF) at its sites. We recommend that the EIS rewrite the purpose and need statement to reflect the larger question of what to do with inactive reactors and accelerators if this is the case.

More Detailed Comments

1. In Table S-10, impacts are described by comparison with applicable air environmental standards. We recommend a similar approach be used in Table S-11 to describe radiological impacts (dose) by comparison with the applicable Clean Air Act standard (10 mrem/year). Separate comparisons should be made with Safe Drinking Water Act criteria. This would help in providing a more consistent basis for comparing radiological to nonradiological impacts and would also make clear what (if any) of the radiological impact is due to releases to groundwater.

2. We recommend that the EIS present cancer risks from chemical, radiologic, and the combination of both on the same page and in the same format. For example, readers of the EIS could more easily detect that the chemical cancer risk in Table 4-76 is much greater than the associated radiological risk. More direct comparison would add clarity to this useful information.

3. On Page 4-274, Table 4-140 is explained with "Hazard indexes for the toxic chemicals were all far below one, and cancer risk values are well below acceptable risk values. Thus, there would be no hazardous chemical impacts from the operation of the new reactor". It is not clearly stated what "acceptable risk values" are. The hazardous chemical cancer risk in Table 4-140 is approximately 0.000000001 which is a small number but is not zero. The basis for dismissing this level of risk is not stated. If the same logic were applied to the radiological risks in Table 4-138, the radiological risks might also be "no impact". Nonradiological cancer risks should be carried through the analysis in the same way as radiological risks including, where appropriate, the calculation of population-scale "Latent Cancer Fatalities".

4. In Appendix I, hazardous chemical risks are not evaluated where quantities do not exceed Threshold Planning Quantities, or where quantities are bounded by the quantities currently stored in the facility. As a consequence, hazardous materials risks from serious accidents such as Ion Exchange Explosion or Dissolver Tank Failure are evaluated for radiological consequences, but

1737-1

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1737-10

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environmental impacts that would occur if these alternatives were implemented (Chapter 4 of Volume 1). Pursuant to CEQ regulations 40 CFR 1505.1(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. The associated cost report and nonproliferation report were made available to the public on August 24, 2000 and September 8, 2000, respectively. Both reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided summaries of the Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment in Appendixes P and Q, respectively, in the Final NI PEIS.

1737-7: The text associated with Table S-11 in the Draft NI PEIS (Table S-15 in the Final PEIS) provides the Clean Air Act and Safe Drinking Water Act standards for radiological impacts.

1737-8: Cancer incidence risks from chemical and radiological agents are presented separately in Chapter 4 of Volume 1. However, Table 2-6 of Section 2.7.1.1 provides side-by-side comparisons of radiological and chemical risks. In general, combining the population radiological latent cancer fatality risk with the chemical cancer incidence risk is not appropriate. Section H.3 (Assumptions) has been revised to provide a discussion of the differences in the risk measures for radiological and chemical risk.

1737-9: The reference to acceptable risk values for the carcinogenic chemicals has been removed from the text in the Final NI PEIS. The cancer risk listed for Propylene in Table 4-140 of the Draft NI PEIS Table 4.147 of the Final PEIS means that the likelihood of an individual contracting cancer from exposure to 0.000173 micrograms per cubic meter of propylene over 35 years would be less than approximately 1 in 1.5 billion. For perspective, that risk is approximately six orders of magnitude less than the risk of the individual contracting a fatal cancer from 35-years of exposure to cosmic radiation. Nevertheless, since "acceptable risk values" is open to interpretation, the phrase "acceptable risk values" will be removed.

The radiological risk to the maximally exposed offsite individual shown in Section 4.6.1.2.9 means that the likelihood of the individual

Commentor No. 1737: Richard B. Parkin (Cont'd)
U.S. EPA

not for associated chemical risks. This approach limits comparisons of alternatives and also of radiological to nonradiological risks. From the standpoint of providing an equitable basis for comparison, Threshold Planning Quantities and quantities on hand are not pertinent. The important consideration is to compare impacts (including both chemical and radiological ones) among alternatives.

1737-10

5. In summary tables of risks, both radiological and nonradiological risks should be included for comparison.

1737-11

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becoming a latent cancer fatality due to the radiation exposure that would result from implementation of this alternative is less than approximately 1 in 22 million. That risk is approximately four orders of magnitude less than the risk of the individual contracting a fatal cancer from 35-years of exposure to cosmic radiation. Neither risk is voluntary, and the radiological risk to the maximally exposed offsite individual due to the former radiation source is essentially zero.

Some care should be exercised in comparing the cancer risk from hazardous chemicals with the latent cancer fatalities used to quantify radiological risk to populations because the two risks have different physical interpretations. The cancer risk from hazardous chemicals shown in tables throughout Chapter 4 of Volume 1 is a probability of cancer incidence (not fatality) for an individual that is continuously exposed to the specified concentration of the chemical over the 35 year program duration. The U.S. Environmental Protection Agency (EPA) has not developed cancer mortality risk factors for carcinogenic chemicals. Therefore, it is not possible to provide a latent cancer fatality estimate for exposure to these chemicals. Additionally, the impacts from exposure to multiple carcinogens are not necessarily additive. Exposure to multiple carcinogens may result in either synergistic or antagonistic effects. The expected number of latent cancer fatalities, from a radiological exposure, among the population is a statistical average that considers the variability in radiological exposure that arises from the geographical distribution of the population and prevailing weather conditions. Based on wind direction, wind speed, atmospheric stability and distance from the radiation source, some persons in the area at risk are exposed to more radiation than others. While it is possible to develop population cancer incidence figures using similar modeling techniques to those used in the radiological assessment; that has not been done in this analysis. The EPA recommends using an iterative approach when performing risk analysis for chemical exposures, progressing from the simple to the more complex analysis depending upon the perceived need for more detail in the analysis. Based upon the information available and the results of the chemical risk analysis, it was determined that the analysis provided in the PEIS provides an appropriate measure of the chemical risks. Care is also required in comparing the cancer risk from hazardous chemicals to the

Commentor No. 1737: Richard B. Parkin (Cont'd)
U.S. EPA

**U.S. Environmental Protection Agency Rating System for
 Draft Environmental Impact Statements
 Definitions and Follow-Up Action***

Environmental Impact of the Action

LO -- Lack of Objections

The Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC -- Environmental Concerns

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO -- Environmental Objections

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU -- Environmentally Unsatisfactory

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category I -- Adequate

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

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radiological risk to the maximally exposed offsite individual. The cancer risk for hazardous chemicals is a probability of cancer incidence, while the radiological risk to the maximally exposed offsite individual is a risk of cancer mortality.

- 1737-10:** The NI PEIS analyses included the determination of the incremental hazardous chemical accident risks for the proposed actions under each alternative. Therefore, hazardous chemical accident risks were not evaluated at facilities that would not be altered by the proposed action. This allows an equal comparison of the proposed action among alternatives.
- 1737-11:** Section 2.7 of Volume 1 contains a summary table that includes both the radiological and nonradiological risks from normal operations and radiological risks from accidents for use in making comparisons among alternatives. The nonradiological hazardous chemical accidents evaluated in the NI PEIS resulted in no risk to health and safety at distances well within the site boundaries of each facility. Therefore, the nonradiological accident risks were not included in the summary table.

Commentor No. 1737: Richard B. Parkin (Cont'd)
U.S. EPA

Category 2 - - Insufficient Information

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

Category 3 - - Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions impacting the Environment. February, 1987.

Response to Commentor No. 1737

Commentor No. 1738: John Feldman

NI PEIS Toll_Free Telephone

9/18/00

John Feldman
3722 SE Taylor
Portland, OR 97214

Yes, I am against the reactivation of the Hanford nuclear power systems. I don't think it's a good idea. They should think twice. So please reconsider. My name is John Feldman, my address is 3722 Southeast Taylor, Portland, Oregon 97214.

1738-1

Response to Commentor No. 1738

1738-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1739: Laura Berger

NI PEIS Toll_Free Telephone

9/15/00

Laura Berger
408_2609

Hi. My name is Laura Berger and I oppose the restart of the FFTF nuclear reactor at Hanford. I don't know if I need to say anything more but if you need to contact me my number is 408_2609.
Thank you.

1739-1

Response to Commentor No. 1739

1739-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1740: Martin Lewis

NI PEIS Toll_Free Telephone

9/15/00

Martin Lewis
3133 Fairfield Street
Philadelphia, PA 19136
215_676_1291

My name is Martin Lewis. I'm sending this to Colette Brown concerning the DOE plans to expand production of plutonium 238 for future space missions. Please do not send me the draft PEIS. Keep it. There's no need to expand the existing nuclear infrastructure. Space nuclear power is a good way to destroy this earth. Every entry accident of some kind, on the path accidents for that matter, and we could wind up with plutonium 238 in Philadelphia, which I'm strongly against as I live in Philadelphia, my name is Martin Lewis, 3133 Fairfield Street, Philadelphia, PA 19136, 215_676_1291. I don't know if I'm being recorded. I hope I am. It's just ridiculous that we are still pushing for more plutonium 238. We've been lucky so far. Although our children may not be lucky the way we're poisoning the earth. I don't have any children but I still do not want the effects of my being on this earth poisoning future generations. Please do not promote in any way the use plutonium 238 into space business and please stop promoting the use of nuclear power in space. Thank you.

1740-1

1740-2

Response to Commentor No. 1740

1740-1: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Although research to identify other potential fuel sources to support these space exploration missions has been conducted, no viable alternative to using plutonium-238 has been established. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost. Section 1.2.2 of Volume 1 was revised to further clarify the purpose

Commentor No. 1740: Martin Lewis (Cont'd)

Response to Commentor No. 1740

and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

In January 1997, President Clinton tasked his Committee of Advisors on Science and Technology (PCAST) to evaluate the current national energy research and development portfolio and to provide a strategy that ensures the United States has a program to address the Nation's energy and environmental needs for the next century. In its November 1997 report responding to this request, the PCAST Energy Research and Development Panel determined that restoring a viable nuclear energy option to help meet our future energy needs is important and that a properly focused research and development effort to address the potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) was appropriate. The PCAST panel further recommended that DOE reinvigorate its nuclear energy research and development activities to address these potential barriers. Section 1.2.3 provides information on the nuclear energy research and development mission.

1740-2: DOE notes the commentor's concern for NASA's use of nuclear materials for space missions, although this issue is beyond the scope of this PEIS. Through a Memorandum of Understanding with NASA DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch.

Commentor No. 1741: Angel Kelly

NI PEIS Toll_Free Telephone

9/15/00

Angel Kelly
Portland, OR

Hi. My name is Angel Kelly. I live in Portland, Oregon. I'm calling to say that I disagree with the restart of the Fast Flux Facility at Hanford. I think that the priority of the Department of Energy should be to clean up existing nuclear messes which they're not currently doing adequately and to not do anymore creation of radioactive waste until there is proper way to deal with the waste that's already created and any future waste that is generated. The Environmental Impact Statement doesn't take into account that this waste will last for hundreds of years and that it will contaminate the water and the land. Thank you.

1741-1

1741-2

Response to Commentor No. 1741

-
- 1741-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 1741-2:** The restart of FFTF or any of the other proposed alternative facilities would not impact the schedule or available funding for existing cleanup activities at Hanford, INEEL, or ORR. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 1742: Sonia Wilson

NI PEIS Toll_Free Telephone

9/15/00

Sonia Wilson
9505 NE Campaign
Portland, OR 97220
503_253_0191

Hi. I would like to call to state my opinion. I'm opposed to the restart of the FFTF nuclear reactor at Hanford. If you have any questions, or you need to make sure that I'm a voter or whatever, my name is Sonia Wilson and I live at 9505 NE Campaign in Portland, 97220. My phone is 503_253_0191. Thank you. Bye_bye.

|| 1742-1

Response to Commentor No. 1742

1742-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1743: Mrs. Birdwell

NI PEIS Toll_Free Telephone

9/15/00

Mrs. Birdwell
White Salmon, WA

You're wrong to restart any nuclear reactors near Hanford or any other place near the Columbia or any waterway flowing into it. Now you've got to clean up that mess at Hanford and refrain from this happening there again. Keep it away from the country. Put it away from here. Put it out in the middle of the desert where there's no water to flow into it. You have to figure out something better. I'm Mrs. Birdwell at White Salmon, right on that Columbia. I don't like it. Don't like to have that beautiful, beautiful river spoiled. It's the second largest river in the United States and look what you're doing to it.

1743-1

1743-2

Response to Commentor No. 1743

1743-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1743-2: Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are a high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Commentor No. 1744: John Shumacher

NI PEIS Toll_Free Telephone

9/15/00

John Shumacher
503_408_2651

I oppose the restart of the nuclear reactor at Hanford.
Please don't do it. My name is John Shumacher, area code
503_408_2651, if you want to get a hold of me, but do not
start the reactor again. Thank you.

|| 1744-1

Response to Commentor No. 1744

1744-1: DOE notes the commentor's opposition to Alternative 1, Restart
FFTF.

Commentor No. 1745: John McCarthy

NI PEIS Toll_Free Telephone

9/15/00

John McCarthy
White Salmon, WA

Hi, my name is John McCarthy. I'm a resident of White Salmon, Washington and I just want to voice my opposition to the startup of the reactor at Hanford in the state of Washington.

1745-1

I've been to all the Department of Energy meetings out here and the message from the people that live here is very clear. Please clean up the mess that is out there before you start adding to it. It is just beyond belief that you want to add to this cesspool that by your own admission you cannot clean up.

1745-2

So this is another citizen voicing very, very strong opposition to the startup of the nuclear reactor at Hanford.

1745-1

Thank you.

Response to Commentor No. 1745

1745-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1745-2: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The stated missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

Commentor No. 1746: Cal Roberts

NI PEIS Toll_Free Telephone

9/15/00

Cal Roberts
504 NE 139th Avenue
Vancouver, Washington 98684
360_892_1985

My name is Cal Roberts I live at 504 Northeast 139th Avenue, Vancouver, Washington 98684. My telephone number is 360_892_1985. I am totally opposed to the restart of the nuclear reactor at Hanford. Things need to be cleaned up before you even think about doing this kind of stuff. You've already got enough problems over there which means I have enough problems over there and since all stuff comes down_river, guess what? So, I would love to be able to talk with somebody about this if you think this is something you need to do. I just oppose it so much and I really would like to have somebody contact me. All right, thank you very much.

1746-1

1746-2

1746-1

Response to Commentor No. 1746

1746-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1746-2: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to “ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use.” The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Commentor No. 1747: Anonymous

NI PEIS Toll_Free Telephone

9/15/00

Anonymous

Good afternoon. I would just like to go on record as saying that I'm opposed to the restart of the FFTF nuclear reactor at Hanford. It's my understanding that the waste generated by this plant will take somewhere in the neighborhood of hundreds of thousands of years to become non_toxic. I just don't see anyway that the planet can afford nor needs to spend what is required to generate electricity through nuclear energy. Thank you very much.

1747-1

1747-2

1747-3

Response to Commentor No. 1747

- 1747-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 1747-2:** DOE notes the commentor's concern regarding the long-term storage requirements for the waste generated by the proposed action. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.
- 1747-3:** DOE notes the commentor's opposition to nuclear power generation. It is the current United States policy that clean, safe, reliable nuclear power continue as a viable component of the United States' energy portfolio. In recognition of this need, the government has initiated nuclear energy research and development programs to address potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) and to ensure that current nuclear power plants can continue to deliver adequate and affordable energy supplies. An enhanced DOE nuclear facility infrastructure is required to support such nuclear energy research and development for civilian applications.

Commentor No. 1748: Anonymous

NI PEIS Toll_Free Telephone

9/15/00

Anonymous

Don't start any nuclear reactors near Hanford or any other place on the mainland of America. Stop all waste being delivered at Hanford or any other place that is on our mainland. Build it someplace out on an island, and where it won't hurt the people, and prove to us that it is safe.

|| 1748-1

|| 1748-2

|| 1748-1

Response to Commentor No. 1748

1748-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, as well as Alternative 4, Construct New Research Reactor, unless it were built on an island.

1748-2: DOE notes the commentor's concern regarding waste generation and the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

Both government and commercial waste disposal sites are operated within the Hanford site. These are permitted by the State of Washington.

Commentor No. 1749: Anonymous

NI PEIS Toll_Free Telephone

9/16/00

Anonymous

Yes, DOE claims that it does have a preferred alternative among the five proposals in the PEIS released on July 21, 2000 but will identify one in the final PEIS. This creates a big credibility gap for those of us who have found that because of the failures of the DOE to identify, to include in the PEIS facts such as:

1. The DOE's own Blue Ribbon Medical Advisory Committee recommended last April that the FFTF not be considered as a viable long_term source of research radioisotopes.

1749-1

Also, the claim that it's needed for NASA research. NASA informed the DOE on May 22nd 2000 that missions can utilize alternative technologies with lower cost, potentially much lower environmental impact than start up of FFTF for production of Plutonium 238.

1749-2

And another thing that was missing from the PEIS was the cost report for alternatives. Also the Nuclear Infrastructure Nonproliferation Impact Assessment was not included. So I would say that this PEIS is a completely faulty matter and that there must be some hidden agenda. We in the Pacific Northwest want to have you fulfill commitment to close down FFTF and clean up Hanford, the most polluted place in the United States. Thank you.

1749-3

1749-4

1749-5

Response to Commentor No. 1749

- 1749-1:** The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost-efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.
- 1749-2:** DOE notes the commentor's views about FFTF and the production of plutonium-238 for use in future NASA space exploration missions. The May 22, 2000, correspondence from NASA to DOE identifies that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and

Commentor No. 1749: Anonymous (Cont'd)

Response to Commentor No. 1749

need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

- 1749-3:** The costs and nuclear nonproliferation impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such ancillary documents need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed these documents to more than 730 interested parties on August 24 and September 8, 2000, respectively. Both reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided summaries of the Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment in Appendixes P and Q, respectively, in the Final NI PEIS.
- 1749-4:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. With respect to previous commitments to deactivate FFTF, a change to the Tri-Party Agreement (TPA) removed the planned milestone for total deactivation of the FFTF until its ultimate fate was assessed. That proposed TPA milestone change was the subject of previous public meetings.
- 1749-5:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This

Commentor No. 1749: Anonymous (Cont'd)

Response to Commentor No. 1749

agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities. A previous change to the Tri-Party Agreement (TPA) removed the planned milestone for total deactivation of the FFTF until its ultimate fate was assessed. That proposed TPA milestone change was the subject of previous public meetings.

Commentor No. 1750: Anonymous

NI PEIS Toll_Free Telephone

9/16/00

Anonymous

We feel betrayed by DOE failing to live up to the Tri_Party Agreement which assured the people of the Northwest that you, as DOE, would be responsible for cleaning up Hanford's toxic waste.

Also in 1995, DOE added the agreement for FFTF to be shut down and cleaned up. Shut it down and clean it up without further delay.

1750-1

Response to Commentor No. 1750

1750-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford and the risk of contamination to the Columbia River. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

A previous change to the Tri-Party Agreement (TPA) removed the planned milestone for total deactivation of the FFTF until its ultimate fate was assessed. That proposed TPA milestone change was the subject of previous public meetings.

Commentor No. 1751: Roberta Carlson

NI PEIS Toll_Free Telephone

9/17/00

Roberta Carlson

Hello. This is Roberta Carlson and I'm calling to say that I want to have the Tri_Party Agreement followed for the Hanford cleanup. I'm very, I feel very strongly about this and I really want to have the nuclear reactor shut down in the whole process moving forward for the cleanup. Thank you.

1751-1

1751-2

Response to Commentor No. 1751

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- 1751-1:** Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. Waste management activities, such as treatment, storage, and disposal, are conducted via permits from the Washington State Department of Ecology.
- 1751-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 1752: Yolanda Domond

NI PEIS Toll_Free Telephone

9/17/00

Yolanda Domond
Portland, OR

Yes this Yolanda Domond from Portland Oregon. I totally oppose the restart the FFTF nuclear reactor in Hanford. I think it's insane to create more waste when we haven't even cleaned up the other waste.

1752-1

1752-2

Response to Commentor No. 1752

1752-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1752-2: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

Commentor No. 1753: Janelle Spain

NI PEIS Toll_Free Telephone

9/17/00

Janelle Spain
509_722_3046

I have comments. My name is Janelle Spain and telephone number 509_722_3046. And this is my comment:

The Department of Energy Nuclear Infrastructure should by no means be expanded for future research and development. Research and production. This is about the stupidest idea I've ever heard. Already we have a nuclear contamination crisis in our backyard. Already the Hanford nuclear reservation is filled with leaking tanks of toxic nuclear waste. Already taxpayers are spending billions in an attempt to clean up the mess and there exist no credible solution for rendering the materials harmless. When is enough, enough? The uranium is best left underground and Hanford is best left in a purely clean up mode. It would be a grave error to expand production at Hanford and produce more plutonium regardless of any perceived need to meet future demands of nuclear products. It's simply not worth it because workers and civilians are exposed to harmful ionizing radiation at every stage of the nuclear fuel cycle. From mining the uranium, to operating the reactors, to storing and transporting the end product and waste. Plutonium is perhaps the most toxic substance on the planet. It has a half life of 24,400 years. Once created it remains dangerous in human terms forever and leaves a poisonous legacy to future generations. Atomic radiation is an invisible killer that causes cancers and birth defects. Every dose is an overdose. We must not allow any expansion or new production at Hanford. We must not allow the Department of Energy to further pollute our state.

1753-1

1753-2

1753-3

1753-4

1753-5

Response to Commentor No. 1753

- 1753-1:** DOE notes the commentor's opinion that there is no need to expand its nuclear infrastructure for nuclear research and development missions. Clean, safe, reliable nuclear power has a role today and in the future for our national energy security. In recognition of this need, nuclear energy research and development programs have been initiated to address potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) and to ensure that current nuclear power plants can continue to deliver adequate and affordable energy supplies. Because it is unlikely that existing facilities could fully and effectively support these nuclear energy research and development initiatives without disturbing their existing missions, DOE is proposing to enhance its nuclear facility infrastructure to also support these activities. Information on the need for nuclear energy research and development is provided in Section 1.2.3 of Volume 1.
- 1753-2:** DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.
- 1753-3:** DOE notes the commentor's views about FFTF and the production of plutonium-238. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Although research to identify other potential fuel sources to support these space exploration missions has been conducted, no viable alternative to using plutonium-238 has been established. Based on NASA guidance to DOE on the potential use of

Commentor No. 1753: Janelle Spain (Cont'd)

Response to Commentor No. 1753

radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

1753-4: The commentor's positions concerning exposure to ionizing radiation, the nuclear fuel cycle, plutonium, and radiation dose are noted. Risks due to uranium mining are outside the scope of this PEIS. Chapter 4 of Volume 1 and Appendixes H through J discuss the radiological risks and waste generation that would result a range of reasonable alternatives and includes the impacts from operation of reactors and fabrication processing facilities, target storage, transportation activities, waste generation, and waste management. Radiological risks that would result from production of plutonium-238 and medical/industrial isotopes were found to be small. Waste that would be generated under each of the nuclear infrastructure alternatives would place no significant burden on existing waste management systems at the candidate sites.

1753-5: DOE notes the commentor's concerns regarding environmental impacts associated with potential expansion or new production at Hanford. The environmental impacts associated with nuclear infrastructure operations at Hanford are addressed in detail in Section 4.3 of the NI PEIS. All air emissions and wastewater discharges would be in accordance with applicable permit and regulatory requirements. The release of criteria air pollutants would result in concentrations well below Federal and state air standards (Table 4-13). The release of radioactivity and hazardous chemicals into the atmosphere would have a negligible effect on human health (Tables 4-17 and 4-19). There would be no discernible impacts to groundwater or surface water quality (Section 4.3.1.1.4). It is concluded that nuclear infrastructure operations would result in small impacts to the biosphere and would not contribute to polluting Washington or any other state.

Commentor No. 1754: Anonymous

NI PEIS Toll_Free Telephone

9/17/00

Anonymous

I'm calling to say that I do not want the nuclear reactor restarted in Hanford. Please make sure that it does not get re_started. Thank you.

1754-1

Response to Commentor No. 1754

1754-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1755: Jim Morrison

NI PEIS Toll_Free Telephone

9/17/00

Jim Morrison
Seattle, WA
206_624_6524

Yes, hello this Jim Morrison. I'm calling from Seattle, Washington. My number is 206_624_6524. I'm calling to register my opposition to any restart of the Fast Flux Test Facility at Hanford and to urge option number 5. There should be a complete shutdown of operations there and thorough and responsible clean up the messes that exist already. I appreciate you taking time to consider these options and I hope that the majority of residents who have spoken on this issue will be listened to and the mess will be cleaned up, and the facilities will not be used to generate more toxic hazardous nuclear waste.

1755-1

1755-2

1755-3

Response to Commentor No. 1755

1755-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

1755-2: See response to comment 1755-1.

1755-3: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

Commentor No. 1756: Margaret McLean

NI PEIS Toll_Free Telephone

9/17/00

Margaret McLean
8728 Jason Avenue, North
Seattle, Washington 98103

This Margaret McLean calling from Seattle, Washington. I'd like to leave a message for Ms. Colette Brown. My message regards the restart of the Fast Flux Test Facility at Hanford, Washington. I would like to express my opposal to this restarting of this facility. My address in Seattle is 8728 Jason Avenue North, Seattle, Washington, 98103. And once again I do oppose the restart of the Fast Flux Facility at Hanford. Thank you. Bye_bye.

1756-1

Response to Commentor No. 1756

1756-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1757: Anonymous

NI PEIS Toll_Free Telephone

9/17/00

Anonymous

Hi, I'm calling from Tulsa, Oklahoma. I'm terribly concerned, terribly opposed, concerned about, opposed to, what is it? Fabricating more plutonium 238? Are you talking about making more of it on purpose? I thought we were killing ourselves trying to get rid of it. I understand that they're planning to make more of it for the space program. We don't want that. We don't want to be sending plutonium into space and we certainly don't want to be making more of the damn stuff. Somebody up there is crazy to come up with this idea. Well we don't want it.

1757-1

Response to Commentor No. 1757

1757-1: Plutonium-238, used to support NASA space missions, is not weapons grade plutonium (i.e., plutonium-239). Whereas the United States is currently planning for the disposition of tons of surplus plutonium-239 that is not needed to support the U.S. nuclear weapons stockpile, there are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems and the plutonium-238 that fuels them for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, DOE anticipates that the existing plutonium-238 inventory will be exhausted by approximately 2005. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Commentor No. 1758: Nicki Stash

NI PEIS Toll_Free Telephone

9/18/00

Nicki Stash
360_733_6121

Hi. I would to leave a comment. My name is Nicki Stash. My number is 360_733_6121. I would like you to shut down the FFTF reactor and I would prefer that you please focus on cleanup. OK,
Thanks, Bye.

1758-1

1758-2

Response to Commentor No. 1758

-
- 1758-1:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 1758-2:** Restoration of the Hanford Site and waste management activities are the primary missions at Hanford. FFTF restart would not impact the cleanup missions at Hanford.

Commentor No. 1759: Maureen Dorney

NI PEIS Toll_Free Telephone

9/18/00

Maureen Dorney
Boynton Beach, FL

Good Morning. I am calling to register my comments about the Department's plan to expand their plutonium development. I am strongly opposed to developing any further use of plutonium because it's so extremely toxic and I am sure that the department could find alternative sources of power for the space exploration, as the Europeans have been doing, particularly using solar panels. I do know from personal experience about the contamination, accidents, and as I look at today's date, September 18th, I'm reminded that this would be my oldest brother's birthday, he, sad to say died of a result of a nuclear accident at the age of 29. He was working on development of nuclear energy for the Baney Corporation under contract to Atomic Energy Commission. So I know of the hazards of some of this. And I've been following some of the other more recent very tragic accidents. We cannot afford to take this risk and to expose our people on this planet to the deadly hazards of plutonium. It is one of the most toxic elements known. Please reconsider. My name is Maureen Dorney and I live in Boynton Beach, Florida. Thank you.

1759-1

1759-2

Response to Commentor No. 1759

1759-1: DOE notes the commentor's views about the production of plutonium-238. Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed production of plutonium-238 are relatively low and are discussed in detail in Chapter 4 of Volume 1 and appendixes H, I, and J of Volume 2 in the Final NI PEIS.

Potential health and safety impacts associated with future launches of spacecraft utilizing plutonium-238 are not within the scope of the NI PEIS analysis, but would be addressed in the specific NEPA documentation prepared by NASA in support of such missions. Issues of research and development of alternative energy sources are beyond the scope of this NI PEIS. The stated missions to be addressed in this PEIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and nuclear research and development, can currently only be met using nuclear reactor or accelerator technologies.

1759-2: The commentor's concerns about plutonium are noted. Radiological risks that would result from production of radioisotopes, including plutonium-238, are described in Chapter 4 of Volume 1 and Appendixes H and I. The evaluation showed that plutonium would be the primary contributor to health impacts associated with processing of irradiated neptunium targets at candidate processing facilities. However, the analysis showed that no radiological or chemical fatalities would be expected to result from implementation of the nuclear infrastructure alternatives. See, for example, Sections 4.3.1.1.9, 4.3.2.1.9, and 4.3.3.1.9 in Chapter 4 and the Summary Tables in Chapter 2 of Volume 1 of the NI PEIS.

Commentor No. 1760: Mildred McElhaney

NI PEIS Toll_Free Telephone

9/18/00

Mildred McElhaney
5806 247th Street, SW
Mount Lake Terrace, WA 98043

I would like to express my opinion about the Hanford cleanup. I think that we should go ahead with the Hanford cleanup with all due speed and do not start some new production. I feel that starting up the FFTF would produce a radioactive waste and I don't want anymore workers' health and safety put into jeopardy. So that's my opinion and I am a voter and my name is Mildred McElhaney and my address is 5806 247th Street SW, Mount Lake Terrace, WA 98043.

Thank you.

1760-1

1760-2

1760-3

1760-4

Response to Commentor No. 1760

1760-1: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

1760-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1760-3: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

1760-4: Worker safety (radiological protection) is a key element of DOE's Radiological Health and Safety Policy (DOE P 441.1, April 26 1996). This policy states in part that DOE facilities must "conduct radiological operations in a manner that controls the spread of radioactive materials and reduces exposure to the workforce and the general public and that utilizes a process that seeks exposure levels as low as reasonably achievable." Each DOE site, including Hanford, is required to implement a radiological control program with the intent to meet this policy goal. Based on the assessment of worker health impacts for all of the alternatives and options that make use of Hanford facilities, the most likely impact of the use of these facilities is no increase in cancer fatalities

Commentor No. 1760: Mildred McElhaney (Cont'd)

Response to Commentor No. 1760

among the facility workers. For example in Alternative 1 option 3, all of the activities (target irradiation and processing) occur at Hanford facilities. As shown in Section 4.3.3.1.9, the expected consequences are less than one additional fatal cancer among the workforce; that is, no additional fatal cancers are expected.

Commentor No. 1761: Harvey G. Spencer

NI PEIS Toll_Free Telephone

9/18/00

Harvey G. Spencer
143 Emerald Drive
Quinn, WA 98382

I received a card postmarked September 7th from Germantown about two reports related to the Draft NI PEIS. Now I've had the summary of the NI PEIS but I wanted to review the cost report on the alternatives as well as the Nonproliferation Assessment before making a comment. I hardly had time to make a comment by the 18th, by the way which is today, without reviewing these reports. After all the summary doesn't say very much except that various things will work. It doesn't give you the basis for making any kind of a comment.

I tried to review those on the Internet several times and I was not able to make your search engine work. Your card that you sent out should indicate the links to use on the Internet with which to locate those reports. I couldn't even locate the base Draft Programmatic Impact Statement itself on the Internet. I think you better work on your search engine and your identification of these reports. I protest not being able to make a comment on this PEIS by virtue of the unavailability of the important reports on it and I suggest you that you should extend the comment period. Thank you. This Harvey G. Spencer at 143 Emerald Drive, Quinn, Washington 98382, phone number 360_681_2338. Thank you very much.

1761-1

Response to Commentor No. 1761

1761-1: DOE regrets the difficulties encountered by the commentor in obtaining copies of the Cost Report, Nuclear Infrastructure Nonproliferation Impact Assessment, and the Draft NI PEIS from the Internet and inability to fully comment on the NI PEIS. The NI PEIS could be directly accessed from a hyperlink at the bottom of the DOE's Office of Nuclear Energy, Science and Technology homepage (<http://www.nuclear.gov>) that provides linked access to the Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment. DOE concedes that access through the DOE home page (<http://www.doe.gov>) may have been more problematic. In the future, DOE will endeavour to make electronic access via the Internet to posted documents on its servers as efficient and direct as possible.

Commentor No. 1762: Marjorie Westman

NI PEIS Toll_Free Telephone

9/22/00

Marjorie Westman
123 McKinley
Burleith, WA 98233

My name is Marjorie Westman. I live at 123 McKinley in Burleith, Washington 98233, and I'm deeply perturbed about the idea of starting up that facility. I remember Einstein's comment many years ago that we were asking for it not keeping up with our technology. We're pressed for that now. We know we have not solved the nuclear waste problem. Please, please do not consider starting this thing up again. Thank you.

|| 1762-1

|| 1762-2

Response to Commentor No. 1762

1762-1: DOE notes the commentor's concern regarding waste management. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

1762-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1763: Laura Houston

NI PEIS_Toll Free Telephone

9/18/00

Laura Houston
4031 SE Madison
Portland, OR 97214
503_232_7117

I was just calling in response to saying no on reactivation of the Hanford site. I personally have thyroid cancer and I know that people living in that area were definitely impacted by thyroid cancer and other cancers. So it is very much a hazard to people, and our water, and our animals. So absolutely not. My name is Laura Houston. My address is 4031 SE Madison, Portland, Oregon 97214. I can be reached at 503_232_7117. Again, no reactivation. Thanks, bye.

1763-1

1763-2

Response to Commentor No. 1763

1763-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1763-2: The commentor's concern about the Hanford Site as a potential hazard to people, water, and animals in the Portland area is noted.

As discussed in Section 3.4.9.3 of Volume 1, the question of whether the population surrounding the Hanford Site is subject elevated rates of cancer incidence or cancer mortality is unresolved. Existing studies and data suggest that cancer mortality and cancer incidence rates in counties adjacent to the Hanford Site are not elevated. Radiological impacts of the Hanford Site on the Portland area would be much smaller than the impacts on counties adjacent to the site.

Chapter 4 of Volume 1 presents the analysis of impacts to human health and water resources that would be expected under implementation of Alternative 1, Restart FFTF. Radiological risks to human health for people residing within 80 kilometers (50 miles) of the Hanford Site were found to be small. Because Portland is further than 80 kilometers (50 miles) from the site, radiological impacts to persons in Portland would be smaller than those listed in Chapter 4. There are no radiological liquid effluent pathways to the environment from FFTF, so that implementation of Alternative 1 would not be expected to contaminate the Columbia River. Prevailing winds at Hanford blow toward Grant County, Washington from the south to south-southwest directions. Grant County would be expected to bear the major burden of wind borne contamination from the Hanford Site. Environmental impacts on the Portland area that would result from implementation of the nuclear infrastructure alternatives described in Section 2.5 of Volume 1 would be essentially zero.

Implementation of the alternatives described in Section 2.5 of Volume 1 would not be expected to adversely impact wildlife in areas surrounding the Hanford Site or Portland. According to an International Atomic Energy Agency (IAEA) publication (IAEA Technical Report Series No. 332, Effects of Ionizing Radiation on Plants and Animals at Levels Implied by Current Radiation Protection Standards), a dose rate of 100 millirem per year to the most exposed human will lead to dose rates to plants and animals of less than 0.1 rad per day. The IAEA concluded that a dose rate of 0.1 rad per day or less for animals and 1 rad per day or less for plants would not affect these populations. The largest individual dose for any of the nuclear infrastructures alternatives under normal operations

Commentor No. 1763: Laura Houston

Response to Commentor No. 1763

would be less than 0.1 millirem, which is three orders of magnitude less than the IAEA threshold for adverse effects. Therefore, as a result of implementation of the nuclear infrastructure alternatives, all impacts to ecological resources would be small in the immediate area of the Hanford Site and negligible at all distant locations.

Commentor No. 1764: Rosemary Sirellia

NI PEIS Toll_Free Telephone

9/18/00

Rosemary Sirellia
206_522_7075

This is message is directed to Colette Brown. I would like the FFTF nuclear reactor shut down and the focus back to the clean up at Hanford. My name is Rosemary Sirellia and the telephone is 206_522_7075. Thank you. Good_bye.

|| 1764-1

|| 1764-2

Response to Commentor No. 1764

-
- 1764-1:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 1764-2:** Restoration of the Hanford Site and waste management activities are the primary missions at Hanford. FFTF restart would not impact the cleanup missions at Hanford.

Commentor No. 1765: Mary Sanderford

NI PEIS Toll_Free Telephone

9/18/00

Mary Sanderford

Hello. This is Mary Sanderford. I'm calling with regard to the restart of the FFTF. I certainly am against it and I hope that along with the others, calling that will have some effect. Please take note of it and not have that reactor start at Hanford.

1765-1

Response to Commentor No. 1765

1765-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1766: Thomas Wright

NI PEIS Toll_Free Telephone

9/18/00

Dr. Thomas Wright
Portland, OR 97213

I'm calling. My name is Dr. Thomas Wright. Again, Dr. Thomas Wright and I'm from Portland, Oregon, my zip code is 97213. I am calling to oppose the restart of the FFTF nuclear power plant at Hanford. So along with the other thinking individuals, I oppose that. OK, again my name is Dr. Thomas J. Wright, Portland, Oregon 97213. I opposed to the restart of the FFTF nuclear power plant at Hanford. Bye.

1766-1

Response to Commentor No. 1766

1766-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1767: Aniska Kaus

NI PEIS Toll Free Telephone

9/18/00

Aniska Kaus

Yes my name Aniska Kaus, and I'm an Oregon voter and I'm worried about the Hanford nuclear reactor whose waste products seep into the Columbia River and I want the Tri_Party Agreement to be upheld. Please clean the Hanford up and get the nuclear reactor shut down. Thank you.

1767-1

1767-2

Response to Commentor No. 1767

1767-1: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford and the risk of contamination to the Columbia River. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

1767-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 1768: James Granland

NI PEIS_Toll Free Telephone

9/18/00

James Granland
206_282_9472

Hello my is James Grandland. My telephone number is 206_282_9472. I'm calling just to get my comment in at the very end of the comment period concerning the restart of the Fast Flux reactor at Hanford. I want to voice my opinion, as a citizen, that I prefer that this reactor not be restarted. I think the reasons that are being put forth for the medical isotopes, I believe it's economically not viable to produce them that way and that's just a smoke screen. By the way, these comments are directed to Colette Brown, if that's applicable, and I'm happy to receive a phone call back along regarding that. But I think the government or the management of the Hanford facility has not proven that they're capable of maintaining the facility in a safe matter and producing more radioactivity there is not a wise move until we're better able to deal with what we've got. Please call me back at 206_286_9166 if you have any further questions about how I feel about this.

1768-1

1768-2

Response to Commentor No. 1768

1768-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1768-2: FFTF operated safely for more than 10 years with no impact to health or safety of onsite workers or the public and no discernible impact to the environment. FFTF meets all safety requirements established by DOE and the DOE requirements are consistent with those established and applied by other regulatory agencies such as the Nuclear Regulatory Agency. Analyses presented in the PEIS show that the risks associated with operation of the FFTF are extremely small.

Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. Wastes are safely managed in accordance with applicable federal and state regulations and appropriate DOE Orders.

Commentor No. 1769: Joan Chantler

NI PEIS Toll_Free Telephone

9/18/00

Joan Chantler
509_748_2551

Hi. My name is Joan Chantler. My daytime number is 509_748_2551. I'd like to register opposition to the idea of reactivating Hanford. I just think we haven't got the first mess cleaned up. Let's not work on making another one. So thank you very much. I appreciate the opportunity to state my opinion. Bye.

|| 1769-1

|| 1769-2

Response to Commentor No. 1769

1769-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1769-2: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

Commentor No. 1770: Marlyee

NI PEIS Toll_Free Telephone

9/18/00

Marlyee

Hi my name is Marlyee my number is 503_872_8747 and I'm just calling to let you know that I completely disagree with the restart of the Fast Flux Testing Facility. It's sounds like it's going to be extremely harmful to the environment as well as the people of the Northwest. So I my vote is to not start it. I feel passionate about it and I hope you guys think twice about it. It's my understanding that it is an unnecessary step, for apparently NASA is needing it and it's completely unnecessary. So they're saying this as well. So please take my comments into consideration and do the right thing.

1770-1

1770-2

1770-3

Response to Commentor No. 1770

1770-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1770-2: DOE notes the concern expressed in the comment on the potential impacts of FFTF and support facility operations described in the NI PEIS. The environmental impacts associated with operation of the FFTF and support facilities at Hanford during normal operations and from postulated accidents are presented and discussed in Section 4.3 of the NI PEIS. All impacts to human health and to ecological resources would be small in the immediate area of the Hanford site and negligible at all distant locations.

1770-3: A May 22, 2000, correspondence from NASA to DOE identified that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Commentor No. 1771: Anderson Marie

NI PEIS Toll_Free Telephone

9/18/00

Anderson Marie

I'm worried about the Columbia River and I want the Tri_Party agreement to be upheld. My name is Anderson Marie and please shut the Hanford reactor down. Thank you.

|| 1771-1

|| 1771-2

Response to Commentor No. 1771

1771-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Public meetings were held on this formal milestone change.

The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

1771-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 1772: Sasha Seyavitz

NI PEIS Toll_Free Telephone

9/18/00

Sasha Seyavitz

Hi. I'm calling with my public comments for the EIS. My name is Sasha Seyavitz. I'm calling to ask you to shut down the FFTF reactor and focus on cleanup at Hanford. Thank you very much. Bye.

|| 1772-1
|| 1772-2

Response to Commentor No. 1772

- 1772-1:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 1772-2:** Restoration of the Hanford Site and waste management activities are the primary missions at Hanford. FFTF restart would not impact the cleanup missions at Hanford.

Commentor No. 1773: Anonymous

NI PEIS Toll_Free Telephone

9/14/00

Anonymous

I'm calling to dissuade the powers that be to close the Hanford nuclear facility. It is a matter of environment and health for the whole region. Thank you very much.

1773-1

Response to Commentor No. 1773

1773-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 1774: William Stratton

NI PEIS Toll_Free Telephone

9/15/00

William Stratton
2 Akima Lane
Los Alamos, NM 87544
505 (672)_3706

My name is William Stratton, 2 Akima Lane, Los Alamos, NM 87544. My telephone 505 (672)_3706. I would like to receive the summary of the Programmatic Nuclear Infrastructure Environmental Impact Statement (NIPEIS). I just learned that there's now another scheme to shut down the Fast Flux Test Facility. The Fast Flux Test Facility is the only sodium cooled reactor operating in the United States. For the future it is certainly vital to keep this going. In the mean time it is useful in producing isotopes for medical applications and probably for industrial applications. I think it should be considered more widely, more broadly than the small number of hearings that you've outlined to me. There is no hearing in the Southwest where we at Los Alamos might have commented or people from Sandia or Albuquerque. We are a rather significant part of the nuclear family in this country. So please send me the summary volume and record the fact that I object to shutting down the FFTF. I think we need to have all the isotope production in this country that we can obtain. We've been dependent upon Canada for a long time. I think we should have our own sources. We should have our own long range development program for future electric power reactors. Please send this summary as soon as possible. My letter will follow shortly. Certainly for something of this magnitude, the comment period should be longer. Thank you.

1774-1

1774-2

1774-3

1774-4

1774-1

Response to Commentor No. 1774

1774-1: DOE notes the commentor's support for Alternative 1, Restart FFTF, and opposition to Alternative 5, Permanently Deactivate FFTF.

1774-2: DOE notes the commentor's request for an additional public hearing in the Southwest United States and extension of the public comment period. During the public comment period, July 28 through September 18, 2000, DOE hosted seven public hearings. In accordance with NEPA, hearings were held in appropriate localities including near the locations potentially affected by the proposed actions as well as in locations where the public had expressed a substantial interest in the decisions to be made. These locations included Oak Ridge, Tennessee; Idaho Falls, Idaho; Hood River, Oregon; Portland, Oregon; Seattle, Washington; Richland, Washington; and Crystal City, Virginia (outside Washington, D.C.). For persons unable to attend these hearings or living outside of the areas, the public also had the opportunity to comment on the Draft NI PEIS through the U.S. mail, e-mail, a toll-free fax number, and a toll-free phone number.

The Council on Environmental Quality's (CEQ) "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act" (40 CFR 1506.10(c)) require that a minimum of 45 days be allowed for public comment on the Draft NI PEIS. As stated in the Notice of Availability (65 FR 46443 et seq.), the public comment period began on July 28, 2000 and continued to September 18, 2000. In preparing the Final PEIS, DOE has assessed and considered both oral and written comments received on the Draft PEIS during the public comment period and has responded to these comments in the Final PEIS. Volume 3 of the NI PEIS contains public comments received on the NI PEIS and DOE responses to those comments. Moreover, late comments were considered to the extent practicable.

1774-3: DOE notes the commentor's opposition to Alternative 5, Permanently Deactivate FFTF, and support for isotope production in the United States. The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. Under the NI PEIS proposed action and consistent with its mandates under the Atomic Energy Act, DOE would enhance its existing nuclear facility infrastructure to, among other things, more effectively support production of radioisotopes for medical applications and research. DOE's intent is to complement commercial sector capabilities to ensure that a reliable supply of isotopes is available in the U.S. to meet future demand, and to encourage the commercial sector to privatize the production of

Commentor No. 1774: William Stratton (Cont'd)

Response to Commentor No. 1774

isotopes that have established applications to a level that would support commercial ventures. FFTF operation would not eliminate the need to acquire isotopes from foreign sources, including Canada.

1774-4: DOE notes the commentor's opinion about the need for development of future electric power reactors. As discussed in Section 1.2.3 of the NI PEIS, the Nuclear Energy Research Advisory Committee (NERAC) Subcommittee on Long-Term Planning for Nuclear Energy Research has set forth a recommended 20-year research and development plan to guide DOE's nuclear energy programs in areas of material research, nuclear fuel, and reactor technology development. This plan stresses the need for DOE facilities to sustain the nuclear energy research mission in the years ahead. Such nuclear research and development initiatives requiring an enhanced DOE nuclear facility infrastructure fall into three basic categories: materials research, nuclear fuel research, and advanced reactor development. Further information on the need for nuclear energy research and development is provided in Section 1.2.3 of Volume 1.

Commentor No. 1775: P. F. Shaw

From: Pete Shaw[SMTP:PETESHAW@JUNO.COM]
 Sent: Monday, September 18, 2000 4:01:47 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Restart and Operation of the FFTF
 Auto forwarded by a Rule

I support restart and operation of the FFTF for the following reasons:

Production of medical isotopes for cancer research and treatment

Domestic production of radiation sources for use in irradiation of food and sterilization of medical/surgical supplies

Materials and source research and development

The reason given for the shutdown of the fast reactor programs in the United States _ which included the FFTF _ was to discourage the proliferation of nuclear weapons worldwide. That was a total failure. We pretty much destroyed our position as world leader in nuclear technology without gaining any benefit whatsoever by that sacrifice.

In response to the often heard statement that restart of the FFTF would detract money and attention from cleanup of the Hanford reservation, it's much more likely that shutdown of the facility would have that effect. Restart and operation would be funded from different sources and be done by different staff.

A excellent job was done on the PEIS. The people responsible can take pride in accomplishing that, and under pressures that must have been obscene.

Thank you for the opportunity to comment on the program.

Yours truly,
 P.F. Shaw
 2217 Camas Ave, Richland, WA 99352_1905 17

1775-1

1775-2

Response to Commentor No. 1775

- 1775-1:** DOE notes the commentor's support for Alternative 1, Restart FFTF. It should be pointed out that food irradiation is not in scope of the PEIS.
- 1775-2:** FFTF was closed due to cost considerations arising from cancellation of liquid metal fast reactor programs (which were key elements in closed fuel cycle and actinide waste disposal technology development), and the projected availability of other irradiation facilities to meet DOE's mission requirements. DOE does not agree that the shutdown of these programs was a failure and destroyed the U.S. world leadership position in nuclear technology. The programs were successfully shutdown, and the associated facilities now are either being shutdown or considered for potential use (as in the case of FFTF) in programs that meet DOE mission needs and are compliant with U.S. nonproliferation policy.

Commentor No. 1777: Christine Eide

From: Christine Eide
[SMTP:GCHRIS@ONEWORLD.OWT.COM]
Sent: Monday, September 18, 2000 6:08:29 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF Restart
Auto forwarded by a Rule

It is obvious from the PEIS and following documents that restarting the FFTF is the best choice.
Please restart FFTF.

Christine Eide
gchris@oneworld.owt.com

1777-1

Response to Commentor No. 1777

1777-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1778: Marilee Henry and Jeffrey Thorson

From: Jeff Thorson[SMTP:THORSH@HALCYON.COM]
 Sent: Monday, September 18, 2000 6:24:14 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: SHUT DOWN HANFORD'S FFTF REACTOR!
 Auto forwarded by a Rule

To: Colette E. Brown, US Department of Energy

WE have heard that the Department of Energy is considering restarting the FFTF Nuclear Reactor at Hanford, Washington, to produce research medical isotopes and plutonium_238.

WE ARE COMPLETELY OPPOSED TO THIS PLAN !!!

***Currently Hanford is one of THE MOST CONTAMINATED SITES in this country. There is already a plume of highly toxic substances leaking from this site threatening pollution of the entire Columbia River system. The efforts to clean up Hanford have been costly and ineffective. WE DO NOT NEED TO ADD TO THE WASTES ALREADY THERE!!!

***Restarting the FFTF Nuclear Reactor would delay already tardy clean_up efforts!!!

***Demand for medical isotopes can be met using currently operating facilities in other regions.

***The Department of Energy has NOT fulfilled its responsibility to protect the populace, wildlife, and water resources of Washington State from the dangers of Hanford Nuclear operations in the past; there is no reason to believe they will do so for future operations.

We want the FFTF to be completely shut down, and Hanford and its plume contained/cleaned_up FIRST, before any consideration can be given to future use. CLEAN UP YOUR MESS!!!

Marilee Henry and Jeffrey Thorson
 14042 _ 97th Ave. N.E., Bothell, Wa. 98011

1778-1

1778-2

1778-3

1778-2

1778-4

1778-2

Response to Commentor No. 1778

1778-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

1778-2: Restoration of the Hanford Site and waste management activities are the primary missions at Hanford.

Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

1778-3: The United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements.

***Commentor No. 1778: Marilee Henry and Jeffrey Thorson
(Cont'd)***

Response to Commentor No. 1778

Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions (basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term (less than 5 years). Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

1778-4: See response to comment 1778-1.

Commentor No. 1779: Norm Buske

From: Norm Buske[SMTP:SEARCH@IGC.ORG]
 Sent: Monday, September 18, 2000 6:56:57 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Comment: NI PEIS
 Auto forwarded by a Rule

To: Colette Brown 9/18/00
 Fm: Norm Buske, Nuclear_weapons_free America
 Subj: Comment: NI PEIS

Dear Ms Brown:

At the PEIS Scoping Hearings, you asked what the public wanted included in the PEIS. I asked for the impact of the products of FFTF if the reactor undertook modern nuclear weapons material production on an "activity" rather than a "mission" basis.

You failed to provide that likely activity impact in the PEIS.

I asked again for that impact at your Seattle hearing on August 30, 2000. Although you might not have heard, because you walked away as I was commenting...

Anyway, the first two sentences of Sec. 2.3.1.1.3 of the NI PEIS (p.2.13) state that FFTF would only use "one quarter of reactor design power level to meet the irradiation requirements of the proposed missions. Periodic increases in power level between 100 and 400 megawatts may be required to support nuclear research and development activities."

Neutrons produced by a reactor at quarter power level are expensive. So there is economic virtue in having other "required activities" that would use up to three times the power of the stated mission activities for FFTF.

But that implies FFTF is really being restarted on pretext missions while it's "required activities" are clandestine.

1779-1

Response to Commentor No. 1779

1779-1: DOE notes the commentor's views. The NI PEIS evaluates a range of reasonable alternatives for expanding DOE's existing nuclear facility infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by reestablishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and that the United States has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the U.S. energy portfolio. No component of the proposed action is for the purpose of supporting any defense or weapons-related missions or activities. The environmental impacts examined in this NI PEIS are those related to the stated missions/activities.

Commentor No. 1779: Norm Buske (Cont'd)

This concern has come up increasingly during the EIS hearings. To many people, it is now clear that DOE seeks to restart FFTF on any civilian mission mix it can pretend is viable, and then to go into clandestine production of special nuclear weapons materials.

The FFTF reactor is the only reactor in the DOE complex presently suitable for clandestine weapons material production in significant quantities for deployment and use on the nuclear battlefield.

I request once again that the Final EIS include a range of likely environmental impacts from the use of such generic, "necessary activities" products of FFTF operation.

As deployment of a new generation of American nuclear weapons can be expected to have proliferation and other de_stabilizing consequences. Thus, I also request you include in the Final EIS, environmental impact scenarios in which weapons comparable to those from FFTF_produced, special nuclear materials are used against a range of American cities and other targets.

With my thanks again for your consideration,
Norm Buske
Nuclear_Weapons_Free America

1779-1

Response to Commentor No. 1779

Commentor No. 1781: Gary E. Richardson

From: Gary Richardson
 [SMTP:GARY@SNAKERIVERALLIANCE.ORG]
 Sent: Monday, September 18, 2000 7:18:49 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: comment
 Auto forwarded by a Rule
 Sept. 18, 2000
 Ms. Colette Brown
 DOE, Office of Space and Defense Power Systems

Re: Draft Programmatic Environmental Impact Statement for accomplishing expanded civilian nuclear energy research and development and isotope production mission in the United States, including the role of the Fast Flux Test Facility

Dear Ms. Brown:

How is it that the federal agency that employs some of the best minds on the planet consistently come up with the most hair_brained schemes to try to justify continuing the production and proliferation of some of the most deadly, dangerous and unnecessary substances known to man?

Instead of trying to come up with new missions for obsolete, discredited and environmentally problematic facilities like the FFTF at Hanford and Building 666 at INEEL, shut them down and get on with the only jobs left for the DOE that make common sense: Clean up the mess left from half a century of playing with nuclear "fire" and develop clean alternative energy resources for the future.

I favor Alternative 5 of the PEIS and shut down of the FFTF. Please, do not create another project that will add to the already overwhelming amount of nuclear waste sitting above and leaching into the Snake River Aquifer at INEEL. Thank you for the opportunity to comment on this proposed plan.

Sincerely,
 Gary E Richardson
 746 Santa Paula Ct., Boise, ID 83712

1781-1

1781-2

1781-1

1781-3

Response to Commentor No. 1781

1781-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. The FFTF reactor was constructed and initiated operation in the mid 1980s, making it DOE's newest reactor. It has no structural flaws that would prevent safe operations. As stated in Volume 1, Section 2.3.1.1.2, several upgrades would be implemented if a decision to restart FFTF was made by DOE. These upgrades would improve efficiency and reliability, minimize waste, and conform to current industry standards. Throughout the life of FFTF, the FSAR has been maintained via approved change control and engineering change notices. All updates and revisions have had the required reviews and approvals. No deficiencies in the FFTF design, analysis, facility condition, or operations have been identified or recognized that would prevent FFTF from meeting the safety objectives and intent of commercial nuclear safety regulations for equivalent facilities. If the Record of Decision concludes that FFTF should be restarted, a Probabilistic Risk Assessment would be completed and a new FSAR would be prepared in accordance with applicable regulations.

Building CPP-666 is divided into two parts, the Fuel Storage Facility and the Fluorinel Dissolution Process Facility (FDPF). The FDPF is under consideration in this PEIS for storage of neptunium-237 oxide, preparation of neptunium-237 targets, and separation of plutonium-238 from irradiated targets.

DOE believes that FFTF and FDPF will meet, with further analysis and/or minor modifications, the criteria to safely conduct these operations for the 35 year time period being considered in the NI PEIS.

1781-2: DOE notes the commentor's interest in alternative energy sources and concern over nuclear waste, although the issue of the cleanup of existing nuclear waste sites is beyond the scope of this Nuclear Infrastructure PEIS. The DOE missions to be addressed in this EIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies.

As discussed in Chapter 4 of Volume 1 (e.g. sections 4.3.1.1.13, 4.3.2.1.13, 4.3.3.1.13), waste will be generated by all of the proposed alternatives including the No Action Alternative. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and

Commentor No. 1781: Gary E. Richardson (Cont'd)

Response to Commentor No. 1781

alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. DOE activities associated with this program would not impact schedule or available funding for existing cleanup activities at candidate sites for implementation of the nuclear infrastructure alternatives.

1781-3: The commentor's position on generation of additional waste at INEEL is noted. Waste generation that would result from implementation of nuclear infrastructure alternatives concerned with the Fluorinel Dissolution Process Facility and/or the Advanced Test Reactor are discussed in Sections 4.3.2.1.13 and 4.4.1.1.13. Localized radiochemical and chemical plumes in the Snake River Plain Aquifer at INEEL are described in Volume 1, Section 3.3.4.2.2. Tritium and strontium-90 plumes in the aquifer are the result of historical waste disposal practices at INEEL. Waste that would result from implementation of the nuclear infrastructure alternatives would be dispositioned in compliance with current waste management procedures at INEEL, and would not be expected to contaminate the Snake River Plain aquifer.

Commentor No. 1782: Mary and Gregory Dyson

From: Dyson[SMTP:DYSE@TELEPORT.COM]
 Sent: Monday, September 18, 2000 7:41:26 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Nuclear Infrastructure PEIS
 Auto forwarded by a Rule

Dear Ms. Brown,

We, like many other residents of the Northwest, oppose the proposed restart of the FFTF Nuclear reactor. Not only do a large number of residents oppose this proposal, but our elected officials do as well.

Hanford already has billions of gallons of high_level radioactive waste that DOE has not dealt with. Hanford is th emost polluted site in the Western Hemisphere. Hanford needs to be cleaned up now, prior to any talks of starting new activity. Where will new waste go if the FFTF reactor is restarted? The DOE needs to clean_up the site to gain the trust of Northwest residents. Why is the DOE continually ignoring our wishes?

The DOE has failed to demonstrate a need for the production of plutonium. We know there are a few, vocal people who think medical isotopes will save their loved ones suffering from cancer. What they fail to understand is that the polluted mess that is Hanford is causing cancer in many more people than medical isotopes can ever save. While we sympathize with the pain and suffering that cancer causes, we cannot advocate for a treatment that poses countless risks. In addition, NASA's current demandfor plutonium is much lower than you project and can easily be met with current contracts. If the demand can not be met, NASA needs to re_evaluate their space program that places citizens at risk of cancer from polluted nuclear sites.

We want the DOE to release the numerical breakdown of the comments you have received _ both for and against _ so that Secretary Richardson is clear where residents of the Northwest

1782-1

1782-2

1782-3

1782-2

1782-4

1782-5

1782-4

1782-6

1782-7

Response to Commentor No. 1782

1782-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

1782-2: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

There are currently 53 million gallons of waste stored in underground storage tanks on the Hanford Site. Treatment of this waste has already been determined. None of the DOE missions considered by this PEIS will add to this volume of waste.

DOE is using this opportunity to solicit public comment on this NI PEIS.

1782-3: Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

1782-4: DOE notes the commentor's views. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems,

Commentor No. 1782: Mary and Gregory Dyson (Cont'd)

stand. You need to also include in your numbers, the City Councils that have passed resolutions against FFTF restart.

|| 1782-7
|| (Cont'd)

The No Action Alternative must include the shutdown of FFTF instead of maintaining it on a stand_by basis. USDOE should chose alternative 5 _ shut down FFTF.

|| 1782-8
|| 1782-9

Thank you,

Mary and Gregory Dyson
232 NE Stanton St.
Portland, OR 97212

Response to Commentor No. 1782

and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

A May 22, 2000, correspondence from NASA to DOE identified that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup.

1782-5: DOE notes the commentor's concerns regarding ongoing activities to remediate the existing contamination at Hanford. The Hanford Site environmental restoration activities are high priority to DOE and are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The NI program would not impact the schedule or available funding for existing cleanup activities.

The NI PEIS evaluated the maximum cumulative radiation exposure to the public from all reasonably foreseeable Hanford Site activities, including

Commentor No. 1782: Mary and Gregory Dyson (Cont'd)

Response to Commentor No. 1782

future waste management and remediation activities (see section 4.8.3.3), over the 35-year time-frame of NI-related activities. As shown in Table 4-173, the dose to the maximally exposed individual would be expected to remain well within regulatory limits. Based on an exposure period of 35 years, 0.21 (<1) latent cancer fatalities would be expected to occur among the local population over the 35-year period as a result of Hanford related radiation exposure.

The annual doses to the public from the Hanford site and proposed NI PEIS activities above are insignificant. For perspective, the radiation dose the average American receives from natural sources is about 300 mrem each year. Based on the same 35 year time period used above, approximately 2,000 latent cancer fatalities would be expected among the same population as a result of natural (non-Hanford related) radiation exposure. In that same 35 years, about 19,000 cancer fatalities from all causes would be expected in the same population.

- 1782-6:** DOE notes the commentor's concern for NASA's use of nuclear materials for space missions, although this issue is beyond the scope of this PEIS. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch.
- 1782-7:** In preparing the Final PEIS, DOE has assessed and considered both oral and written comments received on the Draft PEIS during the public comment period and has responded to these comments in the Final PEIS. Volume 3 of the NI PEIS contains public comments received on the NI PEIS and DOE responses to those comments. These comments are summarized, tabulated, and cross-referenced by commentor, category, and method of submission. A summary discussion is also provided of the overall prevailing issues raised during the public comment period.
- 1782-8:** The No Action alternative is required under Council on Environmental Quality regulations (40 CFR 1502.14(d)). It provides a point of comparison for the action alternatives. The No Action Alternative generally represents the status quo; that is, it includes those actions that

Commentor No. 1782: Mary and Gregory Dyson (Cont'd)

Response to Commentor No. 1782

would normally take place without the proposed action. Since the status quo involves maintaining FFTF in standby and not its deactivation, it is not appropriate to include its deactivation as part of the No Action Alternative. Deactivation of FFTF is included as Alternative 5, Permanently Deactivate FFTF, and as part of Alternative 2, Use Only Existing Operational Facilities, Alternative 3, Construct New Accelerator(s), and Alternative 4, Construct New Research Reactor.

1782-9: See response to comment 1782-1

Commentor No. 1783: Barbara Lyons

From: clyde hill[SMTP:PLUMBUTTER@USA.NET]
 Sent: Monday, September 18, 2000 8:52:02 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: FFTF Reactor
 Auto forwarded by a Rule

Hello: thank you for taking public comment on the plan to restart the FFTF reactor at Hanford. It sounded like a humanitarian idea, to make plutonium for medical purposes. However, we already know that the DOE is capable of concealing the truth when it comes to pollution. For example, you said that there was no pollution after the recent wildfires, and then you had to admit that it was 1000 times higher than normal. At least, someone said it was that high. I don't really trust your statements, because you seem to want to always reassure people instead of telling the truth. I'm opposed to starting this reactor again. The reactor would not produce the right kind of isotopes, is inefficient, and creates more pollution. There isn't a scientific basis for establishing a crying need for these isotopes at the present time, either. I suppose you want to keep the reactor going, just in case, because you think it is a shame to get rid of something that works. However, this reactor should be scrapped and the whole area should be cleaned up before we have more disasters. Public safety should be more important right now. Thank you for your time.

Sincerely,
 Barbara Lyons 614 North 100th, Seattle, Washington 98133.

1783-1

1783-2

1783-3 | 1783-4

1783-3

1783-1

Response to Commentor No. 1783

1783-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. FFTF restart would not impact the cleanup missions at Hanford.

No radioactive materials were "released" in the Hanford Wildfires of 2000. Wildfires did resuspend some materials already in the environment. The resuspended materials were low, slightly above natural background levels. Real-time monitoring instruments cannot detect environmental levels of contaminants. The low levels required several days of analysis to quantify. DOE publicly reported monitoring results as they became available.

1783-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1783-3: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

Commentor No. 1783: Barbara Lyons (Cont'd)

Response to Commentor No. 1783

The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

- 1783-4:** Potential environment impacts associated with FFTF operations are addressed in detail in Section 4.3 of the NI PEIS. All air emissions and wastewater discharges would be in accordance with applicable permit and regulatory requirements. The release of criteria air pollutants would result in concentrations well below Federal and state air standards (Table 4-13). The release of radioactivity hazardous chemicals into the atmosphere would have a negligible effect on human health (Tables 4-17 and 4-19). There would be no discernible impacts to groundwater or surface water quality (Section 4.3.1.1.4). It is concluded that operation of FFTF would result in small impacts to the biosphere and not contribute to pollution of the environment.

Commentor No. 1784: Matthew Witt

From: Matthew Witt[SMTP:MWITT@HEVANET.COM]
 Sent: Monday, September 18, 2000 9:18:12 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: keep Hanford shut down!
 Auto forwarded by a Rule

To Whom it may concern:

I agree with Senator Hatfield's position on the FFTF. Also, NASA doesn't reports it has no use for Plutonium 238 at this time, and the DOE's own blue ribbon commission dismisses the usefulness of the FFTF for producing medical isotopes. Why, then, is it still being considered??

Where is the DOE's accountability on this issue? Either a full accounting of FFTF stakeholder interests must be provided the American public, or Hanford, a source of significant anxiety for anyone who knows anything about it, must remain shut down.

Respectfully,

Matthew Witt
 1611 NW 32nd Ave.
 Portland, OR 97210

1784-1

1784-2

Response to Commentor No. 1784

1784-1: DOE notes the commentor's views about FFTF and its use for the production of both medical isotopes and plutonium-238 for use in future NASA space exploration missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Although research to identify other potential fuel sources to support these space exploration missions has been conducted, no viable alternative to using plutonium-238 has been established. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

A May 22, 2000, correspondence from NASA to DOE identified that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires one-third less plutonium-238 as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000, letter to DOE that large RTGs be maintained as backup. Section 1.2.2 was revised to clarify plutonium-238 mission needs.

DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert

Commentor No. 1784: Matthew Witt (Cont'd)

Response to Commentor No. 1784

Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

Commentor No. 1784: Matthew Witt (Cont'd)

Response to Commentor No. 1784

1784-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, although the commentor should note that the reactor is presently in a standby mode and has not been permanently deactivated.

Commentor No. 1785: Tamera Simonson

From: Biker Cub[SMTP:BIKERCUB@NETZERO.NET]
Sent: Monday, September 18, 2000 10:00:46 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: REACTORS
Auto forwarded by a Rule

Dear Colette Brown,

DO NOT START UP REACTORS CALLED FFTF!!!

|| 1785-1

Tamera Simonson

Response to Commentor No. 1785

1785-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1786: Steve Herring

From: drjsh@srv.net%internet[SMTP:DRJSH@SRV.NET]
 Sent: Monday, September 18, 2000 10:41:35 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: Comments on PEIS
 Auto forwarded by a Rule

Comments on the Programmatic Environmental Impact Statement on Nuclear Infrastructure

I support all three missions contemplated in the PEIS. These missions are vital for continued progress in the fields of nuclear energy and nuclear medicine. However, I feel that the PEIS does not make a fair comparison among the options for the following reasons:

1. The EIS appears to be very comprehensive in identifying the various contributors to public and worker risk. However the costs of the different alternatives all contain the cost of decommissioning FFTF buried within the total costs. It would be much clearer to the public and the decision makers if the costs of decommissioning were separated from the overall cost of the Pu_238 and medical isotope production missions. It seems strange that the costs of decommissioning are NOT included in option 2, alternative 1 which presumes the use of FFTF for the production of Pu_238, but that the costs of decommissioning FFTF ARE included in the options that use other facilities. FFTF and ATR and HFIR will all have to be decommissioned some day, so saddling the other options with FFTF decommissioning costs does not seem any more equitable than including the ATR decommissioning costs in the FFTF option..

2. The Nuclear Infrastructure Nonproliferation Impact Assessment arrived much too late (Sept. 15) for a reasonable review. However, the conclusion that option 2, alternative 2 is the worst from a proliferation prevention standpoint is very puzzling. All of the options will require the separation of neptunium and/or plutonium from spent fuel and targets for the production of Pu_238. Furthermore, the production of medical isotopes will generally

1786-1

1786-2

Response to Commentor No. 1786

1786-1: DOE assumes that the commentor is referring to deactivation, not decommission. Decommission costs were not included for any alternative. Deactivation of FFTF is not part of implementing Alternative 1, Restart FFTF. Deactivation of FFTF is part of implementing Alternatives 2, 3, 4, and 5 and including the cost of FFTF deactivation in the implementation costs for these alternatives is appropriate. The Cost Report was structured to identify the implementation costs of the various alternatives so the Secretary of Energy would have this information along with other data for consideration.

1786-2: While it is true that all alternatives, except for no action, require the separation of neptunium, plutonium, medical, and industrial isotopes, the separate nonproliferation impact assessment report identifies two specific factors which are the major contributors to raise a significant nonproliferation concern for Alternative 2, Option 2. Option 2 uses the FDPF/PPP-651 for plutonium-238 production and storage. Nuclear Infrastructure Nonproliferation Impact Assessment, Section 6.2.2.2, states that FDPF/PPP-651 is currently excluded from international monitoring and may not qualify for an exemption under the Fissile Material Cutoff Treaty. These two factors are the basis for identifying Alternative 2, Option 2 as least favorable from a nonproliferation impact standpoint. The commentor's support of U.S. production of plutonium-238 and medical isotopes as a means to reduce the potential for proliferation is noted.

Commentor No. 1786: Steve Herring (Cont'd)

require the chemical processing of targets. Both represent some proliferation risk. However, the goal of nonproliferation policy is to prevent the spread of weapons' technology to current non_weapons' states. The use of separations technologies in the US (i.e. at the Chem Plant at the INEEL or at Hanford) does not present the transfer of that technology to non_weapons' states. Indeed, if the production of medical isotopes and Pu_238 in the US avoids the need to purchase those isotopes from other, non_weapons', countries, such domestic production would serve to reduce the potential for proliferation.

3. The choice of alternative reactors focuses on future needs for steady_state irradiation facilities, such as FFTF and ATR. However, there is a continuing need for transient irradiation, such as in the testing of new fuels. Steady_state reactors cannot perform the transient tests needed to show that new, proliferation_resistant fuels can operate safely under a variety of operating conditions. These testing needs can be met by TREAT at ANL_W and perhaps by the ACRR at Sandia. If the PEIS is really to encompass the infrastructure needs of nuclear research, then transient testing requirements should be addressed.

From a comparison of the risk profiles, it appears that the preferred alternative is Option 2, Alternative 2, i.e. the use of ATR and the FDPF/PPP651 facilities for the production of Pu_238 and medical isotopes.

Thank you,

Steve Herring
298 Call Avenue
Idaho Falls, Idaho 83402

1786-2
(Cont'd)

1786-3

1786-4

Response to Commentor No. 1786

1786-3: As stated in Section 1.2.3 of Volume 1, transient conditions are one of the requirements for nuclear fuel research. The ACRR is operational and available for testing new fuels with transient irradiation. TREAT could also be restarted without NEPA action to support transient irradiation tests of new fuels.

The purpose of this NI PEIS is to evaluate the environmental impacts of all reasonable alternatives capable of supplying steady state neutron streams to fulfill the requirements of the missions described in Section 1.2 of Volume 1, which include production of medical and industrial isotopes, production of plutonium-238 for NASA space missions, and civilian nuclear research and development. The Record of Decision will be based on a number of factors that include environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

1786-4: DOE notes the commentor's support for Option 2 of Alternative 2, Use Only Existing Operational Facilities. It should be noted that the preferred alternative need not be the alternative with the least environmental impacts.

Commentor No. 1787: Steve Hiller

From: Steve Hiller[SMTP:SWHILLER@TELEVAR.COM]
 Sent: Tuesday, September 19, 2000 1:32:44 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Cc: senator_murray@murray.senate.gov%internet;
 locke2000@garylocke.com%internet
 Subject: NUCLEAR INFRASTRUCTURE PEIS
 Auto forwarded by a Rule

To: Colette Brown, NE_50
 US Dept. of Energy

CC: Slade Gorton, US Senator
 Patty Murray, US Senator
 Doc Hastings, US Representative
 Gary Locke, Washington State Governor

I have a few comments regarding the Nuclear Infrastructure PEIS:

I would like to see the FMEF facility, located adjacent to the FFTF, used in conjunction with the FFTF for the preparation and recovery of isotopes. This would allow all operations, especially those where time is critical, to be performed in one area. This would minimize greatly the time and more importantly the risk of transporting the materials between the isotope labs and the reactor. This would require some additional monies up front, but I believe that in the long run this would be the most cost effective by far and clearly the most sensible approach with regard to safety.

The second thing I would like to see is the listing of nonproliferation type activities as an actual mission to be included with the restart of the FFTF facility. There are significant quantities of plutonium and uranium, domestic and foreign (e.g., SNR300 fuel) that can be taken away from any kind of threat by operation of the FFTF. There is clearly a big international bonus and plus to this option and with the uncertainty in the world today, this would be an important and significant mission _ removing attractive special nuclear materials from the worlds stockpiles and transmuting them to an

1787-1**1787-2****Response to Commentor No. 1787**

1787-1: DOE notes the commentor's support for Options 3 and 6 of Alternative 1, Restart FFTF.

1787-2: As the commentor correctly pointed out, use of the Hanford MOX fuel would dispose of a significant U.S. stockpile of highly attractive fresh plutonium fuel by conversion to spent fuel through irradiation in FFTF. This represents a safe, low-cost, high benefit opportunity to reduce U.S. civilian plutonium without chemical or bulk processing. Use of the German MOX also represents a similar advantage with respect to the German stockpile of separated civilian plutonium. In addition, use of the German MOX would also extend the time for any research for designing a new low enriched uranium fuel for use at FFTF, and delay the need to produce HEU for the FFTF.

Commentor No. 1787: Steve Hiller (Cont'd)

unrecoverable status as far as weapons are concerned is a major plus and should be listed as an actual mission of the facility. Not only transmuting the material but getting significant use for the general public at the same time makes this a very attractive means.

**1787-2
(Cont'd)**

I would very much like to see the restart of the FFTF for the production of medical, industrial, research and space isotopes. I think that an acceptable approach due to the availability and cost effectiveness of the FFTF is to restart this facility and then go into a long term plan for its replacement which could then be to bring on line an accelerator or another reactor in the next 20 years to pick up from FFTF and to ensure long range isotope production. When you are talking a program of this size with the projected growth predicted, 20 years off is not that far away and therefore this becomes a very attractive alternative. Now (today), it only makes sense to go with one facility and the one that is already built with a proven operating history, but the day will come that a replacement and even sooner, a sister facility, would be needed. The time is available then to fully develop an acceptable replacement for the FFTF some 25 to 30+ years down the road. The DOE and our government must start thinking in more long term actions instead of just the current fiscal year driving all our decisions.

1787-1

Issues with the impact to Hanford Clean_up with the restart of FFTF need to be addressed and shown that first there is no real impact. FFTF does not produce any high level waste and that the spent fuel will be shipped to a repository with the fuel being held at FFTF until this facility is ready to receive spent fuel (FFTF has the capacity, so no impact to other facilities at Hanford). This reduced concern with Hanford Clean_up and the thousands of lives that will be provided a significantly higher quality of life with medical isotopes should make the preferred alternative obvious to being the restart of the FFTF.

I would also like to see something that discusses external regulation of the FFTF. This seems to occasionally get some concern based on DOE operating the facility and being their own regulator and police _ which some perceive the do poorly at due to budget

1787-3

Response to Commentor No. 1787

1787-3: DOE notes the commentor's support for Alternative 1, Restart FFTF. The purpose of this NI PEIS is to evaluate the environmental impacts of a range of reasonable alternatives to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238 for future NASA missions, and civilian nuclear research and development. The Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

With respect to external regulation, on February 19, 1999, Secretary Bill Richardson sent a letter to Senator John Warner, Chairman of the Committee on Armed Services to inform him of DOE's efforts in exploring a potential move toward the external regulation of DOE's nuclear facilities. Secretary Richardson reported that, based on DOE's analysis, many of the potential benefits that were expected from external regulation had not been demonstrated, and appear to be outweighed by associated costs and difficulties raised in the pilot projects. As a result, DOE had determined that submittal of legislation to exempt certain facilities from Departmental regulations was premature. It should be noted that FFTF meets all safety requirements established by DOE and the DOE requirements are consistent with those established and applied by other regulatory agencies such as the Nuclear Regulatory Commission.

Commentor No. 1787: Steve Hiller (Cont'd)

constraints and missions goals. It should be made clear that the FFTF would be operated outside the Hanford mission (maybe more associated with the PNNL research activities) and that an outside regulator, most likely the NRC, would be responsible for this aspect of the operation. I think this approach would put a lot of concerned peoples minds at ease and take some wind out of the sails of the anti_nuke, anti_DOE and anti_FFTF contingency. This would make the whole process of restarting FFTF more palatable for many.

**1787-3
(Cont'd)**

Thank you so much for considering my recommendations/suggestions. I am very much for the restart of the FFTF for an isotope mission and think any decision that would shutdown this fine irradiation facility would be a complete misuse of government funds and assets. Thank you again for the opportunity to respond and looking forward to your decision to move forward with the restart of this proven, dependable source of irradiation services and testing.

1787-1

Steve Hiller
5310 W. 25th Avenue
Kennewick, WA 99338
(509) 783_3861

Response to Commentor No. 1787

Commentor No. 1788: Les Davenport

From: Les (038) Betty Davenport
[SMTP:DAVENPOR@OWT.COM]
Sent: Tuesday, September 19, 2000 2:07:06 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Comments on NI PEIS
Auto forwarded by a Rule

I support restart of FFTF (Alternative 1, Option 1) for the production of medical and industrial isotopes at Hanford, along with Pu_238 target fabrication, processing & storage at ORNL. The research being done with medical isotopes is so important to all humanity that it is unconscionable to not proceed due to the fears of those that do not understand science or accept the beneficial uses of nuclear. The more recent cost report for alternatives and nonproliferation impact assessment also support using the already existing, safe FFTF. Finally, neutron_rich isotopes produced in a nuclear reactor are much better for production of therapeutic medical isotopes than the neutron_poor isotopes produced in an accelerator.

Les Davenport
1922 Mahan Ave.
Richland, WA 99352

1788-1

Response to Commentor No. 1788

1788-1: DOE notes the commentor's support for Option 1 of Alternative 1, Restart FFTF. There is no qualitative difference between isotopes produced in an accelerator or a reactor and both are capable of producing medical isotopes in sufficient quantities.

Commentor No. 1789: William J. Stokes

From: StokesWJ@aol.com%internet
 [SMTP:STOKESWJ@AOL.COM]
 Sent: Tuesday, September 19, 2000 2:43:59 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: FFTF PEIS
 Auto forwarded by a Rule
 See Attached

Ms. Colette E, Brown, NE_50
 U.S. Department of Energy, 19901 Germantown Road
 September 18, 2000
 Germantown, MD 20874

Reference ANMS Letter to Ms C Brown, November 7, 1999
 Subject: Nuclear Infrastructure Programmatic EIS Comments

In my referenced letter, I identified three principal issues for the draft PEIS. For brevity, I will not repeat those issues or comments here but still consider the original comments valid and should be addressed in the Final PEIS. In this letter, I would like to address two issues:

* First, the list of Alternatives is not complete, as it does not include the alternative to privatize the FFTF and therefore the cost analysis does not adequately consider reduced costs to the taxpayer from commercialized operations.

* Second the cost analysis ignores the signed agreement ANMS has with SBK for the transfer of the fuel ownership and therefore does not address the cost impact of reconciling ANMS' legal position on the fuel.

* Privatize FFTF Operations: Privatization of isotope production has been a core mission for DOE and allows the private sector to meet the demands of isotope production and research facility availability at nominal cost and minimal risk to the government. This option is proposed as a new alternative rather than included under Alternative 1 because of the significant differences in potential mission management, cost assessment, policy issues and positive

1789-1**Response to Commentor No. 1789**

1789-1: DOE has not ruled out shared-cost approaches related to future operation of the FFTF, should that facility be restarted. The decision on whether to restart or shutdown that facility is based on many considerations, including cost effectiveness. Cost effectiveness, however, is not evaluated based on the source of funding for those costs, but rather on the effectiveness of the expenditure of funding in meeting critical mission needs. Program participation and cost-sharing would necessarily be considered once a decision was implemented, and the desirability and practicality of such an approach could be definitively evaluated, based on a clear projection of the use of the FFTF.

DOE will continue to seek out partnerships, which are mutually beneficial.

Commentor No. 1789: William J. Stokes (Cont'd)

socio_economic benefit to the community not available under Alternative 1 as described.

The benefits of privatization were reflected in correspondence from WA Governor Gary Locke to then Secretary Pena on April 10, 1997, in which the Governor writes: "This reactor (FFTF) is a valuable asset with an impressive operational record....It is capable of making a valuable contribution to society as well as to community economic development efforts....I support the concept of using the facility for the production of medical isotopes....Further, I feel that privatization could facilitate an expeditious transition to medical isotope production. While I do not endorse any single firm, I urge you to meet with representatives of Advanced Nuclear and Medical Systems (ANMS) at your earliest convenience to discuss the potential of privatization and I trust such a meeting can be arranged."

The range of alternatives identified in the public meeting is insufficient and does not conform to the Council on Environmental Quality guidance, which requires that all reasonable alternatives be evaluated. In determining the scope of alternatives to be considered, the emphasis is on what is "reasonable" rather than on whether the proponent or applicant likes or is itself capable of carrying out as a particular alternative. Reasonable alternatives include "those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant."

Clear and demonstrated evidence has been submitted that privatization of FFTF is a viable alternative from an "economic stand point" and that while it is potential that the government (proponent) may not be able to carry out the alternative, the private sector may be able to. Further, a privatization alternative would provide a basis for equitable comparison of privatization compared to government operations under Alternative 1.

**1789-1
(Cont'd)**

Response to Commentor No. 1789

Commentor No. 1789: William J. Stokes (Cont'd)

In correspondence to Secretary Richardson in 1999 and 2000, ANMS has proposed a public private partnership to pay for the cost of restart and initial operations of the facility. The proposal was supported with expressions of interest by a reputable lender for potential investment of \$200 million and a pharmaceutical firm interested in relocating their production facilities to Richland, under a commercial operations plan. DOE should vigorously pursue such opportunities consistent with the Administration's initiative to "reinvent" government and include such options in the cost assessment of this EIS

In the Financial Proforma, ANMS used the projected market from the 1997 Frost & Sullivan report cited in the PEIS. The growth rates were approximately 15% per year. The actual growth rates being experienced are higher than the projected. Growth in 1999 alone was 19%. Data from the Proforma was:

- * Assumed FFTF only captured portions of the market growth, the capture share of the existing market was zero
- * Restart and initials operations loan payback was 20 years, the IRR on the Proforma calculated out to be about 54%

Although the market growth rate may be on the high side of some estimates, it is well within limits of all projections, and less than current experience. The assumptions on market capture appear conservative and the assumed operational life in the analysis is probably 5_10 years lower than could be expected.

The financial proforma, as reviewed by Compass Group prior to their expression of interest for a \$200 Million restart construction loan, indicates a viable and financially attractive commercial project. Evidence of the "reasonableness" of this approach is in the expression of financing interest from Compass and should therefore be included in the cost analysis supporting this PEIS.

The Department of Energy committed to evaluate privatization of operations of the FFTF in the EIS in the July 29_30, 1999 NERAC meeting. This commitment and information which, was provided by

**1789-1
(Cont'd)**

Response to Commentor No. 1789

Commentor No. 1789: William J. Stokes (Cont'd)

the DOE FFTF Standby Office managed by PNNL, formed the basis of the NERAC Resolution Regarding the FFTF, recommending that the Secretary proceed toward a record of decision concerning the FFTF.

The NERAC Resolution states: "The specific missions identified by PNNL for FFTF should be further assessed, including a discussion of alternatives and privatization of some or al of the missions."

The committee was responding to the August 1999 Program Scoping Plan for the FFTF, Section 4.1.3.4, "Potential for Privatization" which states: "For the purposes of this plan (PNNL Scoping Plan), privatization was not considered for FFTF reactor operations. However, there have been expressions of interest in privatizing all operations associated with the FFTF by those believing that if DOE was willing to enter into a mutually acceptable long_term facility lease was a private company, private source funding could be obtained to support FFTF restart. During the EIS process for an FFTF restart, if initiated, privatization options will be evaluated for alternative management approaches, including:

- * full privatization of FFTF restart and operations,
- * etc.

The report also provided the following citation: "Advanced Nuclear & Medical Systems (ANMS) submitted an unsolicited proposal, dated September 1996, to the DOE for the privatization of the FFTF. In July 1997 the DOE notified ANMS that it was premature to consider privatization proposals for the FFTF. However, the DOE indicated that it would consider privatizing the facility if a decision were made to restart it."

ANMS has reiterated our offer to privatize FFTF for the production of medical, industrial and agricultural isotopes. Space would also be made available for research projects as appropriate. In support of our offer, ANMS has provided a letter of interest from a credible financial lender, identifying their interest in providing \$200 million in private financing for the restart and operation of the FFTF under a privatization plan. This letter is included in the Appendices of the PNNL Scoping Plan.

**1789-1
(Cont'd)**

Response to Commentor No. 1789

Commentor No. 1789: William J. Stokes (Cont'd)

ANMS has followed numerous models regarding privatization of existing DOE nuclear facilities, US Enrichment Corporation facilities, privatization of new DOE nuclear facilities, Hanford Tank Waste Immobilization Plant, and models regarding an isotope production and processing complex centered around the production reactor, Petten Holland, otherwise known as Medical Valley.

**1789-1
(Cont'd)**

Privatization of the FFTF for the missions identified has been demonstrated to be reasonable and financially feasible. I also submit that in order to provide the decision_maker with the full range of facts and information necessary to make a Decision, a full consideration and evaluation of the proposed alternative is necessary and required.

SNR_300 SURPLUS REACTOR FUEL FROM GERMANY

Restart of the FFTF assumes availability of SNR_300 surplus reactor fuel from Germany to support FFTF operations. As DOE has been informed on previous occasions (December 1998, January 1999, July 1999, etc.), ANMS has an agreement in place with SBK for the transfer of this fuel to ANMS for use at FFTF. It is fully reasonable and appropriate to assume this fuel to be available to DOE for use in FFTF, however, the cost analysis must reflect the appropriate cost for this transfer. ANMS has proposed several concepts for the utilization of this asset to promote medical research and further the development of a medical and agricultural isotope processing industry in the local community. Costs used in the PEIS should reflect a negotiated price between ANMS and the DOE for the use of this fuel in the FFTF.

1789-2

Thank you for consideration of our comments. If further discussion or clarification is required, please contact me at 509_946_9900 or 509_946_9800 FAX.

Sincerely,
WILLIAM J. STOKES
William J. Stokes
President

CC: WA State Congressional Delegation
Governor Gary Locke's Office

Response to Commentor No. 1789

1789-2: Costs for the use of SNR-300 (German MOX) reactor fuel were included in the estimated annual operating costs for FFTF. Table 2-3 of the Cost Report shows the cost of operating FFTF using foreign MOX fuel which includes an additional \$0.53 million per year for the domestic transport of this fuel from port-of-entry to FFTF. As stated on page 2-7 of the Cost Report, the German MOX fuel was assumed to be available to DOE at no additional cost for fabrication of fuel assemblies. Therefore, only domestic transportation costs would be incurred.

Commentor No. 1790: Dona Hippert

From: Brad Hippert[SMTP:BHIPPERT@TRANSPORT.COM]
Sent: Tuesday, September 19, 2000 2:59:41 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Hanford
Auto forwarded by a Rule

Dear Ms. Brown,,

It was a pleasure to have the opportunity to speak with you in August at the Portland hearing. Thank you for the opportunity to comment on the Hanford situation and for your time in reading the comment.

Dona Hippert
11723 SW 47th Ave.
Portland, OR 97219

September 18, 2000

Ms. Collette Brown, NE_50
US Department of Energy
Office of Nuclear Energy, Science & Technology
19901 Germantown Rd., Room A_270
Germantown, MD 20874

Dear Ms. Brown,

It would be difficult for me to express my opposition to the restarting of the FFTF more eloquently than those who spoke at the Portland public hearing in August. However, I will add my voice to the chorus in hope that the more of us who speak out against the restart, the greater chance we have that the facility will finally be permanently deactivated. Therefore, I will simply echo the main objections to the draft EIS that were brought forward at that meeting.

First, the FFTF is not an economically viable or dependable source for the medical isotopes that are being used as a reason for restarting the FFTF. Existing reactors in Missouri and Tennessee are

1790-1

Response to Commentor No. 1790

1790-1: DOE notes the commentor's remarks concerning the Portland, Oregon public hearing.

1790-2: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1 2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements.

There currently is little room for growth of medical isotope production at either ATR or HFIR. At ATR the neptunium-237 targets for plutonium 238 production will compete for space in the reactor. There are potential negative impacts to the private company that leases reactor space for the production of radioisotopes due to being assigned less desirable irradiation space. At HFIR, the ability to expand medical isotope targets into additional reactor locations is limited by the potential impacts that the targets have on the primary experiments in the reactor. Medical isotope

1790-2

Commentor No. 1790: Dona Hippert (Cont'd)

better suited for this purpose. Additional capacity to produce these isotopes at the Tennessee reactor and at a reactor in Idaho, along with Canadian sources, assure there will be a sufficient supply. Second, the necessary capacity to produce plutonium 238 for space travel already exists. The DOE must simply remove the constraint that there be a single source to satisfy the needs of all future missions.

Finally, and perhaps most important, any further activity at Hanford would detract from the cleanup of the waste problems that already exist. It is this cleanup that should be the sole priority of the DOE at Hanford.

The assurances of the draft EIS that there would be no great danger in the restart of the FFTF are hard to believe in view of the track record of the nuclear industry. We were right 20 years ago when we voiced our concerns about nuclear waste; the nuclear industry was wrong in its prediction that the waste problem would be solved in short order. Please don't give us the chance to be right again. Deactivate the FFTF permanently now.

Sincerely,

Ms. Dona Hippert

**1790-2
(Cont'd)**

1790-3

1790-4

1790-5

1790-6

1790-7

Response to Commentor No. 1790

targets and neptunium-237 targets are not in competition for the same locations in at HFIR.

1790-3: DOE notes the commentor's views. There are approximately only 9 kilograms of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

DOE has no requirement to conduct all three missions at one site. In the Record of Decision process, DOE could choose to combine components of several alternatives in selecting the most appropriate strategy.

1790-4: Restoration of the Hanford Site and waste management activities are the primary missions at Hanford. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

1790-5: FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Commentor No. 1790: Dona Hippert (Cont'd)

Response to Commentor No. 1790

- 1790-6:** DOE notes the commentor's concern regarding radioactive waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.
- 1790-7:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 1791: Hans Karow

From: Hans Karow[SMTP:CORE@VIP.NET]
 Sent: Tuesday, September 19, 2000 3:34:39 AM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Cc: Loring Wirbel; Helen Caldicott; Jonathan Mark; Russell D. Hoffman; Karl Grossman; Regina Hagen; Michio Kaku; globalnet@mindspring.com%internet; globenet@afn.org%internet
 Subject: DOE's Draft PEIS
 Auto forwarded by a Rule
 VIA E _ MAIL
 September 18, 2000

Attention:
 Mrs. Colette E. Brown

U.S. Department of Energy, NE_50,
 19901 Germantown Road, Germantown, MD 20874_1290;
 fax (toll_free) 1_877/562_4592; 1_877/562_4593;
 E_mail Nuclear.Infrastructure_PEIS@hq.doe.gov

Re: DoE PLANS FOR EXPANDED PRODUCTION OF PLU_238 FOR FUTURE SPACE MISSIONS, specifically, solicited comments based on the DRAFT Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility, DOE/EIS_0310D, July, 2000

Dear Mrs. Brown,

I refer to the letters/e_mails to you from Jonathan Mark (September 14, 2000) and Russell Hoffman (September 9 and 14, 2000) with regards of the above mentioned matter.

I fully support both letters and like to exprss my deepest concern.

I became aware of the nuclear issue with the Cassini deep space mission and have contacted eminent independent scientists and researchers myself . I also have regularly contacted Prof. Karl

1791-1

Response to Commentor No. 1791

1791-1: DOE notes the commentor's concern for NASA's use of nuclear materials for space missions, although this issue is beyond the scope of this PEIS. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch.

Commentor No. 1791: Hans Karow (Cont'd)

Grossman, whom we have to thank that he made the Citizens on Earth aware about the nuclear issue with his book and two videos.

I hereby ask you and the relevant U.S. Government Departments that any further production and use of nuclear fuel (including all nuclear waste products) are to be stopped for the reasons giving below in a fact sheet about Plutonium also downloadable at:
<http://www.animatedsoftware.com/cassini/nltrs/nltr0139.htm>

I kindly ask you to please acknowledge my letter to you, and I especially ask you to please correct my findings about the Plutonium's fact, which I was also able to gather upon contacting a few independent eminent scientists and medical doctors. Please state where I am wrong. Please note: the fact sheet I wrote before Cassini's planned Earth fly_by. The facts about Plutonium's accidental release in/on/above Earth and in space are still valid, no matter in which project involved.

In deep concern,
Hans Karow, former Coordinator of the Cassini Redirection Coalition (CRC), S 32 / C 6, RR # 1, OLIVER, BC, V0H 1T0, CANADA
Tel./Fax: (250) 498 3135, Fax: (250) 498 3183, E_mail: core@vip.net

Facts about Cassini's Plutonium

The Cassini deep space mission to Saturn must be redirected to avoid its planned high risk Earth fly_by this year on August 18. Although a safe alternative solar technique was available instead of the use of Plutonium, NASA ignored worldwide warnings.

Here are some facts about Plutonium (Pu) that everybody should know about:

Pu was plentiful on Earth when it was first formed. Life did not appear on Earth until the Pu had decayed to Uranium.

Pu, almost entirely a man_made element, is a radioactive and highly toxic substance. Pu was first isolated in large (milligram) quantities in

**1791-1
(Cont'd)**

Response to Commentor No. 1791

Commentor No. 1791: Hans Karow (Cont'd)

1942 by Dr. John W. Gofman, who headed the Manhattan Project's Plutonium Group (Hiroshima and Nagasaki bombs).

Once it enters the body through inhalation, ingestion, or through a cut, it becomes an internal emitter that emits highly destructive radiation to the body tissue in which it concentrates. It is akin to an internal X-ray machine.

When lodged within tiny airways of the lung, Pu particles bombard surrounding tissue with alpha radiation. Smaller particles may break away from larger aggregates of the compound to be absorbed through the lung and enter the bloodstream. Because Pu has properties similar to iron, it is combined with the iron-transporting proteins in the blood and conveyed to iron-storage cells in the liver and bone marrow, inducing liver and bone cancer, and leukemia. Pu's iron-like properties also permit the element to cross the highly selective placental barrier and reach the developing fetus, possibly causing the development of abnormal structures in an embryo resulting in a severely deformed fetus and subsequent gross deformities in the newborn infant.

Pu can also migrate to the testicles and ovaries where it can cause genetic mutation to be passed on to future generations.

No quantity inhaled has been found too small to [be able to] induce lung cancer in animals. It has also been found, by any reasonable standard of scientific proof, that there is no safe dose or safe dose_rate of ionizing radiation, meaning there is no safe threshold.

It has been estimated that only one pound of Pu_238, if uniformly deposited in the lungs of the world's population, would be enough to induce lung cancer in everyone on Earth.

In the event of Cassini's accidental atmosphere re_entry during its planned Earth fly_by, or any other time due to a loss of control and subsequent random collision, its 72.3 pounds of Pu would get vaporized into invisible particles and spread as a dust all over the world. Even though over four tons of Pu_239 were released during

Response to Commentor No. 1791

Commentor No. 1791: Hans Karow (Cont'd)

atmospheric nuclear bomb testing, Cassini's 72.3 pounds of Pu_238 would carry more radioactivity than all the Pu_239 from the bomb tests.

The cancer rate will increase (humans and animals), induced over years by Cassini's accidentally released Pu.

If Pu is released into the environment, there is no way to stop its radioactive decay. As it decays, it produces the highly dangerous alpha radiation mentioned above.

Pu cannot be destroyed by any means. Pu does not disappear in the environment. It is not water_soluble. As a dust it easily becomes airborne. Once dispersed into the environment it can mix with organic substances forming compounds that can enable it to be taken up in bodies of all live species: plants, animals, and humans.

A Pu particle constantly produces radiation _ and can harm any living thing, whether human, animal or plant, that it enters, also meaning as many times as it changes its living host. If someone were to die of lung cancer induced by Pu and were cremated, contaminated smoke might carry that Pu particle into someone else's lungs. If an animal dies or is killed, its meat may be eaten by other animals or humans. Or it rots and its poisoned dust could be scattered by the wind and inhaled by other creatures. Pu_238 will be radioactive over more than 800 years [~10X the half_life __ rdh] (14% of Cassini's Plutonium consists of Pu_239, being radioactive for over 240,000 years [~10X the half_life __ rdh], although somewhat less toxic than Pu_238). Once Pu is deposited in the lung, there is no way to remove it from the lung and there is nothing that medical science can do to reduce the risk of lung cancer.

In case all vaporized Pu particles are of the size of the invisible 1,000,000 atoms_particle, there will be about 1.63×10^5 particles per square meter (163,000 particles!) of Earth's surface (including water surface) awaiting all living on Earth, to be absorbed over and over again for many generations!

Response to Commentor No. 1791

Commentor No. 1791: Hans Karow (Cont'd)

All the above facts have been retrieved from Professor Karl Grossman's book " The Wrong Stuff", "The Stop Cassini" web site <http://www.animatedsoftware.com/cassini> and the "Cassini NoFlyBy Action Site" <http://www.nonviolence.org/noflyby> and upon contacting eminent medical doctors and physicists.

Hans Karow

Coordinator, Cassini Redirect Coalition (CRC)

Response to Commentor No. 1791

Commentor No. 1792: Chuck Mercer

From: CHUCKCBM@aol.com%internet
[SMTP:CHUCKCBM@AOL.COM]
Sent: Tuesday, September 19, 2000 9:07:36 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Plutonium production at INEEL
Auto forwarded by a Rule

Dear Ms. Brown,

Here's my two cents' worth on the subject:

a.. Reprocessing is not acceptable and should not be considered at INEEL or any other facility

1792-1

b.. Building 666 is a decrepit and highly contaminated building and should be decommissioned in a manner that is protective of human health and the environment

c.. Plutonium_238 production is unnecessary and its use too risky

1792-2

D.. Using ATR at INEEL would interfere with its current mission of producing medical and industrial isotopes

1792-3

e.. Extend the comment deadline 30 days

1792-4

Thanks,
Chuck Mercer

Response to Commentor No. 1792

1792-1: DOE would not reprocess spent nuclear fuel under any of the alternatives considered under this programmatic environmental impact statement. The alternatives do include processing of target materials used to produce isotopes for medical and industrial uses, plutonium-238 for space missions, and nuclear materials research and development.

Building CPP-666 is divided into two parts, the Fuel Storage Facility and the Fluorinel Dissolution Process Facility (FDPF). The FDPF is under consideration in this PEIS for storage of neptunium-237 oxide, preparation of neptunium-237 targets, and separation of plutonium-238 from irradiated targets. DOE expects that this facility will meet, with further analysis and/or modifications, all requirements to safely conduct these processes.

1792-2: Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed production of plutonium-238 are relatively low and are discussed in detail in Chapter 4 of Volume 1, and Appendixes H, I, and J of Volume 2 in the Final NI PEIS.

Commentor No. 1792: Chuck Mercer (Cont'd)

Response to Commentor No. 1792

- 1792-3:** As stated in EIS Volume 1, Section 2.3.1.2, ATR would continue to meet its medical and industrial radioisotope production mission for the no action and most other alternatives considered where ATR is not used for the production of plutonium-238. If ATR were to be used as a production facility for plutonium-238 (options 1, 2, 3, 7, 8, and 9 under Alternative 2), it would support medical and industrial radioisotope production to the extent possible. DOE would try to minimize the impact of the new mission on current medical and industrial radioisotope production.
- 1792-4:** DOE notes the commentor's request for extension of the public comment period. The Council on Environmental Quality's (CEQ) "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act" (40 CFR 1506.10(c)) require that a minimum of 45 days be allowed for public comment on the Draft NI PEIS. As stated in the Notice of Availability (65 FR 46443 et seq.), the public comment period began on July 28, 2000 and continued to September 18, 2000. In preparing the Final PEIS, DOE has assessed and considered both oral and written comments received on the Draft PEIS during the public comment period and has responded to these comments in the Final PEIS. Volume 3 of the NI PEIS contains public comments received on the NI PEIS and DOE responses to those comments. Moreover, late comments were considered to the extent practicable.

Commentor No. 1793: Karen Boyer

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



FIRST CLASS MAIL

Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

76



Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

until nuclear production does not
produce harmful toxic waste, it
is unconscionable to continue the
production. How much more wise would it be
to use the millions and billions of people's ^{hard earned} dollars
to produce clean sustainable energy!!

Name Karen Boyer
Address 736 SE Lambert St.
City, state Portland, OR Zip 97202

Response to Commentor No. 1793

- 1793-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 1793-2:** The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. The missions to be addressed in this NI PEIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and nuclear research and development, can currently only be met using nuclear reactor or accelerator technologies.
- 1793-3:** DOE notes the commentor's interest in alternative energy sources. The DOE missions to be addressed in this EIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies.

1793-1

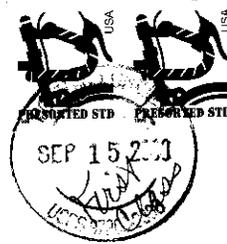
1793-2

1793-3

Commentor No. 1794: Jo Anne Nordling

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214

FIRST CLASS MAIL



Ms. Colette Brown
U. S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

76

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I vote for alternative #5! (A 35 yr. environmental impact study is ridiculous.)
I am opposed to restart of the Fast Flux Test Facility reactor because:

① The need for production of isotopes at Hanford is not proven. ② Restarting the plant would produce more dangerous wastes which we obviously can't deal with the wastes we already have. ③ Environmental impacts will be horrendous yet no serious environmental impact survey has been done. ④ Frankly I don't trust the DOE - their past history of covering up the truth re. plutonium releases is scary. We need an outside, independent oversight agency.

Name Jo Anne Nordling
Address 7105 SW Elmhurst Dr.
City, state Tigard, OR Zip 97223

Response to Commentor No. 1794

1794-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.

It should be noted that the NI PEIS considered a 35-year operational period for purposes of analysis. The 35-year operation period is based upon the estimated length of time existing DOE irradiation facilities would continue operating if used for accommodating these missions. This time frame also accommodates current projections that indicate the demand for radioisotopes and nuclear research and development requiring these enhancements will extend for at least the next 20 years.

1794-2: See response to comment 1794-1.

1794-3: DOE notes the commentor's opposition to restarting FFTF for medical isotope production. DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

Although other manufacturers produce medical radioisotopes, DOE remains the key provider for a large number of radioisotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially experimental, these isotopes are not generally purchased in large-enough quantities to make their production financially attractive to private industry. However, supplies of many research isotopes are not readily available from existing

1794-1

1794-2

1794-3

1794-4

1794-5

1794-6

Commentor No. 1794: Jo Anne Nordling (Cont'd)**Response to Commentor No. 1794**

domestic or foreign sources, causing a number of medical research programs to be terminated, deferred, or seriously delayed. Consistent with the mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure to support production of radioisotopes for medical applications and research.

Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term (less than 5 years).

- 1794-4:** As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

- 1794-5:** DOE notes the commentor's concern about potential environmental impacts associated with restart of FFTF and with the additional concern about performing environmental impact surveys.

The incremental environmental impacts at Hanford specifically associated with the Alternative 1, Restart FFTF, are presented and discussed in Section 4.3 of the NI PEIS. The incremental impacts include those

Commentor No. 1794: Jo Anne Nordling (Cont'd)

Response to Commentor No. 1794

associated with normal operations and from postulated accidents. All impacts to human health and to ecological resources would be small in the immediate area of the Hanford site and negligible at all distant locations.

An environmental report is issued annually by DOE for the Hanford site. The report includes the results of effluent monitoring and environmental surveillance programs and surveys for all areas of Hanford. The results are reflected in the information presented in Section 3.4 of the NI PEIS, in which the existing environment at Hanford is described.

- 1794-6:** The commentor's position with regard to an outside, independent oversight agency is noted. Human health and safety are a priority in all of DOE's programs. With respect to actions that would result from implementation of the nuclear infrastructure alternatives, Chapters 2 and 4 of Volume 1 (e.g., Sections 4.3.1.1.9, 4.3.2.1.9, 4.3.3.1.9) and Appendixes H through J of Volume 2 address health and safety of the public and workers in detail. If Alternative 1, Restart FFTF, were selected for implementation, the issue of external, independent oversight could be considered at that time.

Commentor No. 1795: K. Bryant-Stanek

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

174+1207 [Barcode]

Public comment on Nuclear Infrastructure Draft Programmatic
Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

*one day I would again
like to swim in the
~~water~~ Columbia River
on the banks of Sawvie island.
i only if Hanford is cleaned up!*

Name Kesher Bryant-Stanek
Address 2626 NE 16th St
City, state Portland, OR Zip 97212

Response to Commentor No. 1795

1795-1

1795-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1795-2

1795-2: The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1. No food or water restrictions are in place outside the Hanford Site as a result of Hanford activities.

Commentor No. 1796: Brook Boden

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

76 [barcode]

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

*of concern for the harm it
will cause the environment,
and because I would like
to see more energy and
resources put toward different
forms of energy.*

Name Brook Boden

Address PO Box 1274

City, state Forest Grove, OR zip 97116

1796-1

1796-2

1796-3

Response to Commentor No. 1796

1796-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1796-2: DOE notes the commentor's concern about the potential environmental impacts associated with FFTF restart. The environmental impacts associated with operation of the FFTF and support facilities at Hanford during normal operations and from postulated accidents are presented and discussed in Section 4.3 of the NI PEIS. All impacts to human health and to ecological resources would be small in the immediate area of the Hanford site and negligible at all distant locations.

1796-3: DOE notes the commentor's interest in alternative energy sources. It is the current United States policy that clean, safe, reliable nuclear power continue as a viable component of the United States' energy portfolio. In recognition of this need, the government has initiated nuclear energy research and development programs to address potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) and to ensure that current nuclear power plants can continue to deliver adequate and affordable energy supplies. An enhanced DOE nuclear facility infrastructure is required to support such nuclear energy research and development for civilian applications.

Commentor No. 1797: Phillip Saumpty

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

0874+1207 [Barcode]

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

BECAUSE OF ENVIRONMENTAL AND HEALTH
SENSIBUS, THERE ARE SAFER METHODS
OF OBTAINING NEEDED ENERGY.

Name Phillip Saumpty
Address 1404 SW CARSON ST
City, state Portland, Oregon Zip 97219

Response to Commentor No. 1797

- 1797-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 1797-2:** The environmental impacts associated with operation of the FFTF and support facilities at Hanford during normal operations and from postulated accidents are presented and discussed in Section 4.3 of the NI PEIS. All impacts to human health and to ecological resources would be small in the immediate area of the Hanford site and negligible at all distant locations.
- 1797-3:** DOE notes the commentor's opposition to restarting FFTF. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action. DOE considers various facilities, including FFTF and others, for carrying out these missions. The public health and safety and other environmental impacts associated with the restart of FFTF as well as other proposed alternatives and facilities are described in Chapter 4 of Volume 1 and additional details are provided in Appendixes H, I, J, K, L, and M of Volume 2. In any case, FFTF, if restarted, would not be used for the production of energy.

Issues of research and development of alternative energy sources are beyond the scope of this NI PEIS. Other offices of DOE are responsible for the research and development of alternative energy sources. The stated missions to be addressed in this EIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and nuclear research and development, can currently only be met using nuclear reactor or accelerator technologies.

Commentor No. 1798: Thomas Bergeron

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

0874+1207 [Barcode]

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

There is no sat. factory way to deal with nuclear waste

Name Dr. Thomas Bergeron
Address 18990 Bridgport Rd
City, state Dallas OR Zip 97338

1798-1

1798-2

Response to Commentor No. 1798

1798-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1798-2: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

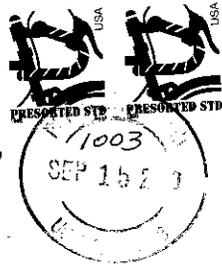
The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

Commentor No. 1799: Laura Feldman

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214

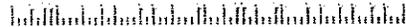
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Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

76



Public comment on Nuclear Infrastructure Draft Programmatic
Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

You know, the human race knows
in its soul that this is suicide.
Think of your loved ones, think
of your garden, your favorite
pleasure, for God's sake. do the right thing.
Name Laura Feldman It's not only your Karma!
Address 817 SE 29th
City, state Portland, OR Zip 97214

|| 1799-1

Response to Commentor No. 1799

1799-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1857: Eban Goodstein

From: Eban Goodstein[SMTP:EBAN@LCLARK.EDU]
Sent: Tuesday, September 19, 2000 7:15:03 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Comment
Auto forwarded by a Rule

Comments on Nuclear Infrastructure PEIS

As a long time observer of the Hanford situation, I would like to make the following comments:

The FFTF is not needed. Therefore it should not be restarted, and it should be shut down permanently, saving taxpayers \$30 million per year.

Sincerely,

+ + + + + + +

Eban Goodstein
Associate Professor, Economics
Lewis and Clark College
Portland, OR 97219
v 503.768.7626 / f 503.768.7611
eban@lclark.edu

Response to Commentor No. 1857

|| 1857-1
|| 1857-2

1857-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF. The need for the proposed action is addressed in Section 1.2 of Volume 1 of the PEIS. The role of FFTF in fulfilling that need is addressed in Section 2.5.2 of Volume 1.

1857-2: See response to comment 1857-1.

Commentor No. 1858: Losena Tubanavau-Salabula

From: Reception[SMTP:PCRC@IS.COM.FJ]
 Sent: Tuesday, September 19, 2000 9:33:08 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: From Losena
 Auto forwarded by a Rule

PACIFIC CONCERNS RESOURCE CENTRE Inc.

83 Amy Street, Toorak, Private Mail Bag, Suva, Fiji
 Telephone:(679) 304.649 Facsimile:(679) 304.755
 E_mail: pcrc@is.com.fj Website: www.pcrc.org.fj

File Ref:Camp/Nuclear Weapons. Chrg: Demil.
 19 September; 2000.

Olette E. Brown,
 U.S. Department of Energy, NE_50,
 19901 Germantown R, Germantown, MD 20874_1290

Dear Olette,

The Nuclear Free & Independent Pacific Movement for nearly three decades worked very hard to promote education awareness programme to educate the peoples of the Pacific region and Pacific rim in the importance of maintaining clean environment for the sustenance of its peoples. The Movement has conflicts with other metropolitan powers due to our contradictory philosophies about clean environment; for example in their denial that nuclear testing is not harmful to the environment and to human health. However, the United States of America has always been committed to its environmental obligations. In this regard, we would like to encourage the U.S. Department of Energy to talk with NASA to promote developing more alternative (solar, hydro) power sources for space missions. NASA certainly can swallow its pride for a moment and follow suit with the European Space Agency (ESA) which has developed high_ efficiency solar cells for deep space mission.

1858-1

Response to Commentor No. 1858

1858-1: DOE notes the commentor's opposition to NASA's use of nuclear materials for space missions, concern for the funding of ongoing cleanup activities, and concern over the use of nuclear power in space-based weapons. Issues such as NASA research priorities are beyond the scope of this PEIS. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. None of the DOE missions stated in the NI PEIS are defense- or weapons-related.

***Commentor No. 1858: Losena Tubanavau-Salabula
(Cont'd)***

Also one problem that has been experienced is the production/fabrication process for space nuclear power missions has recently led to several worker contamination accidents. The expansion of production will certainly just worsen the problem.

The NFIP Movement has kept records of failures of launches of nuclear powered space devices in Cape Canaveral on rockets with 10% failure rates will only increase the possibility of a deadly mishap.

We are dismayed in the massive cost of expanded production of plu_238 cannot be just at a time when the DoE admits it needs over \$US300billion to clean_up exist problems at DoE facilities.

Furthermore, NFIP earlier mentioned the commitment by the US government to clean environment. It is very contradictory to learn that the US Military is promoting the use of nuclear power in space for the space_based weapons technology. Using nuclear power for space war will severe environmental implications for life on Earth.

We sincerely hope that one day the United States of America will halt completely all its nuclear and military activities to allow peace and harmony prevail in the globe.

In Peace

Losena Tubanavau_Salabula
Assistant Director_Demilitarization
PCRC Inc;

**1858-1
(Cont'd)**

Response to Commentor No. 1858

As discussed in Chapter 4 of Volume 1 (e.g. Sections 4.3.1.1.13, 4.3.2.1.13, 4.3.3.1.13), waste will be generated by all of the proposed alternatives, including the No Action Alternative. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. DOE activities associated with this program would not impact the schedule or available funding for existing cleanup activities at candidate sites for implementation of the nuclear infrastructure alternatives.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Commentor No. 1859: Kim Cook

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214

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Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

76



**Public comment on Nuclear Infrastructure Draft Programmatic
Environmental Impact Statement (NI PEIS)**

I am opposed to restart of the Fast Flux Test Facility reactor because:

*Clean-up the waste + find a safe way
to store the waste 1st!! How can we
consider reopening the FFTF - without
knowing the costs 1st!! I am extremely
concerned about SAFETY of transportation
& storage of reactor*

Name Kim Cook
Address 3806 SE Stephens St.
City, state Portland, OR Zip 97214

Response to Commentor No. 1859

- 1859-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 1859-2:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.
- 1859-3:** The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such an ancillary document need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed this document to about 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P in the Final NI PEIS.
- 1859-4:** The commentor's concerns about safety during transportation and storage of nuclear materials are noted.
- Volume 1, Section 2.4 of the NI PEIS describes measures that would be used to ensure that radioactive materials would be safely transported under the nuclear infrastructure alternatives. Special nuclear materials would be transported with DOE's SST/SGT system and many materials would be carried in Type B shipping containers.
- Since its establishment in 1975, the SST/SGT system has transported DOE-owned cargo over more than 151 million kilometers (94 million miles) with no accidents causing a fatality or release of radioactive material. Type B shipping containers that would be used for

Commentor No. 1859: Kim Cook (Cont'd)

Response to Commentor No. 1859

transportation of plutonium in various forms are described in Appendix J. Requirements for certification of a Type B container include maintaining its integrity through a series of accident conditions illustrated in Figure J-1. Type B packages have been used for years to ship radioactive materials in the United States and around the world. To date, no Type B package has ever been punctured or released any of its content, even in actual highway accidents. As described in Appendix J, the Type B package is robust and provides a high degree of confidence that even in severe accidents, the integrity of the package would be maintained with essentially no loss of the radioactive contents or serious impairment of the shielding capability.

Transportation of nuclear materials under the nuclear infrastructure alternatives would be subject regulation by the U.S. Department of Transportation (DOT) and the U.S. Nuclear Regulatory Commission (NRC). Populations and traffic congestion are factors that DOE would consider when planning for the actual route to be used for the transportation of radioactive materials.

In regards to concern with storage of nuclear materials, provisions for in process storage of nuclear fuel, target isotopes, unirradiated targets, irradiated targets and purified isotopes are included in the various facility designs. Design-basis and beyond-design-basis accidents analyzed in Appendix I include materials stored at the storage, irradiation and production facilities proposed in the NI PEIS. These analyses show that over the 35-year operational period no fatalities would be expected among workers or in the general public in the vicinity of Hanford or at distant locations.

Commentor No. 1860: Loren Fenwell

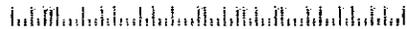
Hanford Watch
2285 SE Cypress
Portland, Oregon 97214

FIRST CLASS MAIL



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

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**Public comment on Nuclear Infrastructure Draft Programmatic
Environmental Impact Statement (NI PEIS)**

I am opposed to restart of the Fast Flux Test Facility reactor because:

1) You have NOT cleaned up the mess
from 60+ yrs ago.
2) There was NOT in my opinion,
been a safe disposal designed yet.
and 3) There ARE alternatives!

Name Loren Fenwell

Address PO 4111

City, state PDX OR Zip 97208

1860-1

1860-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1860-2

1860-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

1860-3

1860-4

1860-3: DOE notes the commentor's concern regarding the disposal of wastes. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for

Commentor No. 1860: Loren Fenwell (Cont'd)

Response to Commentor No. 1860

all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

1860-4: This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS. In accordance with Council on Environmental Quality regulations (40 CFR Part 1502.14(e)), DOE has identified its preferred alternative in Section 2.8 of Volume 1 and includes a discussion of DOE's reasons for selecting it.

Commentor No. 1861: Jane Knechtel

Hanford Watch
 2285 SE Cypress
 Portland, Oregon 97214



Ms. Colette Brown
 U.S. Department of Energy
 Office of Space and Defense Power Systems
 NE-50
 19901 Germantown Road
 Germantown, Maryland 20874-1290

2074+1207

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

*CLEARLY THE PRIORITIES FOR HANFORD
 AT THIS TIME SHOULD BE CLEAN-UP
 AND ENSURING PUBLIC SAFETY, NOT
 PURSUING FURTHER PLUTONIUM PRODUCTION.*

Name JANE KNECHTEL
 Address 3034 NE 24th AVE.
 City, state PORTLAND, OR Zip 97212

Response to Commentor No. 1861

1861-1

1861-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1861-2

1861-2: Restoration of the Hanford Site and waste management activities are the primary missions at Hanford. FFTF restart would not impact the cleanup missions at Hanford.

With respect to waste management and cleanup issues, the Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

With respect to plutonium processing, no weapons material will be produced. All DOE missions are for civilian purposes, and are not defense- or weapons-related.

Commentor No. 1862: Robert Hansen

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214

FIRST CLASS MAIL



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

76



Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

IT IS NOT SAFE & WE DO NOT NEED

IT. IT IS A COWARDLY LIE TO

SAY WE NEED IT FOR MEDICAL ISOTOPES.

LISTEN TO YOUR OWN PANEL! STOP IT!

& CLEAN IT UP!

Name ROBERT HANSEN

Address 2156 N. WYLAND

City, state PORTLAND OR Zip 97217

Response to Commentor No. 1862

1862-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1862-2: FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

1862-3: DOE notes the commentor's opposition to Alternative 1, Restart FFTF. DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost-efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and

1862-1

1862-2

1862-3

1862-4

Commentor No. 1862: Robert Hansen (Cont'd)

Response to Commentor No. 1862

conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

- 1862-4:** DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

Commentor No. 1863: Sarah Schsinky

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214

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Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

76



Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

*It's irresponsible - we already have
an enormous mess on our hands
with current contamination - why on
earth would the DOE risk our
health & children's future with more
poison!*

Name Sarah Schsinky

Address 2946 NE 9th

City, state Portl OR Zip 97212

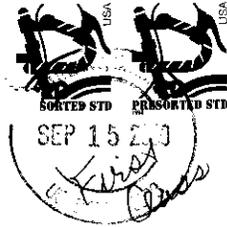
Response to Commentor No. 1863

- 1863-1: DOE notes the commentor's opposition to Alternative 1, Restart FTF.
- 1863-2: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.
- 1863-3: This PEIS has provided an estimate of the potential human health impacts associated with each of the alternatives proposed for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of this evaluation of potential health impacts that would be expected to result from a reasonable range of alternatives, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with these alternatives, including alternatives that make use of Hanford facilities, would be small.

Commentor No. 1864: Tomas Svoboda

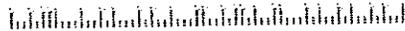
Hanford Watch
2285 SE Cypress
Portland, Oregon 97214

FIRST CLASS MAIL



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

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Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

Please stop the Nuclear Reactor! One
of the biggest concerns is not only
the nuclear waste but the possible
attack of slowly growing terrorism
all over the world.

Name Tomas Svoboda
Address 4729 SE 34th Ave.
City, state Portland, OR Zip 97202

1864-1

1864-2

1864-3

Response to Commentor No. 1864

1864-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1864-2: DOE notes the commentor's concern regarding wastes. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

1864-3: The commentor's opposition to the use of nuclear reactors because of world terrorism is noted. DOE completed a separate nonproliferation impacts assessment report which concluded that the mission described in this EIS would not violate U.S. nonproliferation policy and international nonproliferation agreements. All DOE facilities are operated in accordance with DOE approved safeguards and security plans and procedures which are designed to preclude acts of terrorism. The Record of Decision for the PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

Commentor No. 1865: Marc Zolton

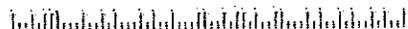
Hanford Watch
2285 SE Cypress
Portland, Oregon 97214

FIRST CLASS MAIL



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

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Public comment on Nuclear Infrastructure Draft Programmatic
Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

Clean up the mess you've
already made at Hanford.
No new, waste-producing
missions at Hanford. Keep your promise
& fully fund the cleanup!

Name Marc Zolton
Address 1911 SE 43rd Ave
City, state Portland, OR Zip 97215

Response to Commentor No. 1865

1865-1

1865-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1865-2

1865-2: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

Commentor No. 1866: Janet McNary



Calette Brown
 U.S. Dept. of Energy
 19901 Germantown Rd.
 Germantown

0274+1207 Maryland 20874

14 SEPT, 2000

PLEASE put me down as one of
 those who wish to encourage
 you and your department to
 shut down the reactor and
 clean up the mess at Hanford.

Hope fully yours,
 Janet McNary

JANET McNARY
 115 N.E. 62 AVE.
 PORTLAND, OR. 97213

1866-1

1866-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

1866-2

1866-2: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

Commentor No. 1867: Kate Doran

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214

FIRST CLASS MAIL



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

76



Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

*it is unnecessary!!
Hanford needs to
be cleaned up, re-
start of the FFTF would
create more waste to*

Name contend with
Address Kate Doran
City, state 425 SE 32nd Ave #9 Zip Portland, OR 97214

Response to Commentor No. 1867

1867-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1867-2: DOE notes the commentor's opposition to the use of FFTF for the expansion of its nuclear facility infrastructure. The NI PEIS evaluates the environmental impacts of a range of reasonable alternatives for expanding DOE's existing nuclear facility infrastructure to support production of isotopes for medical, research, and industrial uses; production of plutonium-238 for use in future NASA space exploration missions; and U.S. nuclear research and development needs for civilian application. In addition to restarting the FFTF, the NI PEIS also evaluates alternatives that would either employ the use of other existing facilities or rely on the construction of new facilities.

1867-3: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

1867-4: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

Commentor No. 1868: Laura Follingstad

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

0874+1297 [Barcode]

Public comment on Nuclear Infrastructure Draft Programmatic
Environmental Impact Statement (NI PEIS) *I should go*
to cleanup, not restart 7/1/11
I am opposed to restart of the Fast Flux Test Facility reactor because:

There is already way too much waste at Hanford, which was never cleaned up according to the agreement. We will be dealing with that mess forever why add to it?
Also none of the reasons for restart are valid -
Name *isotope 238 are obtainable elsewhere!*
Address *Laura Follingstad 2123 NE 53rd*
City, state *PORTLAND OR* Zip *97215*

1868-1
1868-2
1868-1
1868-3

Response to Commentor No. 1868

1868-1: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FTFE through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

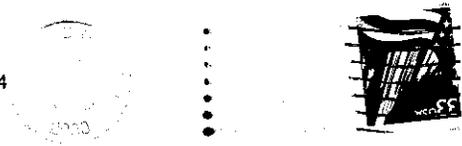
1868-2: DOE notes the commentor's opposition to Alternative 1, Restart FTFE.

1868-3: The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily Molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. Further, supplies of many research isotopes are not readily available from existing foreign or domestic sources, causing a number of medical research programs to be terminated, deferred, or seriously delayed. As such, reliance on these other sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Commentor No. 1869: Tom Davidson

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-5G
19901 Germantown Road
Germantown, Maryland 20874-1290

0874+1207 [Barcode]

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

*It is impossible to deal completely with
the waste through this facility.
This remains unproven if there is any
evidence that this is true from the acre
remains currently on Hanford*

Name Tom Davidson
Address 288 NE 15th Ave
City, state Portland OR Zip 97212

Response to Commentor No. 1869

- 1869-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 1869-2:** Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

Commentor No. 1870: Melora McGilligan-Sands

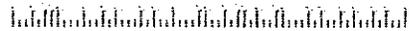
Hanford Watch
2285 SE Cypress
Portland, Oregon 97214

FIRST CLASS MAIL



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

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**Public comment on Nuclear Infrastructure Draft Programmatic
Environmental Impact Statement (NI PEIS)**

I am opposed to restart of the Fast Flux Test Facility reactor because:

I DON'T WANT THE LAND
AND THIS WHOLE WORLD TO
BE MORE CONTAMINATED FOR
THE PRESENT & FUTURE INHABITANTS!

Name MELORA MCGILLIGAN-SANDS
Address 2285 NE 29TH AVE
City, state PORTLAND OR zip 97232

Response to Commentor No. 1870**1870-1**

1870-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1870-2

1870-2: This PEIS has provided an estimate of the potential human health impacts associated with each of the alternatives proposed for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of this evaluation of potential health impacts that would be expected to result from a reasonable range of alternatives, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with these alternatives, including alternatives that make use of Hanford facilities, would be small.

Commentor No. 1871: Robin Bee

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214

FIRST CLASS MAIL



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

76



Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

We already have nuclear warheads that will last for many (too many) years to come! Already too much nuclear waste that has no place to safely go! We must not use plutonium for any more space missions.

Name Robin Bee
Address Box 3991
City, state Portland, OR. Zip 97208

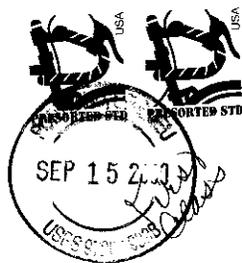
Response to Commentor No. 1871

- 1871-1:** DOE notes the commentor's opposition to Alternative 1, Restart FTF.
- 1871-2:** DOE notes the commentor's view on nuclear weapons. It should be noted that no component of the proposed action is for the purpose of supporting any defense- or weapons-related mission.
- 1871-3:** DOE notes the commentor's concern regarding wastes. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.
- 1871-4:** DOE notes the commentor's opposition to the use of plutonium in space. NASA, not DOE, is responsible for spacecraft design and for determining what electric power source best suits the mission-specific needs. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Commentor No. 1873: George Nordling

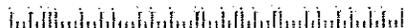
Hanford Watch
2285 SE Cypress
Portland, Oregon 97214

FIRST CLASS MAIL



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

76



Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

*I live downstream in Portland
Ore. Clean up the old mess first.
We don't need salmon that
glow in the dark.*

Name George Nordling
Address 7105 S.W. Elmhurst St
City, state _____ Zip 97223

Response to Commentor No. 1873

1873-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1873-2: DOE notes the commentor's concern about cleanup, although issues of waste cleanup activities are beyond the scope of this Nuclear Infrastructure PEIS. Cleanup at Hanford is high priority for DOE. As discussed in Chapter 4 of Volume 1 (e.g. 4.3.1.1.13, 4.3.2.1.13, 4.3.3.1.13), waste will be generated by all of the proposed alternatives, including the No Action Alternative. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Commentor No. 1874: Donald W. Fantin

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

1874+1207 [Barcode]

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

Please write me your response.
I am opposed to restart of the Fast Flux Test Facility reactor because:

Clean up of existing waste should be the first & only priority at Hanford. The last thing we want or need is more radioactive waste. NO means NO. Focus on cleaning the 54 million gallons first!

Name Donald W Fantin
Address 2230 SE Oak St
City, state Portland OR Zip 97214

1874-1
1874-2

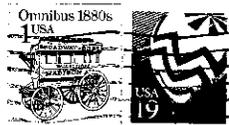
Response to Commentor No. 1874

- 1874-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 1874-2: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The restart of FFTF or any of the other proposed alternative facilities would not have an impact on the cleanup missions at Hanford, INEEL, or ORR. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and appropriate DOE orders.

Commentor No. 1875: William H. Braudt

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

20874-1290

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

there is no valid reason to restart it. Hanford needs to be cleaned up, not be a part of continuing waste production.

Name William H. Braudt
Address 2623 SE Brooklyn St.
City, state Portland, OR Zip 97202

Response to Commentor No. 1875

1875-1: DOE notes the commentor's opposition to Alternative 1, Restart FTF.

1875-2: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Although research to identify other potential fuel sources to support these space exploration missions has been conducted, no viable alternative to using plutonium-238 has been established. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost. Section 1.2.2 of Volume 1 was

1875-1

1875-2

1875-3

Commentor No. 1875: William H. Braudt (Cont'd)

Response to Commentor No. 1875

revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

In January 1997, President Clinton tasked his Committee of Advisors on Science and Technology (PCAST) to evaluate the current national energy research and development portfolio and to provide a strategy that ensures the United States has a program to address the Nation's energy and environmental needs for the next century. In its November 1997 report responding to this request, the PCAST Energy Research and Development Panel determined that restoring a viable nuclear energy option to help meet our future energy needs is important and that a properly focused research and development effort to address the potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) was appropriate. The PCAST panel further recommended that DOE reinvigorate its nuclear energy research and development activities to address these potential barriers. Section 1.2.3 provides information on the nuclear energy research and development mission.

- 1875-3:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

Commentor No. 1876: Kelly Caldwell

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214

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Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

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Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

Nuclear Reactors are not proven to
be safe. Dealing with waste is not
only a nightmare currently, but
potentially UNSOLVABLE. I beg
you to stop this foolish project.

Name Kelly Caldwell
Address 2615 SE 35th Ave
City, state Portland OR Zip 97202

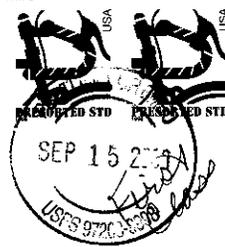
Response to Commentor No. 1876

- 1876-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 1876-2: This NI PEIS has examined the risks associated with the operation of the FFTF for the purpose of producing isotopes for medical use, research and development, and for the production of radioactive heat sources for power supply systems. The EIS addressed the risks associated with normal operation and with accident conditions. (Accident analysis is described in Appendix I and the normal operations risk analysis is described in Appendix H.) Section 4.3 of Volume I provides the results of these evaluations. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small. Based upon these analyses, as well as the previous safe operation of the facility, FFTF can be operated safely.
- 1876-3: DOE notes the commentor's concern regarding wastes. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 1877: Bill Boese

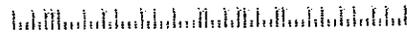
Hanford Watch
 2285 SE Cypress
 Portland, Oregon 97214

FIRST CLASS MAIL



Ms. Colette Brown
 U.S. Department of Energy
 Office of Space and Defense Power Systems
 NE-50
 19901 Germantown Road
 Germantown, Maryland 20874-1290

76



Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

DOE SO FAR HASN'T LISTENED
TO THE VOICE THAT COMES FROM
THESE VARIOUS PUBLIC HEARINGS
THAT CONSISTENTLY SAY NO TO NUCLEAR
FACILITIES RESTARTS @ HANFORD

Name BILL BOESE
 Address 2127 N. ALBINA
 City, state PORTLAND Zip 97227

1877-1
 1877-2

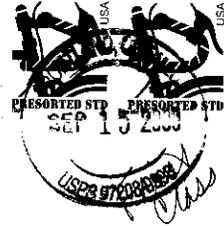
Response to Commentor No. 1877

- 1877-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 1877-2: DOE policy encourages effective public participation in its decision making process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments, regardless of where or from whom they were received. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

Commentor No. 1879: Anonymous

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214

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Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

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**Public comment on Nuclear Infrastructure Draft Programmatic
Environmental Impact Statement (NI PEIS)**

I am opposed to restart of the Fast Flux Test Facility reactor because:

any gain in terms of
medical isotopes use
will be off set by an
increase in illness &
cancer from Nuclear Waste
Creating pollution causes cancer
Name It does not save us
Address from Cancer
City, state _____ Zip _____

Response to Commentor No. 1879

1879-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1879-2: DOE notes the commentor's concern regarding waste generation. As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposal) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

1879-1

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed.

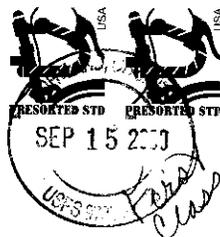
1879-2

This PEIS has provided an estimate of the potential human health impacts associated with a range of reasonable alternatives proposed for the production of isotopes, some of which include the restart of FFTF. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Commentor No. 1880: R. Skar

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214

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Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

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Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

It is a total waste of public money, a mind-boggling danger to the health + livelihood of NW citizens and a scam to keep nuclear weapons research going.

Name R. SKAR
Address 2227 SE Madison
City, state PORTLAND OR Zip 97214

Response to Commentor No. 1880

1880-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1880-2: DOE notes the commentor's opinion regarding the use of public funds.

1880-3: The commentor's position regarding the restart of FFTF is noted. The PEIS has evaluated the risks associated with a reasonable range of alternatives for isotope production. The analysis addresses both normal operation and with accident conditions. Accident analysis is described in Appendix I and the normal operations risk analysis is described in Appendix H. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, which includes the restart of FFTF. The analysis addresses normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

1880-4: DOE notes the commentor's views. The NI PEIS evaluates a range of reasonable alternatives for enhancing DOE's existing nuclear facility infrastructure for the purposes of addressing three primary needs:

1880-1

1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;

1880-2

1880-3

2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and

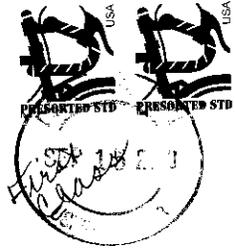
1880-4

3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. However, no component of the proposed action is for the purpose of supporting any defense or weapons related mission.

Commentor No. 1881: G. Larson

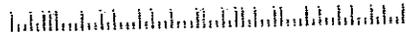
Hanford Watch
2285 SE Cypress
Portland, Oregon 97214

FIRST CLASS MAIL



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

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Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

The FFTF is unneeded, unsafe, expensive, and an existing, and potentially, immense, detriment to the entire NW. Do not endanger my life (hazard for products that may never be used) or state health.

Name Gabriel Larson
Address ~~Gabriel Larson~~ 2524 NE Flanders, #B
City, state Portland, OR Zip 97232

Response to Commentor No. 1881

1881-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1881-2: DOE notes the concerns expressed in the comment with respect to restart of FFTF. The need for the irradiation services that would be provided by FFTF (or the other alternative irradiation facilities, e.g. a new research reactor) is addressed in detail in Section 1.2 of the NI PEIS.

1881-1

1881-2

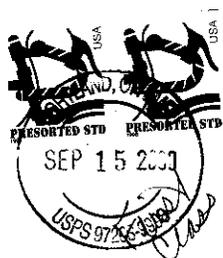
The environmental impacts associated with operation of the FFTF and support facilities during normal operations and from postulated accidents are presented and discussed in Section 4.3 of the NI PEIS. All impacts to human health and to ecological resources would be small in the immediate area of the Hanford site and negligible at all distant locations.

The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. However, DOE prepared a separate cost report which was made available immediately upon release of the final NI PEIS on the web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the cost report in Appendix P of the final NI PEIS.

Commentor No. 1882: Anthony J. McGilligan-Sands

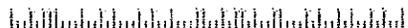
Hanford Watch
2285 SE Cypress
Portland, Oregon 97214

FIRST CLASS MAIL



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

76



Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

UNTIL YOUR SCIENTISTS CAN FIGURE OUT WHAT
TO DO WITH THE WASTE, AND RIGHT NOW
THE IS NO "SAFE" WAY TO STORE THIS WASTE
~~IT~~ IT IS UBSURD THAT WE WOULD
START UP YET ANOTHER NUCLEAR REACTOR

Name Anthony J McGilligan-Sands
Address 2285 NE 29th Ave
City, state Pdx, OR zip 97232

Response to Commentor No. 1882

1882-1

1882-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

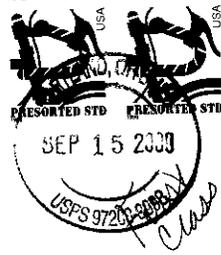
1882-2

1882-2: DOE notes the commentor's concern regarding the storage of wastes. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 1883: Jana Demartini-Svoboda

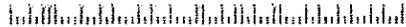
Hanford Watch
2285 SE Cypress
Portland, Oregon 97214

FIRST CLASS MAIL



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

76



Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

the potential threat to our environment is too great to allow the FFTF be re-started for whatever reason.

Name Jana Demartini-Svoboda
Address 4729 SE 34th Ave.
City, state Portland, OR Zip 97202

Response to Commentor No. 1883

1883-1

1883-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

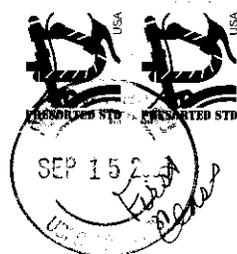
1883-2

1883-2: DOE notes the concern expressed in the comment on the potential environmental impacts of restarting FFTF. The environmental impacts associated with operation of the FFTF and support facilities at Hanford during normal operations and from postulated accidents are presented and discussed in Section 4.3 of the NI PEIS. All impacts to human health and to ecological resources would be small in the immediate area of the Hanford site and negligible at all distant locations.

Commentor No. 1884: Sheryl Murray-Hansen

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214

FIRST CLASS MAIL



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

76



Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:
it is an irresponsible and clearly unnecessary action.
Hanford's tanks are already leaking and explosive. The
USDOE needs to honor it's commitment to clean-up the
mess at Hanford as stated in the Tri-Party agreement.
The USDOE needs to take the FTF off of 'hot stand-by' and
stop diverting clean-up money they are using to keep it
there. Hanford's high-level nuclear waste tanks are
already leaking radioactive waste into the groundwater
which is moving imminently closer to the waters of the
Columbia. Citizens of Portland, a unanimous Portland City
Council, Gov. Kitzhaber, Sen. Ron Waples, Rep. Blumenthal and I call for
Name SHERYL MURRAY-HANSEN the shut down of the FTF
and the continuance
of the cleanup mission.

Address 2156 N WYOMANT ST

City, state PORTLAND OR Zip 97217

Response to Commentor No. 1884

1884-1: DOE notes the commentor's opposition to Alternative 1, Restart FTF and support for Alternative 5, Permanently Deactivate FTF.

1884-2: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Although research to identify other potential fuel sources to support these space exploration missions has been conducted, no viable alternative to using plutonium-238 has been established. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for

1884-1

1884-2

1884-3

1884-4

1884-3

Commentor No. 1884: Sheryl Murray-Hansen**Response to Commentor No. 1884**

reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

In January 1997, President Clinton tasked his Committee of Advisors on Science and Technology (PCAST) to evaluate the current national energy research and development portfolio and to provide a strategy that ensures the United States has a program to address the Nation's energy and environmental needs for the next century. In its November 1997 report responding to this request, the PCAST Energy Research and Development Panel determined that restoring a viable nuclear energy option to help meet our future energy needs is important and that a properly focused research and development effort to address the potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) was appropriate. The PCAST panel further recommended that DOE reinvigorate its nuclear energy research and development activities to address these potential barriers. Section 1.2.3 provides information on the nuclear energy research and development mission.

1884-3: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Public meetings were held on this formal milestone change.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

1884-4: See response to comment 1884-1.

Commentor No. 1885: Maria Simon

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214

FIRST CLASS MAIL



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

76



Public comment on Nuclear Infrastructure Draft Programmatic
Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

① I do not believe there is a compelling need for the medical isotopes, ^{nor for NASA's use} which can be obtained from other existing facilities.

② There is an urgent and compelling need to clean up the toxic waste existing at Hanford, and assure that we will not have to clean up more, or prevent potential disaster.

Name Maria Simon

Address 5831 SE Belmont

City, state Portland, OR Zip 97215

Response to Commentor No. 1885

1885-1: DOE notes the commentor's opposition to Alternative 1, Restart FTF.

1885-2: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings.

The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily Molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. Further, supplies of many research isotopes are not readily available from existing foreign or domestic sources, causing a number of medical research programs to be terminated, deferred, or seriously delayed. As such, reliance on these other sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

1885-1

1885-2

1885-3

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these

Commentor No. 1885: Maria Simon (Cont'd)

Response to Commentor No. 1885

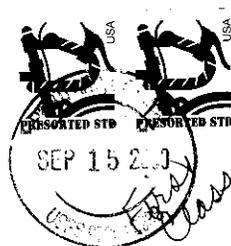
missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Although research to identify other potential fuel sources to support these space exploration missions has been conducted, no viable alternative to using plutonium-238 has been established. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost. DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

- 1885-3:** DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

Commentor No. 1886: Nate and Andrea Hildebrand

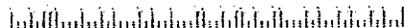
Hanford Watch
2285 SE Cypress
Portland, Oregon 97214

FIRST CLASS MAIL



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

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Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

NOT ENOUGH FACTS! Not enough information on
real reasons. For energy - use solar, wind. For
Medical isotopes - use an accelerator if anything.
For space exploration - work on Earth living first.
For weapons development - NEVER

Name Nate & Andrea Hildebrand

Address 1317 SE Main St

City, state Portland OR Zip 97214

Response to Commentor No. 1886

1886-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF and support for Alternative 3, Construct New Accelerator(s), for the production of medical isotopes.

1886-2: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

1886-1

1886-2

1886-3

1886-4

1886-5

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Although research to identify other potential fuel sources to support these space exploration missions has been conducted, no viable alternative to using plutonium-238 has been established. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space

Commentor No. 1886: Nate and Andrea Hildebrand

Response to Commentor No. 1886

exploration missions may be lost. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

In January 1997, President Clinton tasked his Committee of Advisors on Science and Technology (PCAST) to evaluate the current national energy research and development portfolio and to provide a strategy that ensures the United States has a program to address the Nation's energy and environmental needs for the next century. In its November 1997 report responding to this request, the PCAST Energy Research and Development Panel determined that restoring a viable nuclear energy option to help meet our future energy needs is important and that a properly focused research and development effort to address the potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) was appropriate. The PCAST panel further recommended that DOE reinvigorate its nuclear energy research and development activities to address these potential barriers. Section 1.2.3 provides information on the nuclear energy research and development mission.

- 1886-3:** DOE notes the commentor's interest in solar and wind energy. The purpose of this Nuclear Infrastructure PEIS is to evaluate the environmental impacts of a range of reasonable alternatives to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development.
- 1886-4:** See response to comment 1886-1.
- 1886-5:** DOE notes the commentor's opposition to development of nuclear weapons and space exploration. The scope of this Nuclear Infrastructure PEIS is limited to analysis of alternatives to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development. The three missions are civilian nuclear energy missions and are not defense-related.

Commentor No. 1887: Craig Nordling

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214

FIRST CLASS MAIL



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

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**Public comment on Nuclear Infrastructure Draft Programmatic
Environmental Impact Statement (NI PEIS)**

I am opposed to restart of the Fast Flux Test Facility reactor because:

*No method has yet been found
for the long term storage of
radioactive waste, so I
oppose any more production of
said waste.*

Name Craig Nordling
Address 7105 S.W. Elmhurst
City, state Tigard Or Zip 97223

Response to Commentor No. 1887

1887-1

1887-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

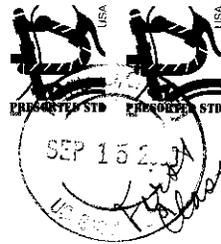
1887-2

1887-2: DOE notes the commentor's concern regarding the storage of wastes. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 1888: Grace Weinstein

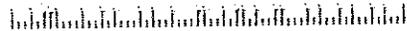
Hanford Watch
2285 SE Cypress
Portland, Oregon 97214

FIRST CLASS MAIL



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

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**Public comment on Nuclear Infrastructure Draft Programmatic
Environmental Impact Statement (NI PEIS) Alternative 5**

I am opposed to restart of the Fast Flux Test Facility reactor because:

*The Columbia River belongs to all of us in the N.W. -
The U.S. Government has a moral obligation
to clean up Hanford, not to add another
radioactive waste stream to jeopardize human
health & safety. Medical isotopes can be
produced at other DOE sites & workers at
Hanford will eventually need to be retrained
anyway. For the common good I am against this
FFTF re-start*

Name GRACE WEINSTEIN

Address 7352 S.W. 26th Ave.

City, state Portland, OR Zip 97219

Response to Commentor No. 1888

- 1888-1:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.
- 1888-2:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.
- 1888-3:** DOE notes the commentor's concern regarding waste generation. As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposal) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed.

This PEIS has provided an estimate of the potential human health impacts associated with a reasonable range of alternatives for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems, including the restart of FFTF. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of this evaluation of potential health impacts that would be expected to result from implementation of any of

Commentor No. 1888: Grace Weinstein (Cont'd)

Response to Commentor No. 1888

the alternatives (some of which include restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting each of the alternatives would be small.

- 1888-4:** Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions (basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term (less than 5 years).
- 1888-5:** FFTF would be deactivated under Alternatives 2 through 5 (See Section 2.5 of Volume 1). If any of these alternatives were selected for implementation, deactivation of FFTF would result in the loss of approximately 300 direct jobs (See Section 4.4.1.2.8 of Volume 1). The loss of 300 direct jobs at FFTF due to deactivation would potentially result in the loss of up to 760 indirect jobs in the Hanford region. However, it is expected that some of the displaced FFTF workers would be employed by other projects at Hanford such as construction of the tank waste remediation system.

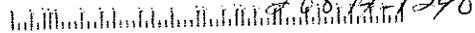
Commentor No. 1889: Max Wilkins

FIRST CLASS MAIL



Ms Colette Broxon
U.S. Department of Energy
Office of Space and Defense
Power Systems N6-50
19901 Germantown Rd
Germantown, Maryland

76



Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

For there to be any activities that either continues or amplifies the risk of nuclear waste seeping into the great Columbia river is unconscionable. The subjects millions of people, maine life to danger - unacceptable

Sincerely,

Name Max Wilkins Address 13703 SE May St.
City Portland State OR. ZIP 97233

Please include my comments in the official record for the DOE/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 1889-1 || 1889-2

1889-3

Response to Commentor No. 1889

1889-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Public meetings were held on this formal milestone change. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

1889-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

1889-3: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Commentor No. 1890: Chelsea Brown

Response to Commentor No. 1890

Chelsea
Brown
9/14/00
D-Block

I do not agree or support the restart of the FFTF at Hanford nuclear reactor. The reason being ~~from~~ from what I have learned about this situation. I believe that the Hanford nuclear reactor should not be re opened for operation. In 1946 this plant was in operation by General Electric to design nuclear weapons with petroleum. As years past the ~~effects~~ plant became toxic to the environment. ~~Some~~ The toxins effected many people and animals very severely. People and animals were dying because of the toxic waste from the Hanford plant. In 1989 the Hanford plant was shut down do to the severe damages the waste cause the environment. From what I learned is that it would take at least 80 yrs. to properly clean up the waste. The toxic waste of the Hanford plant could be deadly to people, and animals and the environment. So, if the Hanford plant was ever to be reopened our environment and our lives would be in extreme danger. If you really care about your life take a stand and voice your opinion. For these reasons I've explained I do not oppose the reopening of the FFTF at Hanford nuclear reactor.

1890-1

1890-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF (It is assumed that the commentor's conclusionary statement was intended to reiterate their opposition to restart of FFTF.)

1890-2

1890-2: DOE notes the commentor's opposition to the use of FFTF for the enhancement of its nuclear facility infrastructure. The FFTF reactor at Hanford was constructed and initiated operations in the mid- 1980s making it the DOE's newest reactor. All of the DOE missions are for civilian purposes. No weapons material will be produced.

The environmental impacts associated with operation of the FFTF are addressed in Section 4.3 of Volume 1 of the NI PEIS. The impacts are shown to be small. These impacts specifically include the risks to human health during normal operations and associated with postulated accidents. Over the 35-year operational period no fatalities would be expected among workers or in the general public in the vicinity of Hanford or at distant locations.

No food or water restrictions are in place outside the Hanford Reservation as a result of Hanford activities.

1890-3

1890-3: Hanford is committed to cleaning up its wastes in a safe and environmentally acceptable manner. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are of high priority to DOE. The restart of FFTF would not divert or reprogram budgeted funds designated for this effort. The management of all wastes associated with restart and operation of the FFTF is addressed in Section 4.3.1.1.13 of the NI PEIS. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. The management of these wastes would be well within management capacities and would not be expected to adversely affect the environment. Impacts on people and ecological resources would be small.

1890-1

Commentor No. 1891: Tabitha Gilmore

Draft PEIS Comment Form

I oppose the restart of the FFTF at Savannah River because I don't want people to die... I don't see how the restart is going to be safe... I don't think the public health risks are being fully addressed...

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
returning this comment form to the registration desk at the meeting or to the address below
calling toll-free and leaving your comments: 1-877-562-4593
faxing your comments toll-free to: 1-877-562-4592
commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

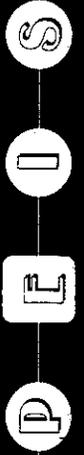
Name (optional): Tabitha Gilmore
Organization:
Home/Organization Address (circle one):
City: State: VA Zip Code:
Telephone (optional):
E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Response to Commentor No. 1891

1891-1
1891-2
1891-3

- 1891-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
1891-2: Cancers are believed to be caused by a combination of hereditary and environmental factors, including exposure to ionizing radiation and chemical agents. This NI PEIS provides an estimate of the potential human health impacts associated with each of the alternatives considered for the production of radioisotopes for medical and industrial uses, research and development, and as heat sources for radioisotope power systems (See Sections 1.2 and 2.5 of Volume 1). The methodology used in the analysis of health effects, which is detailed in Appendix H through J, is based upon our current knowledge of the health impacts that may result from exposure to low doses of ionizing radiation and chemical agents. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of each of the alternatives (Alternative 1 includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with each alternative, including restarting FFTF, would be small.
1891-3: DOE notes the commentor's concern about potential environmental impacts associated with FFTF restart. The environment impacts from FFTF operations are addressed in Section 4.3 of the NI PEIS. All air emissions and wastewater discharges would be in accordance with applicable permit and regulatory requirements. The release of criteria air pollutants would result in concentrations well below Federal and state air standards (Table 4-13). The release of radioactivity and hazardous chemicals into the atmosphere would have a negligible effect on human health (Tables 4-17 and 4-19). There would be no discernible impacts to groundwater or surface water quality (Section 4.3.1.1.4). It is concluded that operation of FFTF would result in small impacts to the biosphere.

Commentor No. 1892: Adriana Morales

Response to Commentor No. 1892

Draft PEIS Comment Form

I strongly oppose the restart of the FFTF at Hanford Nuclear reactor. I'm outraged that you would even consider restarting the FFTF. I personally think this would be a senseless act, considering it is unhealthy for many Oregonian citizens. This is morally wrong.

1892-1

1892-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1892-2

1892-2: Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks to all people, including citizens of Oregon and Washington, associated with restarting FFTF would be small.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Adriana Morales

Organization: _____

Home/Organization Address (circle one): _____

City: Portland State: OR Zip Code: 97230

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 1893: Kimberly T.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

I oppose the restart of the FTF at Hanford nuclear reactor. Because it can kill people and animals. It affects too many things on the Earth.

1893-1

1893-2

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Kimberly T.

Organization: _____

Home/Organization Address (circle one): Portland OR 97213

City: Portland State: OR Zip Code: 97213

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Response to Commentor No. 1893

1893-1: DOE notes the commentor's opposition to Alternative 1, Restart FTF.

1893-2: The commentor's position regarding the restart of FTF is noted. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, which includes restart of FTF, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks to all citizens, including those in Washington and Oregon, associated with restarting FTF would be small.

The NI PEIS identifies (in Chapter 3 of Volume 1) endangered species that live on or near all of the candidate sites, as well as aquatic and wetlands areas that may be impacted by operations at candidate locations. According to an International Atomic Energy Agency (IAEA) publication (IAEA Technical Report Series No. 332, Effects of Ionizing Radiation on Plants and Animals at Levels Implied by Current Radiation Protection Standards), a dose rate of 100 millirem per year to the most exposed human will lead to dose rates to plants and animals of less than 0.1 rad per day. The IAEA concluded that a dose rate of 0.1 rad per day or less for animals and 1 rad per day or less for plants would not affect these populations. The largest individual dose for any of the nuclear infrastructures alternatives under normal operations would be less than 0.1 millirem, which is three orders of magnitude less than the IAEA threshold for adverse effects. Therefore, implementation of any of the range of reasonable nuclear infrastructure alternatives analyzed would not be expected to result in an adverse impacts on plants and animals living in potentially affected areas around the candidate sites.

Commentor No. 1894: Misty East

Response to Commentor No. 1894

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

I oppose the restart of the FFTF at Hanford Nuclear reactor.
 I feel that having this company open has destroyed many lives, people govt. And they have lost their chance of being a lawyer or going into the ARMY.
 I also feel that destroying our animals our plant our water, makes my fellow friends scared of what is going to happen, or not doing the right thing, like not giving their children the right nutrients they need.
 I feel that before you make any decisions about re-opening the reactor think of our futures.

1894-1

1894-2

1894-3

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Misty East

Organization: _____

Home/Organization Address (circle one): 2733 Se 84th

City: Portland State: OR Zip Code: 97266

Telephone (optional): 772-4028

E-mail (optional): Sugars@Workz.com

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 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

1894-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

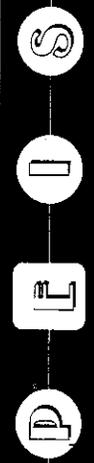
1894-2: DOE notes the commentor's opposition to the use of FFTF for the enhancement of its nuclear facility infrastructure. The environmental impacts associated with operation of the FFTF and support facilities at Hanford during normal operations and from postulated accidents are presented and discussed in Section 4.3 of Volume 1 of the NI PEIS. All impacts to human health and to ecological resources would be small in the immediate area of the Hanford Site and negligible at all distant locations.

All environmental parameters (e.g., air, soil, surface water, groundwater, vegetation, animals, etc.) in and around the Hanford Site are monitored on a set frequency. The information is available to the public in annual monitoring reports. No food or water restrictions are currently in place outside the Hanford Reservation as a result of Hanford activities.

1894-3: DOE notes the concern expressed in the comment on the potential impacts associated with FFTF restart described in the NI PEIS. The environmental impacts associated with operation of the FFTF and support facilities at Hanford during normal operations and from postulated accidents are presented and discussed in Section 4.3. All impacts to human health and to ecological resources would be small in the immediate area of the Hanford site and negligible at all distant locations.

Commentor No. 1895: Jesse Hayres

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

I oppose strongly
 the reopening of Hanford nuclear
 reactor. General Electric has
 poisoned our northwest enough.
 You've ruin familys killed people
 and covered it up the whole
 time. I cant believe it is even
 a option to reopen it.

1895-1

1895-2

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Jesse Hayres

Organization: pace Am

Home/Organization Address (circle one): _____

City: portland State: OR Zip Code: 97230

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Celeste E. Storn, NE-50
 U.S. Department of Energy • 19001 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PES@hq.doe.gov



7/12/00

Response to Commentor No. 1895

1895-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1895-2: General Electric is not involved with any part of the DOE missions addressed in the NI PEIS. There have been no serious safety-related accidents or accidental releases of hazardous or radioactive materials causing injury or harm to workers, or posing any threat or harm to the offsite public at FFTF or the proposed Hanford support facilities during their respective lifetimes.

The environmental impacts associated with operation of the FFTF and support facilities at Hanford during normal operations and from postulated accidents are presented and discussed in Section 4.3 of Volume 1 of the NI PEIS. All impacts to human health and to ecological resources would be small in the immediate area of the Hanford Site and negligible at all distant locations.

Commentor No. 1896: Melinda Arnone

Response to Commentor No. 1896

Draft PEIS Comment Form

I oppose the restart of the FTF at Hanford nuclear reactor. I don't believe that there could ever be a good enough reason to restart the FTF. There are too many problems that would happen. People would die, become sterile, have deformed children, and get long-term sickness that would conclude in death. I would also like our rivers to get cleaner, not more radio-active.

1896-1

1896-1: DOE notes the commentor's opposition to Alternative 1, Restart FTF.

1896-2

1896-2: DOE notes the commentor's views. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs:

1896-3

1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;

1896-4

2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and

3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

1896-3: This PEIS has provided an estimate of the incremental potential human health impacts associated with a range of reasonable alternatives (one of which includes the restart of FTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of these alternatives, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with each alternative and with restarting FTF would be small. As stated in Appendix H of the EIS, other human health impacts (non-fatal cancers and genetic mutations) occur with a lower frequency for the same level of exposure to low levels of radiation. Since the most likely impact on the population from all of the alternatives

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Melinda Arnone

Organization: Parkrose High School

Home/Organization Address (circle one): 12003 NE Shaver

City: Portland State: OR Zip Code: 97220

Telephone (optional): _____

E-mail (optional): _____

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E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 1896: Melinda Arnone (Cont'd)

Response to Commentor No. 1896

is no additional fatalities, it follows that the expected result for these other health impacts is no additional impact.

- 1896-4:** FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Further, the waste generated from the candidate facilities at Hanford would be managed in a safe and environmentally protective manner and in compliance with all applicable Federal and State laws and regulations and DOE Orders. The Hanford Site also has a comprehensive waste minimization and pollution prevention program in place as summarized in Section 3.4.11.8 that would govern any proposed site activities.

Commentor No. 1897: Mary Conway

Response to Commentor No. 1897

Draft PEIS Comment Form

I oppose the restart of the FFTF at Hanford nuclear reactor because I would like the rivers to get better not worse. The nuclear reactor is killing fish and people. So why restart it?

|| 1897-1
|| 1897-2

|| 1897-3

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Mary Conway

Organization: _____

Home/Organization Address (circle one): _____

City: Portland State: OR Zip Code: 9720

Telephone (optional): _____

E-mail (optional): _____

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E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

1897-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1897-2: FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. Section 3.4.4 of Volume 1 of the NI PEIS describes the current condition of water resources potentially affected by the Hanford Site, with specific discussions of surface water and groundwater resources in the Hanford 400 Area, where FFTF is located, provided in Sections 3.4.4.1.2 and 3.4.4.2.2, respectively. This information indicates that the only impact that 400 Area operations have had on water resources to date is contamination of the unconfined aquifer system with nitrate from sanitary sewage disposal. The source of this contamination has since been removed resulting in nitrate levels diminishing over time. The effects of maintaining FFTF in its current standby mode for 35 years are described in Section 4.2.1.2.4 of Volume 1 and this analysis indicates that the impact on water resources would be negligible. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

FFTF standby operations have no impact on fish or other aquatic life. There has never been an accidental release or discharge from FFTF that has killed fish in the Columbia River. As described in Section 3.4.4.1.2 of the NI PEIS, the only liquid effluent discharged from FFTF during current standby operations consists of process wastewater from the facility's cooling towers. This wastewater is discharged to the 400 Area Pond that allows the effluent to percolate to the subsurface. The pond is normally dry. These discharges are regulated under State Waste Discharge Permit No. ST-4501. The effluent is continuously monitored before discharge with periodic sampling and analysis to determine compliance with effluent limitations. Aside from cooling water treatment chemicals added to control corrosion and algae growth, the only chemical and radiological constituents in the discharge are those that occur in the groundwater used for cooling tower makeup. As discussed in the previously cited sections of Chapter 4, restart of FFTF would increase the volume of process wastewater discharged to the pond system but would not measurably affect the quality of the effluent.



Commentor No. 1897: Mary Conway (Cont'd)

Response to Commentor No. 1897

1897-3: The commentor's position regarding the restart of FFTF is noted. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, which includes restart of FFTF, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Commentor No. 1898: Daniel Anthony Herrera

Response to Commentor No. 1898

Draft PEIS Comment Form

I Daniel Anthony Herrera of the Parkrose Community oppose the restart of FFTF Nuclear at Hanford. How could you want to start up something that causes so much devastation and tragedy to so many innocent peoples lives. Do you really think our lives are expendable so you can go make your stupid plutonium or what ever you make. I will do whatever I can in my power to try and stop your irresponsibility.

1898-1

1898-2

1898-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1898-2: This PEIS has provided an estimate of the incremental potential human health impacts associated with each of a range of reasonable alternatives (including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated each alternative analyzed and with restarting FFTF would be small. As stated in Appendix H of the EIS, other human health impacts (non-fatal cancers and genetic mutations) occur with a lower frequency for the same level of exposure to low levels of radiation. Since the most likely impact on the population from all of the alternatives is no additional fatalities, it follows that the expected result for these other health impacts is no additional impact.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): _____

Organization: _____

Home/Organization Address (circle one): _____

City: _____ State: _____ Zip Code: _____

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

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 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 1899: Jeanine

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

I oppose the restart of the FFTF nuclear reactor at Hanford. I think it's a very serious health problem. I don't want to have health problems down the line. I don't think it's right for people to put other people's life in jeopardy. I don't want to wake-up one day and have one of my friends dead because of the FFTF. Not only will you be risking the health of people, but you're risking the health of unborn babies. So to keep our health good, don't restart the FFTF.

From:
Jeanine

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Jeanine

Organization: _____

Home Organization Address (circle one): 4339 NE 133

City: Portland State: OR Zip Code: 97230

Telephone (optional): _____

E-mail (optional): _____

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E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Response to Commentor No. 1899

1899-1

1899-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1899-2

1899-2: This PEIS has provided an estimate of the incremental potential human health impacts associated with a range of reasonable alternatives (including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small. As stated in Appendix H of the PEIS, other human health impacts (non-fatal cancers and genetic mutations) occur with a lower frequency for the same level of exposure to low levels of radiation. Since the most likely impact on the population from all of the alternatives is no additional fatalities, it follows that the expected result for these other health impacts is no additional impact.

Commentor No. 1900: G. Andre Wade, II

Response to Commentor No. 1900

Draft PEIS Comment Form

Hello my name is G. Andre Wade II and I oppose the restart of the FFTF nuclear reactor at Hanford because I don't want to be subjected to nuclear radiation. In life I want to grow up have kids and a family with out having to deal with cancer or thyroid problems.

Thanks
G. Andre Wade II

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): G. Andre Wade II

Organization: Parkrose High School

Home/Organization Address (circle one): 34 NE Sacramento Apt B

City: Portland State: OR Zip Code: 97212

Telephone (optional): 384-0605

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

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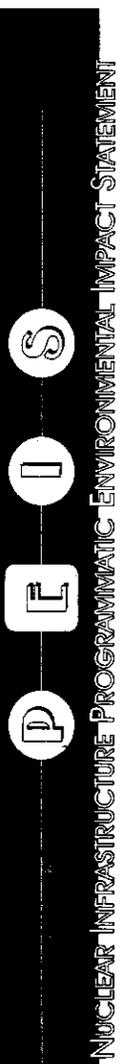
7/12/00

1900-1

1900-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1900-2

1900-2: This PEIS has provided an estimate of the incremental potential human health impacts associated with a range of reasonable alternatives including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small. As stated in Appendix H of the PEIS, other human health impacts (non-fatal cancers and genetic mutations) occur with a lower frequency for the same level of exposure to low levels of radiation. Since the most likely impact on the population from all of the alternatives is no additional fatalities, it follows that the expected result for these other health impacts is no additional impact.



Commentor No. 1901: Stephanie Rankin

Draft PEIS Comment Form

I oppose the restart of the FFTF nuclear reactor at Hanford. Peoples lives, farm land, cattle, our water supply, and all living things are more important than your nuclear reactor. Your nuclear reactor will affect too many living things in not the right way. You need to also think more about the health and safety of your employees. You have already killed and affected more than too many people.

1901-1

1901-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1901-2

1901-2: This PEIS has provided an estimate of the incremental potential human health impacts associated with each of a range of reasonable alternatives (including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

1901-3

The NI PEIS identifies (in Chapter 3 of Volume 1) endangered species that live on or near all of the candidate sites, as well as aquatic and wetlands areas that may be impacted by operations at candidate locations. According to an International Atomic Energy Agency (IAEA) publication (IAEA Technical Report Series No. 332, Effects of Ionizing Radiation on Plants and Animals at Levels Implied by Current Radiation Protection Standards), a dose rate of 100 millirem per year to the most exposed human will lead to dose rates to plants and animals of less than 0.1 rad per day. The IAEA concluded that a dose rate of 0.1 rad per day or less for animals and 1 rad per day or less for plants would not affect these populations. The largest individual dose for any of the nuclear infrastructure alternatives under normal operations would be less than 0.1 millirem, which is three orders of magnitude less than the IAEA threshold for adverse effects. Therefore, implementation of any of the range of reasonable nuclear infrastructure alternatives analyzed would not be expected to result in adverse impacts on plants and animals living in potentially affected areas around the candidate sites.

Worker safety (radiological protection) is a key element of DOE's Radiological Health and Safety Policy (DOE P 441.1, April 26, 1996). This policy states in part that DOE facilities must "conduct radiological operations in a manner that controls the spread of radioactive materials and reduces exposure to the workforce and the general public and that utilizes a process

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Stephanie Rankin

Organization: _____

Home/Organization Address (circle one): _____

City: Portland State: OR Zip Code: 97220

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

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7/12/00

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 1901: Stephanie Rankin (Cont'd)

Response to Commentor No. 1901

that seeks exposure levels as low as reasonably achievable.” Each DOE site, including Hanford, is required to implement a radiological control program with the intent to meet this policy goal. Based on the assessment of worker health impacts for all of the alternatives and options that make use of Hanford facilities, the most likely impact of the use of these facilities is no increase in cancer fatalities among the facility workers. For example in Alternative 1 option 3, all of the activities target irradiation and processing) occur at Hanford facilities. As shown in Section 4.3.3.1.9, the expected consequences are less than one additional fatal cancer among the workforce; that is, no additional fatal cancers are expected.

1901-3: No food or water restrictions are in place outside the Hanford Reservation as a result of Hanford activities.

DOE worker and public health and safety are of paramount and primary importance to the Department. There have been no serious safety related accidents causing significant injury or harm to workers, or posing any threat or harm to the offsite public at FFTF during its lifetime. The environmental impacts associated with operation of the FFTF are addressed in detail in Section 4.3 of Volume 1 of the NI PEIS. The impacts are shown to be small. These impacts specifically include the risks to human health during normal operations and associated with postulated accidents. Over the 35-year operational period no fatalities would be expected among workers or in the general public in the vicinity of Hanford or at distant locations.

Commentor No. 1902: Anonymous

Draft PEIS Comment Form

I oppose the restart of the FFTF Nuclear reactor at Hanford. Because it's not right and our guys know it's not right, so why do people want to make people life all messed up and stuff it's going to make the environment dirty and it's going to kill most of our animals and fish and all the things that provide food for the community and all the good stuff like that, but most of all what make my family and I proud is that the people that's trying to open it back up there are the selfish people on the world, they doing it all because they need more money they're not thinking about all the people they are putting out work of doing or something.

1902-1

1902-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1902-2

1902-2: DOE notes the concern expressed in the comment on the potential health and environmental impacts of FFTF startup. All air emissions and wastewater discharges would be in accordance with applicable permit and regulatory requirements. The releases of air pollutants and contaminated liquid are addressed in Section 4.3 of the NI PEIS. The release of air pollutants would result in concentrations well below Federal and state air standards (Table 4-13). The release of radioactivity and hazardous chemicals into the atmosphere would have a negligible effect on human health (Tables 4-17 and 4-19, respectively). There would be no discernible impacts to groundwater or surface water quality (Section 4.3.1.1.4). All impacts on ecological resources, including animals and fish, associated with operation of the FFTF would be small (Section 4.3.1.1.6).

1902-3

It is concluded that operation of the FFTF would have small adverse effects on the environment.

1902-4

1902-3: DOE notes the commentor's views. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs:

- 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;
- 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and
- 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

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- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): _____

Organization: _____

Home/Organization Address (circle one): _____

City: _____ State: _____ Zip Code: _____

Telephone (optional): _____

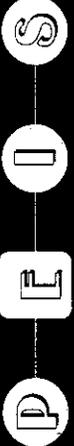
E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50 U.S. Department of Energy • 19001 Germantown Road • Germantown, MD 20874 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Response to Commentor No. 1902

Commentor No. 1902: Anonymous (Cont'd)

Response to Commentor No. 1902

1902-4: This PEIS has provided an estimate of the incremental potential human health impacts associated with a range of reasonable alternatives including the restart of FFTF for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small. As stated in Appendix H of the PEIS, other human health impacts (non-fatal cancers and genetic mutations) occur with a lower frequency for the same level of exposure to low levels of radiation. Since the most likely impact on the population from all of the alternatives is no additional fatalities, it follows that the expected result for these other health impacts is no additional impact.

Commentor No. 1903: Carl Guinn, Jr.

Draft PEIS Comment Form

My name is Carl Guinn JR and I oppose the restart of the FFTF nuclear reactor at Hanford. I plan on having kids some day and I don't want them to have problems and besides why do you want to open something that can hurt the Earth. The only thing this does is make peoples lifetime shorter

1903-1

1903-2

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Carl Guinn JR

Organization: _____

Home/Organization Address (circle one): _____

City: Portland State: OR Zip Code: 97220

Telephone (optional): (503) 317-2523

E-mail (optional): _____

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 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Response to Commentor No. 1903

1903-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1903-2: This PEIS has provided an estimate of the incremental potential human health impacts associated with a range of reasonable alternatives including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small. As stated in Appendix H of the PEIS, other human health impacts (non fatal cancers and genetic mutations) occur with a lower frequency for the same level of exposure to low levels of radiation. Since the most likely impact on the population from all of the alternatives is no additional fatalities, it follows that the expected result for these other health impacts is no additional impact.

The PEIS identifies (in Chapter 3 of Volume 1) endangered species that live on or near all of the proposed sites, as well as aquatic and wetlands areas that may be impacted by operations at all of the proposed locations. According to an International Atomic Energy Agency (IAEA) publication (IAEA 1992), a dose rate of 100 millirem per year to the most exposed human will lead to dose rates to plants and animals of less than 0.1 rad per day. The IAEA concluded that a dose rate of 0.1 rad per day or less for animals and 1 rad per day or less for plants would not affect these populations. The largest individual dose for any of the alternatives evaluated is below 0.1 millirem, three orders of magnitude less than the IAEA identified threshold level. This is well below the IAEA benchmark. Therefore, all of the range of reasonable alternatives analyzed would have no effect on the plants and animals around the proposed sites.

Commentor No. 1904: Ian Albers

Response to Commentor No. 1904

Draft PEIS Comment Form

I oppose the restart of the FFTF nuclear reactor at Hanford. The fact that you have even thought of re-opening the reactor is just crazy! I watched movies on this sorta thing and it's so horrible the kinds things that happen to people affected by the reactor. I want you to think about how you would feel if your baby dies because your neighborhood reactor that you were assured was safe contaminated your land you can't go home and you can't survive.

1904-1

1904-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1904-2

1904-2: This PEIS has provided an estimate of the incremental potential human health impacts associated with a range of reasonable alternatives including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small. As stated in Appendix H of the EIS, other human health impacts (non fatal cancers and genetic mutations) occur with a lower frequency for the same level of exposure to low levels of radiation. Since the most likely impact on the population from all of the alternatives is no additional fatalities, it follows that the expected result for these other health impacts is no additional impact.

The PEIS identifies (in Chapter 3 of Volume 1) endangered species that live on or near all of the proposed sites, as well as aquatic and wetlands areas that may be impacted by operations at all of the proposed locations. According to an International Atomic Energy Agency (IAEA) publication (IAEA 1992), a dose rate of 100 millirem per year to the most exposed human will lead to dose rates to plants and animals of less than 0.1 rad per day. The IAEA concluded that a dose rate of 0.1 rad per day or less for animals and 1 rad per day or less for plants would not affect these populations. The largest individual dose for any of the alternatives evaluated is below 0.1 millirem, three orders of magnitude less than the IAEA identified threshold level. This is well below the IAEA benchmark. All impacts to human health and to the ecological resources would be small in the immediate area of Hanford and negligible at all distant sites.

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Ian Albers

Organization: Parkrose High School

Home Organization Address (circle one): 8631 NE Alberta

City: Portland State: OR Zip Code: 97220

Telephone (optional): 503-255-0474

E-mail (optional): Micstand5@aol.com

COMMENTS MUST BE POSTMARKED BY September 11, 2000

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U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
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E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 1905: Raeleen Rambeau

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

To who it may concern,
 I oppose the restart of the FFTF nuclear reactor. I really don't want to die at a young age, and I don't want to live in pain. I don't want to see little kids all deformed running around. I don't want to see everyone around me dropping dead. So for me, and for you please don't restart the FFTF.

Sincerely,
 Raeleen Rambeau

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- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): Raeleen Rambeau

Organization: Parkrose High School (PACE)

Home/Organization Address (circle one): _____

City: Portland State: OR Zip Code: 97220

Telephone (optional): _____

E-mail (optional): _____

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 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

Response to Commentor No. 1905

1905-1

1905-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1905-2

1905-2: This PEIS has provided an estimate of the incremental potential human health impacts associated with each of a range of reasonable alternatives (including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small. As stated in Appendix H of the PEIS, other human health impacts (non-fatal cancers and genetic mutations) occur with a lower frequency for the same level of exposure to low levels of radiation. Since the most likely impact on the population from all of the alternatives is no additional fatalities, it follows that the expected result for these other health impacts is no additional impact.

1905-1

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

I oppose the restart of the FFTF nuclear reactor at Hanford. We do not want any more birth defects and people and our animal population to die from cancer caused from radiation.

1906-1
1906-2

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- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): J. Sanders
 Organization: _____
 Home/Organization Address (circle one): _____
 City: portland State: OR Zip Code: 97220
 Telephone (optional): _____
 E-mail (optional): _____

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 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

1906-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1906-2: This PEIS has provided an estimate of the incremental potential human health impacts associated with a range of reasonable alternatives including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small. As stated in Appendix H of the EIS, other human health impacts (non fatal cancers and genetic mutations) occur with a lower frequency for the same level of exposure to low levels of radiation. Since the most likely impact on the population from all of the alternatives is no additional fatalities, it follows that the expected result for these other health impacts is no additional impact.

The PEIS identifies (in Chapter 3 of Volume 1) endangered species that live on or near all of the proposed sites, as well as aquatic and wetlands areas that may be impacted by operations at all of the proposed locations. According to an International Atomic Energy Agency (IAEA) publication (IAEA 1992), a dose rate of 100 millirem per year to the most exposed human will lead to dose rates to plants and animals of less than 0.1 rad per day. The IAEA concluded that a dose rate of 0.1 rad per day or less for animals and 1 rad per day or less for plants would not affect these populations. The largest individual dose for any of the alternatives evaluated is below 0.1 millirem, three orders of magnitude less than the IAEA identified threshold level. This is well below the IAEA benchmark. Therefore, all of the range of reasonable alternatives analyzed would have no effect on the plants and animals around the proposed sites.

Chapter 2—Written Comments and DOE Responses

Commentor No. 1907: Joel R. Morsette

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

I oppose the restart of the FFTF nuclear reactor I think it's messed up that you people care more about money than other peoples lives. Whoever raised gas guys must not have had any values. You guys need to check your heads and get your values straight. How would you guys feel if your family members or friends had cancer or diseases from this power plant? I bet that you would think twice about it then.

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Joel R. Morsette
 Organization: RACE Alternative School
 Home/Organization Address (circle one): 12312 NE Brazeel #
 City: Portland State: OR Zip Code: 97220
 Telephone (optional): (503) 251-1263
 E-mail (optional): X

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 Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Response to Commentor No. 1907

1907-1

1907-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1907-2

1907-2: DOE notes the commentor's viewpoint. DOE is very concerned about the health and safety of the public and its workers. The NI PEIS provides an estimate of the incremental potential human health impacts associated with each of the alternatives proposed for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. The radiological risk has been determined to be low. In all cases, the analysis shows that the most likely impacts from the proposed actions are no additional cancer fatalities among the population surrounding the irradiation and processing facilities. See Chapter 4 and summary tables in Chapter 2 for the analysis results.

1907-3

1907-3: This PEIS has provided an estimate of the incremental potential human health impacts associated with a range of reasonable alternatives including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Commentor No. 1908: Shelly

Response to Commentor No. 1908

Draft PEIS Comment Form

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



I oppose the restart of FFTF nuclear reactor. Because we don't need the radiation hurting all the people and the animals.

1908-1
1908-2

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Shelly
 Organization: _____
 Home Organization Address (circle one): 10415 NE Skidmore
 City: Port State: OR Zip Code: 97220
 Telephone (optional): _____
 E-mail (optional): _____

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 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

1908-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1908-2: DOE notes the commentor's opposition to the restart of FFTF. This NI PEIS provides an estimate of the incremental potential human health impacts associated with each of the alternatives proposed (including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Over the 35-year operational period no fatalities would be expected among workers or in the general public in the vicinity of Hanford or at distant locations. [See for example Tables 4-17, 4-30, 4-41 etc. in chapter 4 and the summary Tables in Volume 1, Chapter 2 of the NI PEIS.]

The NI PEIS identifies (in Volume 1, Chapter 3) endangered species that live on or near all of the candidate sites, as well as aquatic and wetlands areas that may be impacted by operations at candidate locations. According to an International Atomic Energy Agency (IAEA) publication (IAEA Technical Report Series No. 332, Effects of Ionizing Radiation on Plants and Animals at Levels Implied by Current Radiation Protection Standards), a dose rate of 100 millirem per year to the most exposed human will lead to dose rates to plants and animals of less than 0.1 rad per day. The IAEA concluded that a dose rate of 0.1 rad per day or less for animals and 1 rad per day or less for plants would not affect these populations. The largest individual dose for any of the nuclear infrastructures alternatives under normal operations would be less than 0.1 millirem, which is three orders of magnitude less than the IAEA threshold for adverse effects. Therefore, implementation of the nuclear infrastructure alternatives would not be expected to result in adverse impacts on plants and animals living in potentially affected areas around the candidate sites.

Worker safety (radiological protection) is a key element of the DOE's Radiological Health and Safety Policy (DOE P 441.1, April 26, 1996). This policy states in part that DOE facilities must "conduct radiological operations in a manner that controls the spread of radioactive materials and reduces

Chapter 2—Written Comments and DOE Responses

Commentor No. 1908: Shelly (Cont'd)

Response to Commentor No. 1908

exposure to the workforce and the general public and that utilizes a process that seeks exposure levels as low as reasonably achievable.” Each DOE site, including Hanford, is required to implement a radiological control program with the intent to meet this policy goal. Based on the assessment of worker health impacts for all of the alternatives and options that make use of Hanford facilities, the most likely impact of the use of these facilities is no increase in cancer fatalities among the facility workers. For example in Alternative 1 option 3, all of the activities target irradiation and processing) occur at Hanford facilities. As shown in Table 4-42, the expected consequences are less than one additional fatal cancer among the workforce; that is, no additional fatal cancers are expected.

Commentor No. 1909: Chairish Thomas

Response to Commentor No. 1909

Draft PEIS Comment Form

To whom it may concern:
 I oppose to restart of the FFTF nuclear reactor at Hanford, because it is killing everyone and everything that breathes air.

It would be extremely stupid to restart this. So think of how many animals we have extinct now. Think of the number of animals and people you could kill. So don't be stupid. I think of the danger.

Sincerely

Chairish Thomas

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Chairish Thomas

Organization: None

Home/Organization Address (circle one): 10529 DE Prescott

APT 303

City: Portland State: OR Zip Code: 97220

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 18, 2000

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 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

1909-1

1909-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1909-2

1909-2: This PEIS has provided an estimate of the incremental potential human health impacts associated with a range of reasonable alternatives including the restart of FFTF for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

The PEIS identifies (in Chapter 3 of Volume 1) endangered species that live on or near all of the proposed sites, as well as aquatic and wetlands areas that may be impacted by operations at all of the proposed locations. According to an International Atomic Energy Agency (IAEA) publication (IAEA 1992), a dose rate of 100 millirem per year to the most exposed human will lead to dose rates to plants and animals of less than 0.1 rad per day. The IAEA concluded that a dose rate of 0.1 rad per day or less for animals and 1 rad per day or less for plants would not affect these populations. The largest individual dose for any of the alternatives evaluated is below 0.1 millirem, three orders of magnitude less than the IAEA identified threshold level. This is well below the IAEA benchmark. Therefore, all of the range of reasonable alternatives analyzed would have no effect on the plants and animals around the proposed sites.

Commentor No. 1910: Jennifer Madewell

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

I oppose the restart of the FFTF reactor at Hanford. This is a very bad idea. This reaction will kill so many innocent people just think how many unborn babies and newborn babies will have serious health problems and possible die. This will cause an epidemic of health problems. I strongly believe the FFTF should not be restarted.

Sincerely,
Jennifer Madewell
jennifere Madewell

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Jennifer Madewell
 Organization: PACE
 Home/Organization Address (circle one): 4815 N.E. 110th
 City: Portland State: OR Zip Code: 97220
 Telephone (optional): _____
 E-mail (optional): _____

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 Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



Response to Commentor No. 1910

1910-1

1910-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1910-2

1910-2: The commentor's position regarding restart of FFTF is noted. This PEIS has provided an estimate of the incremental potential human health impacts associated with a range of reasonable alternatives, including the restart of FFTF, for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small. As stated in Appendix H of the EIS, other human health impacts (non-fatal cancers and genetic mutations) occur with a lower frequency for the same level of exposure to low levels of radiation. Since the most likely impact on the population from all of the alternatives is no additional fatalities, it follows that the expected result for these other health impacts is no additional impact.

1910-1

Commentor No. 1911: Kayla Grow

Response to Commentor No. 1911

Draft PEIS Comment Form

91400

To whom it may concern

There are too many reasons why you should NOT restart the FFTF to even consider putting thousands of people in such great danger is immoral. Also please think of the kids you'll be infecting. It's not a good idea.

Sincerely

Kayla Grow

Kayla Grow

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Kayla Grow

Organization: PACE

Home/Organization Address (circle one): 18800 nesandy

Apt. 31

City: Portland State: OR Zip Code: 97230

Telephone (optional): 503-258-8489

E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-60
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Telephone: 301-973-6922 • Toll-free: 1-877-562-4593
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

1911-1

1911-1: This PEIS has provided an estimate of the incremental potential human health impacts associated with a range of reasonable alternatives including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks (including the risks to children) associated with restarting FFTF would be small. As stated in Appendix H of the EIS, other human health impacts (non-fatal cancers and genetic mutations) occur with a lower frequency for the same level of exposure to low levels of radiation. Since the most likely impact on the population from all of the alternatives is no additional fatalities, it follows that the expected result for these other health impacts is no additional impact.

1911-2

1911-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.



Commentor No. 1912: Ann Sanders/Lewis W. Cornwell

sept 14 2000

U.S. Dept of Energy
19901 Germantown Rd
Germantown, MD 20874

Dear Mr. Brown:

We urge you to shut down the FFTF reactor. We don't want any more radioactive fuel brought into our state, nor do we want more radioactive waste produced. We certainly don't want any more accidents. The D.O.E.'s lack of disclosure to our public regarding the Plutonium emissions into the air during the recent brushfire is one more piece of evidence to add the already weighty body of evidence that no one (public or private) is capable of regulating these toxic elements safely continuously or with integrity.

Sincerely,
Ann Sanders
Lewis W. Cornwell

1912-1

1912-2

1912-3

1912-4

1912-5

Response to Commentor No. 1912

- 1912-1:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 1912-2:** DOE notes the commentor's concerns about bringing radioactive fuel into the state. Use of the FFTF to support the proposed action would require, after onsite fuel was spent (approximately 6 years of operation), domestic highly enriched uranium fuel or foreign mixed-oxide fuel to be transported to Hanford. However, the radioactivity of this incoming fuel is relatively low. The potential impacts associated with transportation activities to support the proposed action are addressed in Chapter 4, Volume 1 and Appendix J, Volume 2 of the NI PEIS.
- 1912-3:** DOE notes the commentor's concern regarding wastes. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.
- 1912-4:** FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.
- 1912-5:** No radioactive materials were "released" in the Hanford Wildfires of 2000. Wildfires did resuspend some materials already in the environment. The resuspended materials were low, slightly above natural background levels. The low levels required several days of analysis to quantify. Very low, environmental levels are not detectable with real-time measurement techniques. Monitoring results were reported to the public as they became available.

Commentor No. 1913: Barbara Z. Rogers

Response to Commentor No. 1913

Draft PEIS Comment Form

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



RE-START THE FFTF!!!!

1913-1

1913-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): BARBARA Z. ROGERS

Organization:

Home Organization Address (circle one): 1108 N. R.D. 36
PARCO WA 99301

City: State: Zip Code:

Telephone (optional):

E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

**Commentor No. 1914: J. M. Fritzman
Lewis and Clark College**

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

The Fast Flux Test Facility at Hanford should not be restarted. It should be shut down and decommissioned permanently. The FFTF is not needed for the production of medical isotopes, for NASA, or any other reason. It is an environmental accident waiting to happen. Adding more nuclear waste will only increase the risk and make more difficult the problems of nuclear waste disposal. Both President Carter and President Reagan ordered the cancellation of the breeder program. With that program gone, there is no rational purpose for the FFTF. The FFTF should not be restarted. It should be shut down.

1914-1
1914-2
1914-3
1914-4
1914-5
1914-3
1914-1
1914-2

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- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear-Infrastructure-PEIS@hq.doe.gov

Name (optional): J. M. Fritzman
 Organization: Lewis & Clark College - Philosophy Department
 Home/Organization Address (circle one): 0615 SW Palatine Hill Road
 # _____
 City: Portland State: OR Zip Code: 97219
 Telephone (optional): _____
 E-mail (optional): fritzman@lclark.edu

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-60
 U.S. Department of Energy • 1901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear-Infrastructure-PEIS@hq.doe.gov



7/12/00

Response to Commentor No. 1914

- 1914-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.
- 1914-2:** See response to comment 1914-1.
- 1914-3:** DOE notes the commentor's opposition to restarting FFTF for expanding its existing nuclear facility infrastructure. DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Although research to identify other potential fuel sources to support these space exploration missions has been conducted, no viable

Commentor No. 1914: J. M. Fritzman (Cont'd)
Lewis and Clark College

Response to Commentor No. 1914

alternative to using plutonium-238 has been established. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

In January 1997, President Clinton tasked his Committee of Advisors on Science and Technology (PCAST) to evaluate the current national energy research and development portfolio and to provide a strategy that ensures the United States has a program to address the Nation's energy and environmental needs for the next century. In its November 1997 report responding to this request, the PCAST Energy Research and Development Panel determined that restoring a viable nuclear energy option to help meet our future energy needs is important and that a properly focused research and development effort to address the potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) was appropriate. The PCAST panel further recommended that DOE reinvigorate its nuclear energy research and development activities to address these potential barriers. Section 1.2.3 provides information on the nuclear energy research and development mission.

The Fast Flux Test Facility was not designed to be a breeder reactor. It was originally intended to support production of nuclear fuel for use in breeder reactors; however, it will not be used for this purpose, if restarted. There is no breeder reactor program in the United States at this time.

- 1914-4:** The environmental impacts associated with operation of the FFTF and support facilities at Hanford during normal operations and from postulated accidents are presented and discussed in Section 4.3 of the NI PEIS. All impacts to human health and to ecological resources would be small in the immediate area of the Hanford site and negligible at all distant locations.
- 1914-5:** DOE notes the commentor's concern regarding wastes. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the

Commentor No. 1914: J. M. Fritzman (Cont'd)
Lewis and Clark College

Response to Commentor No. 1914

proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 1915: William A. Rottschaef
Lewis and Clark College

Response to Commentor No. 1915

Draft PEIS Comment Form

I believe that

(1) the FFTF reactor should not be restarted

(2) It should be shut down permanently

1915-1

1915-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

1915-2

1915-2: See response to comment 1915-1.

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- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): William A. Rottschaef

Organization: Department of Philosophy

Home/Organization Address (circle one): Lewis & Clark College

City: Portland State: OR Zip Code: 97219

Telephone (optional): _____

E-mail (optional): _____

↓ COMMENT PERIOD EXTENDED

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 1916: Susan Kay Donaldson

10311 Park Avenue South
Tacoma, Washington 98444-5857
15 September 2000

Colette E. Brown
NE-50
U.S. Department of Energy
19901 Germantown Road
Germantown, Maryland 20874

re: Hanford nuclear facilities

Dear Ms. Brown:

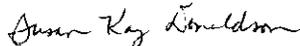
I am writing to express my fears of renewed production activities at the highly contaminated Hanford plant and my opposition to such renewal.

The Fast Flux Test Facility should simply be shut down—for the safety of the people of the immediate area, for the safety of the people of Washington, for the present and long-term safety of the earth.

We on the earth are all one people. No nation has the right to endanger all the planet, as nuclear waste does. There can be no arguments, in my opinion, that outweigh our communal responsibilities to preserve the earth for other human beings. Our forays into nuclear bombs and power have already created huge amounts of waste, whose half-lives are far longer than written human history.

Therefore, please simply shut down the Fast Flux Test Facility and continue with the clean-up there.

Yours sincerely,



Susan Kay Donaldson

c: S. Gorton
P. Murray
A. Smith
R. Yarrow

|| 1916-1
|| 1916-2

|| 1916-3

|| 1916-1 || 1916-4

Response to Commentor No. 1916

1916-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

1916-2: This PEIS has provided an estimate of the incremental potential human health impacts associated with a range of reasonable alternatives including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small. As stated in Appendix H of the EIS, other human health impacts (non fatal cancers and genetic mutations) occur with a lower frequency for the same level of exposure to low levels of radiation. Since the most likely impact on the population from all of the alternatives is no additional fatalities, it follows that the expected result for these other health impacts is no additional impact.

The PEIS identifies (in Chapter 3 of Volume 1) endangered species that live on or near all of the proposed sites, as well as aquatic and wetlands areas that may be impacted by operations at all of the proposed locations. According to an International Atomic Energy Agency (IAEA) publication (IAEA 1992), a dose rate of 100 millirem per year to the most exposed human will lead to dose rates to plants and animals of less than 0.1 rad per day. The IAEA concluded that a dose rate of 0.1 rad per day or less for animals and 1 rad per day or less for plants would not affect these populations. The largest individual dose for any of the alternatives evaluated is below 0.1 millirem, three orders of magnitude less than the IAEA identified threshold level. This is well below the IAEA benchmark. Therefore, all of the range of reasonable alternatives analyzed would have no effect on the plants and animals around the proposed sites.

Chapter 4 of Volume 1 of the PEIS provides a comprehensive assessment of the environmental consequences of each of the proposed alternatives. (The results of these assessments are also summarized in Chapter 2.) These analyses include assessments of the impacts on land resources,

Commentor No. 1916: Susan Kay Donaldson (Cont'd)

Response to Commentor No. 1916

water resources, air quality, geology and soils (in addition to the human health impacts discussed in the preceding paragraph). For the alternatives that consider the use of facilities at Hanford, the environmental impact on all of these resources is negligible.

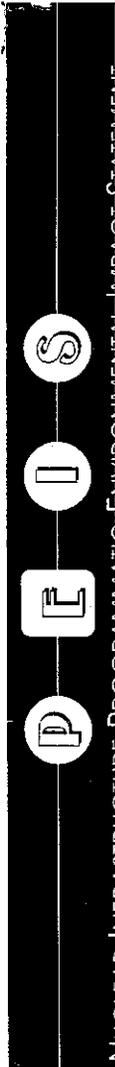
1916-3: The commentor's positions on nuclear waste are noted. The missions described in Section 1.2 of Volume 1 are unrelated to the national defense and none are concerned with the production of nuclear weapons. Chapter 4 of Volume 1 (e.g. 4.3.1.1.13, 4.3.2.1.13, 4.3.3.1.13) describes the generation and disposition of nuclear waste that would occur under implementation of the alternatives described in Section 2.5 of Volume 1.

1916-4: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

Commentor No. 1917: E. Benoth

Response to Commentor No. 1917

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

The FFTF reactor
should not be restarted.
It should be shut down.
Cleanup and safety
should be #1 priorities.
Thank you.
I am speaking for
my children and the
next generations.

1917-1
1917-2
1917-3

1917-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

1917-2: See response to comment 1917-1.

1917-3: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

DOE worker and public health and safety are of paramount and primary importance to the Department.

The environmental impacts associated with operation of the FFTF and support facilities at Hanford during normal operations and from postulated accidents are presented and discussed in Section 4.3 of Volume 1 of the NI PEIS. All impacts to human health and to ecological resources would be small in the immediate area of the Hanford Site and negligible at all distant locations.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): E. Benoth

Organization: _____

Home/Organization Address (circle one): _____

136 Sw Taylor Ferry Court

City: Portland State: OR Zip Code: 97209

Telephone (optional): _____

E-mail (optional): _____

COMMENT PERIOD EXTENDED

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



Commentor No. 1918: Barbara A. Scott

Barbara A. Scott
75 Benton Way
San Luis Obispo, California 93405
(805) 544-8883

Collete E. Brown
US Dept of Energy
NE-50
19901 Germantown Rd.
Germantown, MD 20874
(877) 562-4592

September 12, 2000

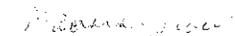
Dear Ms. Brown,

I are writing to request that NASA be required to develop alternative (solar) power sources for space missions. The technology is workable and has been developed in Europe.

I strongly feel the current path of increased Plutonium production is not justified by the health risks to workers or the safety risks to the public at large. Nor is the astronomical costs of plu-238 which drains the economy for decades to come.

Please push forward a space program that our country can be proud of and will not increase possibilities for massive environmental pollution of our earth.

Sincerely,


Barbara Scott

1918-1

1918-2

1918-3

1918-1

Response to Commentor No. 1918

- 1918-1:** DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternative energy sources for space missions, although issues such as NASA research priorities are beyond the scope of this PEIS. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch.
- 1918-2:** Worker safety (radiological protection) is a key element of the DOE's Radiological Health and Safety Policy (DOE P 441.1, April 26 1996) This policy states in part that DOE facilities must "conduct radiological operations in a manner that controls the spread of radioactive materials and reduces exposure to the workforce and the general public and that utilizes a process that seeks exposure levels as low as reasonably achievable." Each DOE site, including Hanford, is required to implement a radiological control

Commentor No. 1918: Barbara A. Scott (Cont'd)

Response to Commentor No. 1918

program with the intent to meet this policy goal. Based on the assessment of worker health impacts for the range of reasonable alternatives and options that make use of Hanford facilities, the most likely impact of the use of these facilities is no increase in cancer fatalities among the facility workers. For example in Alternative 1 option 3, all of the activities (target irradiation and processing) occur at Hanford facilities. As shown in Section 4.3.3.1.9 the expected consequences are less than one additional fatal cancer among the workforce; that is, no additional fatal cancers are expected.

This PEIS has provided an estimate of the incremental potential human health impacts associated with each of the alternatives proposed including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

1918-3: DOE notes the commentor's concern regarding the cost of expanded plutonium-238 production. However, the costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS.

Draft PEIS Comment Form

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

**I REMEMBER THESE COMMENTS ARE LATE, FOR WHICH I APOLOGIZE.*
 PLEASE, LET ME SAY THAT I CONSIDER MYSELF A STRONG ENVIRONMENTALIST. THAT BEING SAID, I STRONGLY BELIEVE THAT THE FFTF SHOULD BE RESTARTED FOR THE FOLLOWING REASONS: 1) THERE IS AN URGENT NEED FOR THE THERAPEUTIC ISOTOPES THAT ONLY THE FFTF CAN PRODUCE IN MEMORABLE QUANTITIES, 2) Pu-238 IS NEEDED FOR STELLING CYCLE GENERATORS FOR NASA'S DEEP-SPACE EXPLORATION VEHICLES, A MOST IMPORTANT PROGRAM, 3) THE UNITED STATES NEEDS TO CONDUCT FAR MORE RESEARCH ACTIVITIES RELATED TO NUCLEAR POWER THAN WE DO CURRENTLY, WE SEVERELY LAG MANY OTHER COUNTRIES IN THIS FIELD.*

I WOULD ALSO LIKE TO SAY THAT THE ANTI-NUCLEAR ANTI-FFTF GROUPS, AS EXEMPLIFIED BY HEART OF AMERICA NORTHWEST, MAKE ME SICK WITH THEIR LIES AND RESTRICTIONS (AND HALF-TRUTHS!) USDOE SHOULD CUT OFF THEIR FUNDING; IT'S A GREAT WASTE OF MY TAX DOLLARS! FINALLY, I THOUGHT USDOE, ESPECIALLY MS. COLETTE BROWN, CONDUCTED ITSELF VERY PROFESSIONALLY AT THE SEATTLE MEETING, SHOWING GREAT RESPECT FOR THE VIEWS OF THE PUBLIC (AND GREAT RESTRAINT WITH THE LIES OF GERALD PILLETT!).

Sincerely

David B. Robbins
 9/15/2000

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

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- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): DAVID B. ROBBINS

Organization: _____

Home Organization Address (circle one): 15138 STONE LANE N. AP. B506

City: SHARPLEAVE State: WA Zip Code: 98133-6282

Telephone (optional): 206-361-9618

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

1919-1

1919-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

1919-2: DOE notes the commentor's views regarding anti-nuclear groups and appreciation for DOE's conduct at the Seattle, Washington public hearing.

1919-2

Commentor No. 1920: Barbara A. Walton

85 North Claymore Lane
Oak Ridge, TN 37830
September 15, 2000

Ms. Colette E. Brown, NE-50
Office of Nuclear Energy, Science and Technology
U. S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

Subject: Draft Programmatic Environmental Impact Statement (PEIS) for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility (FFTF) [DOE/EIS-0310D, July 2000]

Dear Ms. Brown:

I will refer to the subject document in the remainder of this letter as the Nuclear Infrastructure (NI) PEIS. I received the Cost Report for Alternatives Presented in the NI PEIS on September 1 and the NI Nonproliferation Impact Assessment (DOE/NE-D119) on September 12. Even though the time frame was short, I have considered the material in them in preparing these comments:

1. The requirement for this action is fuzzy at best, a stronger case should be made. It now sounds like an excuse to restart FFTF. In addition, future isotope demand should be bounded by a low and a high estimate. Existing facilities at INEEL and ORNL are NOT considered for the Medical and Industrial Isotopes Production and Nuclear Research and Development Mission. See Table 2-1 (page 2-3) or Table S-1 (page S12). This is, in my opinion, the worst flaw in this document. **Please correct this in the Final PEIS!**
2. **Alternative 5 and the No Action Alternative must be rejected as unresponsive to the needs of the nation as well as for reason of nonproliferation concerns.** As a NASA retiree, I recognize the importance of Pu-238 for future space exploration. An assured, domestic supply is preferable. Medical needs are discussed below.
3. **Alternative 1 must be rejected for reasons of cost and equity.** From the scoping meetings, it seems that most folks in the Northwest do NOT want the FFTF restarted. Promises were made about the future use of this area; therefore, these wishes should be honored. Additionally, the surrounding area is now a National Monument (Hanford Reach). Since folks in Idaho and Tennessee are generally supportive of the production of Pu-238 for future space missions and of the production of medical isotopes, it is also unnecessary to select this alternative.
4. **Alternative 3 should be rejected for reasons of cost and unsuitability for many isotopes.**
5. **Alternative 4 should be considered only as a long-term solution.**
6. **The best solution is to expand the scope of Alternative 2 and select it for the near term.** The expansion of alternative 2, upgrading existing facilities, namely HFIR in Oak Ridge and ATR at INEEL, is the most cost-effective option. ATR can be modified to produce short-lived medical isotopes by addition of a rabbit system. HFIR can be upgraded to its full design power of 100 megawatts easily and quickly.
- INEEL, in partnership with I4, and ORNL are currently producing medical isotopes, as noted in pages 2-19 thru 2-23. ORNL also has potential for commercial/government partnership for such production. This has cost saving potential. An additional advantage for isotope production at ORNL is location, with a nearby transportation hub (UPS in Nashville) as well as the proximity of a high percentage of isotope users (East Coast population centers).
7. The REDC is the only Pu-238 Target Fabrication and Processing Facility that is currently operational (Table 7-1, page 7-1 in the NI Nonproliferation Impact Assessment). Use of CLWR requires additional cost to produce stainless steel-clad targets. Therefore Options 7 and 1 of Alternative 2 should be preferred.

Additional comments are attached. Please include me in your distribution of the Final PEIS and ROD.
Sincerely,

Barbara A. Walton

Barbara A. Walton
bwalton@kornet.org

Response to Commentor No. 1920

1920-1

1920-1: DOE notes the commentor's views. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs:

1920-2

1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;

1920-3

2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and

3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

While some existing reactors, such as ATR at INEEL and HFIR at ORNL, may possess the potential capability or capacity to support medical and industrial isotope production and/or nuclear research and development missions, it is unlikely that reliable, increased support of these missions to the extent needed to fulfill projected needs could be accomplished without disturbing the existing missions of these facilities.

Commentor No. 1920: Barbara A. Walton (Cont'd)

Page 2 Barbara A. Walton

Additional comments:

a. The addition of Commercial Light Water Reactor (CLWR) to Alternative 2 since the Pu-238 Production Scoping Meetings is noted; this is a good change.

b. Table 4-155 on page 4-307 is misleading. Several of these decisions have already been made so some of the X's should be removed. For example, line 1 SRS was chosen so delete X from INEEL and Hanford. Likewise line 4, INEEL & SRS were chosen for SNF -- delete X for ORR and Hanford.

c. For Section 4.8, Cumulative Impacts, an estimate of the impacts for Alternatives 3 & 4 for the three sites concerned in this action would be helpful while recognizing that a future EIS would still be needed. This is because the bounding case for ORR (option 7, Alternative 2) and INEEL (option 2, Alternative 2) do NOT include isotope production.

d. The ORNL facilities under consideration were designed to produce medical isotopes. In fact, the origination of isotope production and distribution was at ORNL. It has continued involvement; however, the volume diminished when competition with the private sector became contrary to DOE policy.

e. You may remember the related 1996 EIS for the production of Molybdenum-99. The ROD selected the Annular Core Research Reactor (ACRR) and Hot Cell Facility at Sandia National Laboratory in Los Alamos and the Chemistry and Metallurgy Research facility at Los Alamos National Laboratory. Facilities in Oak Ridge and Idaho were not seriously considered. The ACRR is shown in Table 2-4 as fully dedicated to existing missions. Guess what! In response to questions at the 8/28 meeting, I found out that they never produced any Mo-99 but have been producing I-131. This is, in part, my reason for stating in item 1 on the previous page that this action appears to be an excuse to restart FFTF -- your track record appears to be highly influenced by politics.

1920-4

1920-5

Response to Commentor No. 1920

1920-2: DOE notes the commentor's support for Alternative 2, Use Only Existing Operational Facilities with the upgrade of HFIR and ATR, for the near term and Alternative 4, Construct New Research Reactor, for the long term and her opposition to all other alternatives, including the No Action Alternative.

1920-3: See response to comment 1920-2.

1920-4: The table is being changed to reflect the commentor's observations.

The commentor's concern regarding the cumulative impacts at ORR and INEEL is noted. However, as stated in Section 4.8.5 and 4.8.6 of the NI PEIS, site specific cumulative analyses would be prepared for Alternative 3 (New Accelerator(s) and Support Facility) or Alternative 4 (New Reactor and Support Facility) only if either of these alternatives were selected for implementation. Prior to those analyses, however, siting studies would be prepared to identify the preferable locations for the various facilities. The specific locations so identified would affect the magnitude of impacts associated with their operations. Only then could assessments be performed that would be of comparable accuracy to those presented in the PEIS for the existing facilities at Oak Ridge and INEEL.

In addition to the above, the cumulative impacts presented in Section 4.8 are based on the impacts that have been evaluated earlier in Chapter 4, to which are added existing site impacts and impacts from reasonably foreseeable actions. However, for Oak Ridge and INEEL, impacts associated with the production of medical and industrial isotopes and with research and development activities have not been evaluated in the earlier Chapter 4 sections because the action alternatives assessed (Alternatives 1 through 4) call only for plutonium-238 production at those sites.

1920-5: DOE notes the commentor's views. As discussed in Volume 1, Section 1.7 of the NI PEIS, the "Final Environmental Impact Statement, Medical Isotopes Production Project: Molybdenum-99 and Related Isotopes" analyzed the proposed establishment of a domestic capability to produce molybdenum-99 and related medical isotopes such as iodine-131, xenon-133, and iodine-125. At the time this review was conducted, the U.S. supply of molybdenum-99 depended on the production capacity of one aging reactor in Canada, so DOE proposed this action to ensure a

Commentor No. 1920: Barbara A. Walton (Cont'd)

Response to Commentor No. 1920

reliable domestic source for this vital isotope. The range of reasonable alternatives evaluated in this EIS included facilities at SNL, LANL, ORNL, and INEEL. In the subsequent Record of Decision, DOE selected the ACRR and the Hot Cell Facility at SNL for the production of molybdenum-99 and the related isotopes, with target fabrication to be conducted at LANL. However, since that time, the diversity and reliability of world supply of molybdenum-99 have increased. DOE has determined that, because the vulnerability in supplies of molybdenum-99 has sufficiently diminished, the selected SNL facilities should be further developed for molybdenum-99 production using private funds. Negotiations toward that end are ongoing. Until an agreement is reached, the reactor and hot cell facilities are available for emergency molybdenum-99 production should the need arise. The reactor is also being used for the production of other isotopes, for example iodine-125, and has been made available on a services basis to serve defense missions. As such, the ACRR is currently configured to support DOE Office of Defense Programs pulse testing missions. This configuration is compatible with reactor operations for the production of some isotopes.

Commentor No. 1921: Gary Bickett

September 11, 2000

Colette E. Brown, NE-50
Office of Nuclear Energy, Science and Technology
US Department of Energy
19901 Germantown Road
Germantown, MD 20874

Re: Hanford FFTF Restart

Ms. Brown:

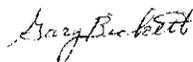
I can not find strong enough adjectives to express how much I oppose the restart of the Fast Flux Test Facility located at the Hanford Nuclear Reservation in the State of Washington! Your reasons for needing to restart this facility are not credible as the materials it would produce can be either produced else where or purchased on the international market. Our lives have been negatively impacted enough from the idiotic past practices at this site. We are sick and tired of the slick side shows and half truths! We're real people here -- quit treating us like we're not! Enough is enough!!

It's time your Department makes a complete change in it's policies and goals. Get on with trying to clean up this ridiculous mess we have been left with as Hanford is one of the most contaminated sites on this planet. The Draft EIS for the restart of the FFTF is inadequate. It fails to properly address the waste issue if it was to go into production. The last thing we need is to generate more low and high level nuclear waste!

If you need more to do spend your time and resources developing and encouraging the development of alternative energy sources other than fossil fuels and nuclear power. Much of it is already available it just needs commitment on the part of the federal government.

I am not normally this antagonistic towards government agencies and am not one of those anti government extremist or even close. But I and many others have a complete lack of trust with your agency. We have been deceived too many times. Please restore your credibility and do the right thing. Listen to common sense and the majority of the public who care about this planet. Choose alternative 5 and permanently deactivate FFTF.

Sincerely,



Gary Bickett
15105 Twin Fir Road
Lake Oswego, OR 97035

Response to Commentor No. 1921

1921-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

1921-2: The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily Molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. Further, supplies of many research isotopes are not readily available from existing foreign or domestic sources, causing a number of medical research programs to be terminated, deferred, or seriously delayed. As such, reliance on these other sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions

1921-3: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

The environmental impacts associated with operation of the FFTF are addressed in Section 4.3 of Volume 1 of the NI PEIS. The impacts are shown to be small. These impacts specifically include the risks to human health during normal operations and associated with postulated accidents. Over the 35-year operational period no fatalities would be expected

1921-1

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Commentor No. 1921: Gary Bickett (Cont'd)

Response to Commentor No. 1921

among workers or in the general public in the vicinity of Hanford or at distant locations.

Steady and consistent progress in restoring the Hanford Site is documented in annual reports. These are available at www.hanford.gov.

- 1921-4:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. High-level radioactive waste would not be generated from merely operating FFTF. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

- 1921-5:** DOE notes the commentor's interest in alternative energy sources. It is the current United States policy that clean, safe, reliable nuclear power continue as a viable component of the United States' energy portfolio. In recognition of this need, the government has initiated nuclear energy

Commentor No. 1921: Gary Bickett (Cont'd)

Response to Commentor No. 1921

research and development programs to address potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) and to ensure that current nuclear power plants can continue to deliver adequate and affordable energy supplies. An enhanced DOE nuclear facility infrastructure is required to support such nuclear energy research and development for civilian applications.

1921-6: DOE notes the commentor's concern.

1921-7: See response to comment 1921-1.

**Commentor No. 1922: Former Members of Congress;
Honorable Sid Morrison/Honorable Mike McCormack**

September 5, 2000

Ms. Colette Brown
DOE Office of Space and
Defense Power Systems NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

Dear Ms. Brown:

We urge the DOE to restart the Fast Flux Test Facility (FFTF) to produce radio isotopes for much needed special pharmaceuticals.

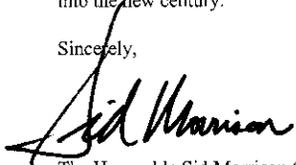
As members of the Congressional Committee that oversaw and authorized funding for the construction and operation of the FFTF, we are especially aware of its unique and valuable ability to produce a variety of isotopes as they are needed.

We believe that abandoning the FFTF would constitute a mindless waste of a significant national resource. We must not let the fears associated with inaction on the handling of nuclear waste blind us to this opportunity to take advantage of an investment we have already made.

We wish to emphasize that producing medical isotopes at the FFTF would in no way impede the clean up of the military waste at Hanford. Nor would FFTF operations contribute to waste management challenges.

This exceptional reactor was built with emphasis on safety and flexibility. While the mission has changed, so have the medical needs of our nation. FFTF is uniquely capable of producing a promising array of isotopes for cancer research and therapy, both now and well into the new century.

Sincerely,



The Honorable Sid Morrison (R-Wash-4)
Member of Congress 1981-1993



The Honorable Mike McCormack (D-Wash-4)
Member of Congress 1971-1981

1922-1

Response to Commentor No. 1922

1922-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

**Commentor No. 1923: Robert G. Graves
Benton PUD**



September 12, 2000

Ms. Colette E. Brown
NE-50, Office of Nuclear Science
Energy and Technology
19901 Germantown Road
Germantown, MD 20874

RE: *Support for the Fast Flux Test Facility*

Dear Ms. Colette:

The Fast Flux Test Facility (FFTF) located in Richland/Hanford, Washington, is a significant national asset as the most advanced and newest reactor that has established unmatched international records for performance, safety and efficiency. Because of its design and the large number of neutrons it can produce, FFTF provides the only full sized test facility for specialized leading edge research in international programs, fusion and medicine.

There are no military or weapons production programs planned for the FFTF. The programs proposed in the EIS include medical and industrial isotope production, production of isotopes for NASA space mission electrical power supplies, nuclear energy research, and development of programs for civilian applications.

The FFTF has the capability to produce a wide variety of isotopes for medical and industrial uses which are not available in adequate quantities anywhere. More than twenty urgently needed scarce radioisotopes of unusually high quality can be produced by FFTF for medical research, treatment, and diagnosis. The United States currently imports 90% of its medical isotopes, virtually all of which could be produced at the FFTF.

The FFTF had an outstanding performance record and was built to strict NRC safety standards. The reactor is inherently safe and has no significant environmental releases. Operation of the reactor will not result in the generation of any additional quantities of high-level waste and only very small amounts of low level, easily treated waste materials.

We support the restart and the continued utilization of the Fast Flux Test Facility. The FFTF is clearly the preferred alternative for the programs considered based on availability, capacity for multi product missions, demonstrated technology, cost effectiveness, safety and minimal environmental impact.

Sincerely,

A handwritten signature in cursive script that reads "Robert G. Graves".

Robert G. Graves
President of the Commission

2721 West 10th Avenue • P.O. Box 6270 • Kennewick, WA 99336-0270 • (509) 582-2175 Tel • (509) 586-1710 Fax

Response to Commentor No. 1923

1923-1

1923-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 1924: Cyndy deBruler Columbia Riverkeeper



September 14, 2000

Colette Brown
NE-50 USDOE
19901 Germantown Rd
Germantown, MD 20874

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Dear Ms. Brown:

Please accept the following comments regarding the PEIS draft on FFTF restart on behalf of Columbia Riverkeeper, a public interest group located in the Columbia River Basin. As a member of the international Water Keeper Alliance we hold the support of tens of thousands of citizens across this nation. Please weigh these comments as representing those interests and more directly the interests of the approximately 2200 members and supporters in the Northwest.

- Your **compilations of prior public comment are seriously lacking** and show your failure to listen to the public. You fail to give any numerical breakdown for the 7000 comments received. You only say “**Many** of the commentors who attended the meetings in Seattle, Portland and Hood River were strongly opposed to the restart of FFTF.” Then you go on to say “**Most** of the comments received at the Richland meeting were in support of restart.” You need to state the numbers on these comments so Sec. Richardson is clear on where the people of the Northwest stand. You put the numbers in when it is to your advantage and leave them out when they are opposed. You need to note that every person at the Hood River hearings was opposed except the people who came to lecture us from the TriCities. You also failed to mention the 5 City Council Resolutions opposing FFTF restart which means you have representatives of entire cities opposing it and their numbers should be included. You must also note the opposition of an entire state as Governor Kitzhaber has taken a position opposing restart.

- You’ve **failed to demonstrate a compelling need** for the production of 1) plutonium for space, 2) medical or research isotopes or 3) nuclear energy research. Neither is there adequate justification for the **need to produce all of them at one site**. Neither is there justification for the **need to produce them domestically** (other than reference to some DOE policy) which makes no sense when we would continue to buy foreign nuclear fuel to run FFTF.

- You must include the recommendations of your own blue ribbon panel (**Subcommittee**

P.O. Box 912, Bingen, WA 98603
Phone/Fax: (509) 393-2808

P.O. Box 82733, Portland, OR 97282
Phone: (503) 727-2580

P.O. Box 1254, Hood River, OR 97051
Phone: (541) 343-3030

email: crk@columbiariverkeeper.org • web: www.columbiariverkeeper.org

Response to Commentor No. 1924

1924-1: In preparing the Final NI PEIS, DOE has carefully considered and responded to all comments received from the public during the comment period, regardless of how or where they were received. All pertinent information and public input will be provided to the Secretary so that he may make an informed and unbiased decision with respect to the alternatives presented in this NI PEIS.

1924-2: Opportunities for public involvement in the NEPA process occur during the scoping process and the Draft PEIS public comment period in accordance with requirements and guidelines of CEQ and DOE regulations. As stated in Section N.1, one of six major purposes of the scoping process includes “... obtaining input from the public and other concerned entities on significant issues that should be evaluated” in the PEIS. Towards this end, all comments received were compiled and grouped in the NI PEIS comment tracking system to determine the major issues and public concerns to be addressed in the NI PEIS. Section 1.4 identifies the issues raised during the scoping process. Any numerical compilation of comments was done only for the purpose of determining the significant issues, whether expressed by individuals, organizations or public officials.

Comments received during the Draft NI PEIS public comment period were carefully reviewed and served as a basis for revisions to the Draft NI PEIS which appear in the Final NI PEIS and identified therein with a vertical bar in the right hand margin of the page. Volume 3 of the Final NI PEIS, referred to as the comment response document, contains a verbatim compilation of all comments received on the Draft NI PEIS along with DOE’s response to each comment which will be used along with other factors by the Secretary of Energy as input to the Record of Decision.

As a result of the scoping and the Draft NI PEIS public hearing processes, the Final NI PEIS adequately and accurately addresses the public’s concerns on the proposed actions.

DOE’s responses to Oregon Governor Kitzhaber’s letter are contained under Commentor No. 1648 in this volume.

1924-3: DOE notes the commentor's opposition to restarting FFTF for enhancing its existing nuclear facility infrastructure. Consistent with its mandates

**Commentor No. 1924: Cyndy deBruler
Columbia Riverkeeper (Cont'd)**

for Isotope Research and Production Planning) that advised **against** the use of FFTF for medical isotope production. Furthermore, EIS Isotope demand projections are outdated and inadequate. They also fail to take into account possible cancer cures like gene therapy that could make medical isotopes unnecessary. In addition, medical isotopes can be adequately produced at other DOE sites if they are a high priority as implied. Current isotope production levels for DOE reactors are misstated in the EIS at near capacity when most are only at around 50%.

- You must include the current demand estimates from NASA for Plutonium 238 which are considerably lower than your need projections and could easily be met under the current contract with Russia. A discussion of alternatives to plutonium fuel must be included. A renegotiated contract with Russia (at double the current cost) could meet future NASA needs at 1/3 the cost of FFTF restart.

- It is improper to release the draft EIS for public comment without the critical information requested by the public in the scoping meetings including:
 - cost analysis of restart and all alternatives with reasonable review time (FFTF will be much more expensive than reasonable alternatives by at least \$2 Billion.)
 - studies on treatment of wastes at all proposed sites and
 - nonproliferation impacts from FFTF and the importation of its necessary radioactive fuel from Europe. (**Violation of the Nonproliferation Agreement by use of Highly Enriched Uranium fuel alone is reason enough to stop restart of FFTF!**)

- You have failed to adequately characterize environmental impacts from FFTF restart. An example is the statement, "Environmental impacts associated with the existing inventory of spent fuel at Hanford site are minimal." To imply that the existing spent nuclear fuel inventory poses no problems is massively incorrect. More than 2100 tons of corroding spent fuel sites in aging water-filled basins near the Columbia River posing one of the largest problems for cleanup and an expected cost of more than \$1.6 billion. You must address all impacts on waste management and the environment at Hanford not dismiss them with erroneous statements.

- You must include the cost of FFTF and all companion facilities decontamination and decommissioning in the restart not just every other alternative. All facilities used in all other alternatives must show the cost of decontamination and decommissioning as well.

- You have failed to assess all existing contaminant sources at Hanford and all other sites before adding additional waste. You must assess current waste inventories and then assess the addition of any new waste to existing waste sources.

1924-4
(Cont'd)

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Response to Commentor No. 1924

under the Atomic Energy Act, DOE is proposing this expansion for the purposes of addressing three primary needs:

1) to support the increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;

2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and

3) to support civilian nuclear research and development in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio.

There is no requirement to conduct all of these missions at one site. In the Record of Decision process, DOE could choose any one of the alternatives or choose to combine components of several alternatives in selecting the most appropriate strategy. For example, DOE could select a low-energy accelerator to produce certain medical, research, and industrial isotopes, and an existing operating reactor to produce plutonium-238 and conduct nuclear research and development. Should FFTF be selected for restart in support of these missions, DOE expects it could utilize a 15-year supply of mixed-oxide fuel that would be available from Germany under favorable economic terms (i.e., no charge for the fuel).

1924-4: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for

Commentor No. 1924: Cyndy deBruer Columbia Riverkeeper (Cont'd)

- You fail to adequately consider use of the Advanced Test Reactor (ATR) in Idaho and the High Flux Isotope Reactor (HFIR) in Oakridge for medical isotopes while acquiring Plutonium 238 from another source. You also fail to analyze lower cost alternatives such as subsidizing university reactors or buying time from private accelerators or reactors.
- The No Action Alternative must include the shutdown of FFTF not maintaining it on stand-by based on prior commitments of Secretaries O'Leary and Watkins and TPA milestones.
- You failed to address the conflict of interest of using PNNL's evaluations when they are a proponent of restart and stands to gain financially.
- You fail to access the legality of introducing new programs and wastes into the highly contaminated 306 e or 325 buildings at Hanford that would be used with FFTF.
- You must admit that the real reasons to restart FFTF are in a hidden agenda that includes preserving jobs and starting new weapons research or other classified missions.
- The draft EIS must state the preferred alternative for adequate public review.
- You must include the impact on demand for medical and research isotopes of the new facility being built at Los Alamos. Why is this not even mentioned??

USDOE should choose Alternative 5- SHUT DOWN FFTF, or Alternative 2- Produce at existing sites with shutdown of FFTF.

Thank you for this opportunity to comment. We hope you will begin to listen to the people of the Northwest and request that these comments be forwarded to the Secretary of Energy who has unfortunately been kept in the dark about the massive opposition to the restart of this reactor in the Northwest.

Sincerely,


Cyndy deBruer
Director

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1924-1

Response to Commentor No. 1924

evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

DOE has taken the Expert Panel and NERAC report recommendations under consideration in developing the range of alternatives evaluated in the NI PEIS. These reports were made available to the public at the NI PEIS public information centers and on the Internet at www.nuclear.gov.

Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability

*Commentor No. 1924: Cyndy deBruler
Columbia Riverkeeper (Cont'd)*

Response to Commentor No. 1924

supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions (basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term (less than 5 years).

1924-5: As discussed in Section 1.2.2, through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. The selection of power systems for space missions is the responsibility of NASA. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Under the No Action Alternative, DOE would continue to purchase plutonium-238 to meet the space mission needs for the 35-year evaluation period considered in the NI PEIS. However, DOE recognizes that any purchase beyond what is currently available to the United States through the existing contract would likely require negotiation of a new contract and may require additional NEPA review.

The May 22, 2000, correspondence from NASA to DOE identifies that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, SRTG development efforts were stopped in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires one-third less

***Commentor No. 1924: Cyndy deBruler
Columbia Riverkeeper (Cont'd)***

Response to Commentor No. 1924

plutonium-238 as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000, letter to DOE that large RTGs be maintained as backup. Section 1.2.2 of Volume 1 was revised to clarify plutonium-238 mission needs.

- 1924-6:** The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS. DOE made every effort to obtain, analyze, and disclose all required information to make a decision on expanding nuclear infrastructure. The costs and nuclear nonproliferation impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report and Nuclear Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such ancillary documents need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed these documents to more than 730 interested parties on August 24 and September 8, 2000, respectively. Both reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided summaries of the Cost Report and Nuclear Nonproliferation Impact Assessment in Appendixes P and Q, respectively, in the Final NI PEIS.
- 1924-7:** DOE notes the commentor's opinion. See response to Comment 1924-6.
- 1924-8:** This NI PEIS addressed the environmental impacts due to the treatment, storage and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.
- 1924-9:** In the event that a decision is made to restart FFTF, the first six years of operation would use existing onsite mixed oxide fuel. DOE expects that an additional 15-year supply of mixed oxide fuel in Europe, owned by Germany, would be available for FFTF. The Nuclear Infrastructure Nonproliferation Impact Assessment for the NI PEIS alternatives,

*Commentor No. 1924: Cyndy deBruler
Columbia Riverkeeper (Cont'd)*

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published in September, 2000, indicated that using the two different sources of existing mixed oxide (MOX) fuel for FFTF (existing FFTF fuel and German MOX fuel) would result in significant mitigating factors, indicating that substantial nonproliferation benefits could be gained by disposing of this inventory as spent fuel. During the period of MOX fuel use, in support of U.S. nonproliferation policy directives, DOE's Office of Nonproliferation and National Security would undertake a study under the Reduced Enrichment Research and Test Reactor (RERTR) program to consider the technical feasibility of using low enriched uranium to fuel the FFTF. Under this nonproliferation protocol, if use of low enriched uranium fuel is found infeasible in FFTF for meeting assigned missions, policy would allow DOE to subsequently procure highly enriched uranium fuel for use in FFTF. Again, this approach is consistent with U.S. nonproliferation policy.

1924-10: DOE notes the concern expressed in the comment on the potential health and environmental impacts of FFTF startup. All air emissions and wastewater discharges would be in accordance with applicable permit and regulatory requirements. The releases of air pollutants and contaminated liquid are addressed in Section 4.3 of Volume 1. The release of air pollutants would result in concentrations well below Federal and state air standards (Table 4-13). The release of radioactivity and hazardous chemicals into the atmosphere would have a negligible effect on human health (Tables 4-17 and 4-19, respectively). There would be no discernible impacts to groundwater or surface water quality (Section 4.3.1.1.4). All impacts on ecological resources, including animals and fish, associated with operation of FFTF would be small (Section 4.3.1.1.6).

It is concluded that operation of FFTF would have small adverse effects on the environment.

The discussion in the Summary and Section 4.8.3.5 of Volume 1 on the cumulative impacts for spent nuclear fuel management at Hanford was revised to clarify that the management of the existing spent nuclear fuel at Hanford results in a dose of less than 0.1 millirem per year of the maximally exposed member of the public. This dose is well within the DOE limits given in DOE Order 5400.5. As discussed in that Order, the dose limit from airborne emissions is 10 millirem per year, as required by the Clean Air Act; drinking water is 4 millirem per year, as required by the Safe Drinking Water Act; and the dose limit from all pathways

***Commentor No. 1924: Cyndy deBruler
Columbia Riverkeeper (Cont'd)***

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combined is 100 millirem per year. DOE has committed to remove the spent nuclear fuel at Hanford for ultimate disposition in a geologic repository.

1924-11: Decommissioning FFTF, including associated costs and cleanup, is not within the scope of the NI PEIS. Before decommission activities were undertaken, DOE would prepare the appropriate environmental documentation to address the associated environmental impacts. Cost assessments would also be prepared.

1924-12: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The current inventory of wastes managed at the Hanford Site are identified in Section 3.4.11.1 of Volume 1. In addition, the generation rates of wastes associated with the NI PEIS options that use Hanford facilities are compared with the current waste generation rates at the site in Section 4.3 of Volume 1. As stated in Sections 4.3.1.1.13, 4.3.3.1.13, and 4.4.3.1.13, the generation rates of wastes at Hanford associated with the options that utilize either FFTF, FMEF and/or RPL 306-E would be much smaller than the current waste generation rates at the site. These volumes would also be small in comparison to the existing inventory at the site (Section 3.4.11.1). These comparisons were also made for the other options which involved INEEL and ORR facilities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

1924-13: Under the No Action Alternative, ATR and HFIR would continue to produce medical isotopes and plutonium-238 could be purchased from Russia. ATR and HFIR would continue to produce medical isotopes under the remaining alternatives. The addition of a CLWR option under Alternative 2, Use Only Existing Operational Facilities, for plutonium-238

*Commentor No. 1924: Cyndy deBruler
Columbia Riverkeeper (Cont'd)*

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production would permit the medical isotope mission at existing reactors to grow. However, this growth was not analyzed in the PEIS because it is not a new mission.

With regard to the commentor's second concern, DOE did consider the use of irradiation facilities other than those addressed under Alternatives 1 through 4. However, their use was dismissed for a variety of reasons as discussed in Section 2.6.1.

The No Action alternative is required under Council on Environmental Quality regulations (40 CFR 1502.14(d)). It provides a point of comparison for the action alternatives. The No Action Alternative generally represents the status quo; that is, it includes those actions that would normally take place without the proposed action. Since the status quo involves maintaining FFTF in standby and not its deactivation, it is not appropriate to include its deactivation as part of the No Action Alternative. Deactivation of FFTF is included as Alternative 5, Permanently Deactivate FFTF, and as part of Alternative 2, Use Only Existing Operational Facilities, Alternative 3, Construct New Accelerator(s), and Alternative 4, Construct New Research Reactor.

1924-14: The 300 Area Revitalization Plan (DOE 1999) provides for continued multi-program R&D operations in the 300 Area, including operation of various laboratories, office facilities, and services. It also provides for consolidation (but not complete elimination) of radiological operations, with support for Hanford Site facility transition and environmental restoration efforts. The plan does not require closure of the 325 and 306 E buildings as long as they are needed for active research projects. Operation of these facilities would not violate any existing agreements between DOE and stakeholders or other legal obligations, nor would it affect ongoing or planned environmental restoration and facility transition activities.

As discussed in Section 1.2 of Volume 1, plutonium-238 would be produced to support NASA's deep space missions. Plutonium-238 is not used to produce nuclear weapons. All missions considered in the NI PEIS are for civilian purposes.

PNNL is not preparing this PEIS, although it has offered technical comments on it. These comments have been evaluated by DOE and the contractor preparing the PEIS. PNNL has also previously provided

***Commentor No. 1924: Cyndy deBruler
Columbia Riverkeeper (Cont'd)***

Response to Commentor No. 1924

technical and cost analyses on matters related to the FFTF, which have undergone independent scrutiny, and have helped confirm the need for the environmental review now being independently developed. PNNL's work does not present a conflict of interest. Ultimately, DOE has full control over the contents of the PEIS.

1924-15: At the time the Draft NI PEIS was completed and published, DOE did not have a preferred alternative. DOE used the environmental evaluation in the Draft NI PEIS, and also other reports on cost and nonproliferation impacts, as well as input from the public to develop its preferred alternative. Council on Environmental Quality regulations (40 CFR 1502.14(e)) do not require the inclusion of a preferred alternative in a draft EIS if one has not been identified at that time. However, the regulations do require identification of a preferred alternative in the final document. DOE has identified a preferred alternative in Section 2.8 of the Final NI PEIS.

1924-16: The Isotope Production Facility (IPF) at Los Alamos National Laboratory produces radioisotopes using the Los Alamos Neutron Science Center's LANSCE) half-mile accelerator that delivers medium-energy protons. Among other isotopes, the IPF's three major products include germanium-68, strontium-82, and sodium-22. As a result of changing DOE missions, the production of radioisotopes at target area "A" of the LANSCE has been rendered inoperable. In order to replace the level of production lost due to this change, DOE is completing a new and more efficient IPF that would allow DOE to continue to produce most of these same isotopes in an effort to meet existing demand. As addressed in Section 2.6.1 of the NI PEIS, IPF at LANSCE was considered but dismissed from further evaluation because, although it can be used in tandem with the Brookhaven Linac Isotope Producer (BLIP) located at the Brookhaven National Laboratory to supply near-term isotope requirements, it is unlikely that these facilities could accomplish reliable, increased isotope production at the level needed to support projected needs.

In 1998, an Expert Panel convened to forecast future demand for medical isotopes estimated that the expected growth rate of medical isotope use during the next 20 years will range between 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These growth projections were adopted by DOE as a planning tool for evaluating the potential capability of the existing

*Commentor No. 1924: Cyndy deBruler
Columbia Riverkeeper (Cont'd)*

Response to Commentor No. 1924

nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. As addressed in Section 2.6.1 of the NI PEIS, IPF at LANSCE was considered but dismissed from further evaluation because, although it can be used in tandem with the Brookhaven Linac Isotope Producer (BLIP) located at the Brookhaven National Laboratory to supply near-term isotope requirements, it is unlikely that these facilities could accomplish reliable, increased isotope production at the level needed to support projected needs.

1924-17: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, or Alternative 2, Use Only Existing Operational Facilities.

Commentor No. 1925: Stanley Hobson, INEEL Citizens Advisory Board



Citizens Advisory Board

Idaho National Engineering and Environmental Laboratory

00-CAB-065

August 31, 2000

William B. Richardson
Secretary of Energy
U.S. Department of Energy, Headquarters
1000 Independence Avenue, S.W., MS 7E-079
Washington, DC 20585

Dear Secretary Richardson:

Chair:

Stanley Hobson

Vice Chair:

Jan M. Edelstein

Members:

Wynona Boyer
James Bondurant
Karen Corrigan
Annemarie Goldstein
Andy Guerra
Robert D. Kaestner
David Kipping
Patricia Klahr
Lawrence Knight
R.D. Maynard
Marilyn Paarmann
F. Dave Rydalah
Monte Wilson

Ex-officio:

Kathleen Trever
Wayne Pierre
Gerald C. Bowman

Jason Staff:

Carol Cole
Amanda Jo Edelmayer
Kathy Grebstad
Wendy Green Lowe
Trina Pettigill
Teri Tyler

I am a member of DOE's Environmental Management Site Specific Advisory Board for the Idaho National Engineering and Environmental Laboratory (INEEL). Within our charter under the Department of Energy, we develop all of our recommendations through consensus-building processes involving the full membership of the Citizens Advisory Board (CAB) in a public setting. The INEEL CAB meets every other month for two full days. This schedule sometimes makes it difficult for us to provide our consensus recommendations within the established public comment periods. When we believe a particular issue for which DOE is seeking citizen input is of considerable importance to the INEEL, we request an extension for the public comment period. We find ourselves in that position once again, with regard to the Draft Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility (NI PEIS).

The comment period for the NI PEIS is scheduled to end on September 18, 2000; our next CAB meeting is scheduled for September 19 and 20, 2000. We have requested for an extension of the comment period so that we can develop an informed, consensus recommendation on this proposed action(s) with significant potential impact on the INEEL. We have not yet received a written response to that request. I have been very cordially advised by telephone (via calls from Mr. Dan Funk and Ms. Collette Brown) that DOE has received our request for an extension. Both further explained that an extension of the comment period would not be granted due to internally determined schedule constraints for this PEIS. Both Mr. Funk and Ms. Brown encouraged the submission of our consensus recommendation, although the comment period will be closed before we will be able to complete our processes.

The INEEL CAB uses topical committees (from within its membership) to review documents and prepare draft recommendations for consideration by the full board at its next meeting. (We define consensus as "all members understand and support the content and intent" of the recommendation.) The NI PEIS is currently being reviewed by one of our issue committees. Discussions within the committee indicate several major areas of concern. These concerns can only be forwarded to the Department after reaching consensus within the entire INEEL CAB. The value of further review by the relevant committee and of full Board deliberations striving toward consensus is, at best, a problem in light of the September 18, 2000 deadline.

Jason Associates Corporation • 477 Shoup Avenue, Suite 201 • Idaho Falls, Idaho 83402
Phone • (208) 522-1662 Fax • (208) 522-2531
<http://www.ida.net/users/cab>

Response to Commentor No. 1925

1925-1

1925-1: DOE values the input of the INEEL CAB to the NEPA process and that of all of its advisory boards. The effort inherent with the development of the CAB's consensus recommendations and its value to informed decision making is also appreciated. DOE stated in the Notice of Availability (65 FR 46443 et seq.) that it would consider comments submitted after the close of the comment period on September 18, 2000 to the extent practicable. Responses to the INEEL CAB comments are shown under Comment Number 2050 of this comment response document (Volume 3 of the NI PEIS).

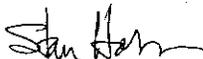
***Commentor No. 1925: Stanley Hobson (Cont'd)
Citizens Advisory Board***

We find ourselves in a dilemma, Mr. Secretary. On the one hand, we believe that DOE's efforts to address our concerns would considerably strengthen the EIS. On the other hand, as volunteers, we want the expenditure of our time to be productive. The alternatives and options being considered in this EIS portend significant federal outlays. This environmental documentation and the decision-making process it supports are important to DOE, important to the citizenry of the country, and perhaps just a little more important to the potentially impacted sites and their surrounding communities. We would hope that developing a thorough and legally-defensible EIS—one that has been provided to the public consistent with provisions for public participation under the National Environmental Policy Act—is more important than meeting a self-imposed deadline.

In my several years of service on the INEEL CAB, I have come to genuinely believe our jointly-derived, consensus recommendations are vastly superior to any I could develop on my own. I offer my thoughts on the EIS and my concerns about the associated public participation efforts as a private citizen who has invested a number of hours of my own time in reviewing the EIS. I have made this investment of my time in preparation for listening to my esteemed colleagues and then participating in collaborative work to forge a consensus recommendation that is worthy of transmittal to the Department. The Board has not met, nor deliberated on the contents of this letter; the thoughts I am expressing have not been approved by my peers.

I very much appreciate the recent efforts by Ms. Brown and Mr. Funk to keep me, as Chair of the INEEL CAB, informed.

Sincerely,



Stanley Hobson

cc: INEEL CAB Membership

**1925-1
(Cont'd)**

Response to Commentor No. 1925

**Commentor No. 1926: Earl C. Leming, State of Tennessee,
Department of Environment and Conservation**



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DOE OVERSIGHT DIVISION
761 EMORY VALLEY ROAD
OAK RIDGE, TENNESSEE 37830-7072

September 14, 2000

Colette Brown,
US Department of Energy
Office of Space and Defense Power Systems (NE-50)
19901 Germantown Road
Germantown MD 20874-1290

Dear Ms Brown

Document NEPA Review: Draft Programmatic Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility (Nuclear Infrastructure Programmatic Environmental Impact Statement [NI PEIS]) (DOE/EIS-0310D)

The Tennessee Department of Environment and Conservation, DOE oversight Division (TDEC/DOE-O) has reviewed the subject document in accordance with the requirements of the National Environmental Policy Act (NEPA) and associated regulations of 40 CFR 1500-1508 and 10 CFR 1021 as implemented.

General Comments

The listed options that incorporate use of existing facilities demonstrate that no increased impacts would be associated with operations on the Oak Ridge Reservation (ORR). Since the options that incorporate the building of new facilities do not specifically state where the new facilities would be located on the ORR, there is no means to properly evaluate impacts associated with this new construction. If one of these options is chosen, then further evaluation will become necessary.

Specific Comments

1. Volume 1, Page 1-5, Table 1-1 and Related Text

DOE will soon be supplying medical isotopes derived from uranium-233 (U-233) for the *Phase II Leukemia Research Trials* to be conducted during the fall of 2000. The isotopes of interest for these studies (and for the ultimate treatment of leukemia) are actinium-225 (Ac-225) and bismuth-213 (Bi-213). Ac-225 and Bi-213 are not listed in Table 1-1 of the NI PEIS. Please list Ac-225 and Bi-213 in Table 1-1 and also address those isotopes, as well as U-233, in the text of the NI PEIS.

1926-1

1926-2

Response to Commentor No. 1926

- 1926-1:** DOE notes the commentor's observations. DOE used the generic site approach for Alternatives 3 and 4 in the absence of specific siting alternatives. This level of analysis is appropriate for a PEIS. Projected construction and operational data on nonradiological air emissions, water use, radiological and chemical releases, and waste generation are provided at a level of detail commensurate with that provided for the existing facilities under consideration. Should one of these alternatives ultimately be selected on the basis of its technical merit for accomplishing the stated missions and the assessment of environmental impacts, subsequent NEPA reviews would be conducted to include an analysis of siting alternatives and associated site-specific impacts.
- 1926-2:** The commentor identifies several isotopes that are not discussed in the Draft NI PEIS. DOE is supplying small amounts of isotopes actinium-225 and bismuth-213 for medical clinical trials. The small quantity needed for these clinical trials was produced by chemically processing uranium-233. If clinical trials are successful, large quantities might require the use of a reactor or accelerator to meet this possible future demand. In response to comments on the Draft NI PEIS, a discussion of isotopes that can be extracted from existing supplies of long-lived isotopes, including progeny of uranium-233, has been added to Section 2.7.3 of Volume 1.

**Commentor No. 1926: Earl C. Leming, State of Tennessee,
Department of Environment and Conservation (Cont'd)**

2. Volume I, Page 1-13, Section 1.6, Related NEPA Reviews

DOE has stated in correspondence with the Division that it plans to initiate a specific "U-233 Storage and Disposition Programmatic Environmental Impact Statement (PEIS)" in 2002. This PEIS should be listed and discussed in Section 1.6 of the NI PEIS.

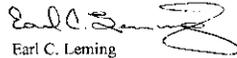
**3. New Accelerator(s) Alternative (Alternative 3, Page 2-61, Section 2.2.4) and
New Reactor Alternative (Alternative 4, Page 2-63, Section 2.5.5)**

These sections in the NI PEIS mention that if either the new accelerator(s) or new reactor alternatives are chosen, the facility "...would be constructed at an existing DOE site." The possible locations of the new accelerator(s) and reactor should be listed and discussed in the NI PEIS. Without this information, an adequate evaluation of the alternatives cannot be conducted.

The above sections in the NI PEIS state that "Targets for medical and industrial isotope production would be fabricated in a new support facility located at the same site as the new low energy accelerator (or reactor)" if alternative 3 or 4 is chosen. It is the Division's position that an existing facility should be utilized as a support facility if practical.

If you have any questions concerning these comments, please contact me at (865) 481-0995.

Sincerely



Earl C. Leming
Director

xc: Dodd Galbreath - TDEC
Eddie Nanny - TDEC
Rodney Nelson - DOE

Ecl540.99

Response to Commentor No. 1926

1926-3

1926-3: DOE is no longer planning to initiate a U-233 storage and disposition PEIS in 2002. Rather, DOE is changing its plans for the use of uranium-233 at Oak Ridge. An appropriate NEPA review would be performed for the proposed action to determine the level of NEPA documentation.

1926-1

1926-4

1926-4: As noted in Sections 2.5.4. and 2.5.5 of Volume 1, because Alternative 3, Construct New Accelerator(s), and Alternative 4, Construct New Research Reactor, are evaluated at a generic DOE site(s), no credit was taken for any support infrastructure existing at the site and it was postulated that a new support facility would be required. However, it is highly unlikely that DOE would consider locating either a new accelerator(s) or reactor on a DOE site(s) that does not have existing infrastructure capable of supporting all or most of the infrastructure requirements.

Commentor No. 1927: Rebecca J. Inman
State of Washington, Department of Ecology



STATE OF WASHINGTON
 DEPARTMENT OF ECOLOGY
 P.O. Box 47600 • Olympia, Washington 98504-7600
 (360) 407-6000 • TDD Only (Hearing impaired) (360) 407-6006

September 13, 2000

Colette E Brown, Document Manager
 Office and Defense Power Systems (NE-50)
 Office of Nuclear Energy, Science & Technology
 US Dept of Energy
 19901 Germantown Rd
 Germantown MD 20874

Dear Ms. Brown:

Thank you for the opportunity to comment on the draft programmatic environmental impact statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility (NI PEIS) [#DOE/EIS-0310D]. We have reviewed the draft EIS and have the following comments.

General Comments:

- (1) The description in Section 3.4 of the Hanford environment impacted by the use of the Fast Flux Test Facility (FFTF) is relatively thorough, especially compared to other Department of Energy programmatic environmental impact statements (PEIS), such as the Waste Management PEIS.
- (2) The cost information in the document is incomplete. It appears the real tradeoff is between use of the FFTF and cutting or prioritizing certain research activities at currently operating facilities. The PEIS fails to make a specific case why creating new capacity is necessary. Please expand the document to include this information.
- (3) The "Purpose and Need" section (1.2) is very qualitative, based on summary assertions from advisory committees. To some degree, the sources cited that are available via the Internet do not provide a quantitative basis to assess the need for additional capacity. Consequently, "Comparison of Mission Effectiveness Among Alternatives" (Section 2.7.1.2.3) is very brief and inconclusive. As there is no cost analysis included in the draft NI PEIS, it is impossible to evaluate the tradeoffs between the options in terms of meeting specific needs based on relative costs. Please expand the NI PEIS to include this discussion.
- (4) The list of "Related NEPA Reviews" in Section 1.6 is illuminating and helpful. However, the text does not help the reader clearly understand how these reviews relate to the decisions to be made under this PEIS. Perhaps a graphic or table showing links would be helpful.

1927-1

1927-2

1927-3

1927-4

1927-2

1927-5

Response to Commentor No. 1927

- 1927-1:** DOE notes the commentor's view that Volume 1, Section 3.4 of the NI PEIS presents a relatively thorough description of the affected environment at Hanford.
- 1927-2:** CEQ (40 CFR 1500 et seq.) and DOE (10 CFR Part 1021) implementation regulations do not require inclusion of cost studies in an environmental impact statement. The basic purpose of the NI PEIS is to describe the alternatives under consideration for implementation (Section 2.5 of Volume 1) and the environmental impacts that would occur if these alternatives were implemented (Chapter 4 of Volume 1). Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. The associated cost report was made available to the public on August 24, 2000. DOE mailed this document to approximately 730 interested parties, and the report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in public reading rooms.
- 1927-3:** DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing

Commentor No. 1927: Rebecca J. Inman, State of Washington, Department of Ecology (Cont'd)

Colette E Brown
September 13, 2000
Page 2

- (5) The PEIS does not address decommissioning, closure, and long-term stewardship requirements for facilities. In particular, what would be the long-term added requirements and costs were FMEF to be used and contaminated? Please include a discussion on these issues.
- (6) The information (calculations, etc.) to establish the basis for the amount of waste generated by restart of FFTF is not included. Please clarify this issue in the final document.

Specific Comments

Page S-8 The second sentence of the next to last paragraph states "However, in Richland, Washington, the meeting was attended by several stakeholder and environmental groups who voiced considerable opposition...", while on page S-9 the fourth sentence of the fourth paragraph says "Most of the comments received at the Richland, Washington, meeting supported restarting FFTF." Please clarify this discrepancy in the final document.

Page S-29 The third sentence of the next to last paragraph says "200 degrees C (44 degrees F)". Centigrade temperatures are converted to Fahrenheit by multiplying by 9/5 and adding 32; (200x9/5) plus 32 = 392 degrees F. Please correct the error in the final NI PEIS.

Page S-63 The third sentence under Spent Fuel Management states "The environmental impacts associated with the existing inventory of spent fuel at Hanford site are minimal. Please expand this section to include the justification for the statement.

Section 4.3.1.1.13 The statement made here and elsewhere in the document that "transuranic waste would be... eventually shipped to a suitable geologic repository for disposal" lacks candor. There is no disposal path for transuranic wastes generated in this program. Indefinite storage on-site appears highly likely. Please clarify the disposal pathway for this material.

The same section states that low-level and mixed low-level wastes were analyzed in and will be handled under the Waste Management PEIS Records of Decision. It would be helpful to see exactly where these wastes were covered in the Waste Management PEIS. Furthermore, if they are not disposed of commercially (the "preference" expressed in this draft PEIS), they would likely be disposed of on-site. To assert that would have no impact at Hanford is premature, based on the Waste Management PEIS. The Hanford Radioactive and Hazardous Solid Waste draft EIS has yet to be released for public review. Please include this discussion in the final NI PEIS.

1927-6

1927-7

1927-8

1927-9

1927-10

1927-11

Response to Commentor No. 1927

research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

DOE has taken the Expert Panel and NERAC report recommendations under consideration in developing the range of alternatives evaluated in the NI PEIS. These reports were made available to the public at the NI PEIS public information centers and on the Internet at www.nuclear.gov.

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Under the No Action Alternative, DOE would continue to purchase plutonium-238 to meet the space mission needs for the 35-year evaluation period considered in the NI PEIS. However, DOE recognizes that any purchase beyond what is currently available to the United States through the existing contract would likely require negotiation of a new contract and may require additional NEPA review.

Commentor No. 1927: Rebecca J. Inman, State of Washington, Department of Ecology (Cont'd)

Colette E Brown
September 13, 2000
Page 3

Chapter 5: The list of potentially applicable laws and regulations (Chapter 5) is quite exhaustive. However, the text does not indicate specifically which state laws and regulations (Section 5.1.4) the Department of Energy actually commits to comply with. Please expand this section to clarify the regulations that will be complied with.

1927-12

Section 5.1.4: Delete the word 'potentially' from the third line in the paragraph above Table 5-2. The sentence should read "A list of applicable state laws, regulations and agreements is provided in Table 5-2."

1927-13

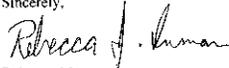
Section 5.1.4, Table 5-2: Replace the word "Potential" from the third column of Table 5-2 with the word "Regulatory." The heading should read 'Regulatory Requirements.'

1927-14

The tenth item identified in this table is the "Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement)." The description in the third column under "Potential Requirements" is not complete. The Tri-Party Agreement does not establish the applicability of state and federal laws but determines the steps necessary to bring Hanford into compliance with state and federal regulations. Replace the information in this column with the following wording: 'The Tri-Party Agreement is an enforceable agreement which details work necessary to comply with State and Federal hazardous waste management requirements.'

Thank you again for the opportunity to comment on the NI PEIS. If you have any questions, please call Mr. Max Power with our Nuclear Waste Program at (360) 407-7118.

Sincerely,



Rebecca J Inman
Environmental Coordination Section

EIS #005089

cc: Steve Moore, Kennewick
Max Power, Nuc Waste

Response to Commentor No. 1927 (Cont'd)

The May 22, 2000, correspondence from NASA to DOE identifies that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, SRTG development efforts were stopped in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires one-third less plutonium-238 as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000, letter to DOE that large RTGs be maintained as backup. Section 1.2.2 of Volume 1 was revised to clarify plutonium-238 mission needs.

The major mission of FFTF would not be the production of plutonium-238. Rather, all three missions are of equal importance; no one mission is given priority in the NI PEIS.

1927-4: Volume 1, Section 2.7.1.2.3 of the Draft NI PEIS presents a comparison of mission effectiveness among alternatives. This section has been revised in the Final NI PEIS (see Section 2.7.1.8, "Comparison of Mission Effectiveness Among Alternatives") to provide the reader a better understanding of the medical isotopes that can be produced using accelerator technology (Alternative 3) and reactor technology alternatives (Alternatives 1 and 4).

1927-5: DOE notes the commentor's view. Discussions addressing related NEPA reviews, originally presented in Section 1.6 of the Draft NI PEIS, are now presented in Section 1.7 of the Final NI PEIS. The relevance of each of these NEPA reviews to the NI PEIS analyses is provided at the end of each individual discussion.

1927-6: Decommissioning of existing facilities, including FMEF, and their closure and long-term stewardship requirements are not within the scope of the NI PEIS. Before these activities were undertaken, DOE would prepare the appropriate environmental documentation to address the associated environmental impacts. Cost assessments would also be prepared.

1927-7: The NI PEIS provides references for the sources of waste generation in each of the alternatives and alternative options. The waste generation estimates for FFTF were obtained from the May 2000 draft of the

Commentor No. 1927: Rebecca J. Inman, State of Washington, Department of Ecology (Cont'd)

Response to Commentor No. 1927 (Cont'd)

“Waste Minimization and Management Plan for FFTF.” The estimates used in the draft plan were based on information from past operations of the FFTF. Waste generation and disposition are detailed in Chapter 4 of the NI PEIS for each of the alternatives.

- 1927-8:** Page S-8 of the Draft NI PEIS summarizes comments DOE received at the Plutonium-238 Production EIS scoping meetings that were held in November 1998. The comments summarized on page S-9 of the Draft NI PEIS are comments DOE received at the NI PEIS scoping meetings held in October 1999. Appendix N of the NI PEIS summarizes the comments received during both public scoping periods.
- 1927-9:** The commentor is correct. The value of 392 degrees F is the correct conversion of 200 degrees Centigrade to Fahrenheit temperature. However, since 200 degrees Centigrade is identified as approximate, the value of 400 degrees F has been inserted in the parentheses on page S-29 of the final PEIS instead of the incorrect value of 44 degrees F. This error has no effect on the results presented in the EIS.
- 1927-10:** The discussion in the Summary and Section 4.8.3.5 of the NI PEIS on the cumulative impacts for spent nuclear fuel management at the Hanford Site was revised to clarify that the management of the existing spent nuclear fuel at Hanford results in a dose of less than 0.1 millirem per year to the maximally exposed member of the public. This dose is well within the DOE limits given in DOE Order 5400.5. As discussed in that Order, the dose limit from airborne emissions is 10 millirem per year, as required by the Clean Air Act; drinking water is 4 millirem per year, as required by the Safe Drinking Water Act; and the dose limit from all pathways combined is 100 millirem per year. DOE has committed to remove the spent nuclear fuel at Hanford for ultimate disposition in a geologic repository.
- 1927-11:** Sections 4.3.1.1.13, 4.3.2.1.13, 4.3.3.1.13, and 4.4.3.1.13 were revised to address comments received during the public comment period. These sections now state that “DOE is considering whether the waste from processing of irradiated neptunium-237 targets should be classified as high-level radioactive waste and not transuranic waste. Irrespective of how the waste is classified (i.e., transuranic or high-level radioactive waste), the composition and characteristics are the same and the waste management activities (i.e., treatment and onsite storage) as described in this NI PEIS would be the same. In addition, either waste type would

Commentor No. 1927: Rebecca J. Inman, State of Washington, Department of Ecology (Cont'd)

Response to Commentor No. 1927 (Cont'd)

require disposal in a suitable repository. If it is transuranic waste, it would be nondefense waste and could not be disposed of at WIPP under current law. Because nondefense transuranic waste has no current disposal path, DOE Headquarters' approval would be necessary before a decision is made to generate such waste, as required by DOE Order 435.1. If the waste is classified as high-level radioactive waste, it is assumed for the purposes of this analysis that Yucca Mountain, Nevada, if approved, would be the final disposal site for DOE's high-level radioactive waste."

Section 4.3.1.1.13 states that "In accordance with the Records of Decision for the 'Waste Management PEIS', wastes could be treated and disposed of on site at Hanford or at other DOE sites or commercial facilities." The paragraph continues on to provide summaries of the various Records of Decision for each of the waste types. This section does not state that the wastes that would be generated from the proposed alternative or alternative options were included in the Waste Management PEIS.

Section 4.8 of the NI PEIS provides information on the cumulative impacts. The waste management information has been revised from the draft to include capacities for the treatment, storage and disposal facilities. For this assessment the total maximum waste volume that would be generated for each site were added to the total site baseline for the 35 year nuclear infrastructure operation and can be compared to the site's storage, treatment and disposal capacities.

1927-12: Section 5.1.1 provides information on the Federal environmental, safety, and health laws and regulations including the applicability to the alternatives. In the Final NI PEIS, Section 5.1.4 provides information on environmental requirements, which were previously addressed in Section 5.1.1, that have been delegated to state authorities or for which the state has established their own programs. DOE is committed to comply with state laws and regulations, as they are determined applicable to the proposed action.

1927-13: Section 5.1.4 has been revised in the Final NI PEIS to reflect the commentor's request.

1927-14: Table 5-2 in the Final NI PEIS has been revised to reflect the commentor's request.

Commentor No. 2014: Sally Yocum

From: SALLY YOCUM
[SMTP:SLY.IN.WYO@HQRTMTA1.DOE.GOV]
Sent: Wednesday, September 20, 2000 10:32:12 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: plutonium production
Auto forwarded by a Rule
September 18, 2000

Ms. Colette Brown
DOE, Office of Space and Defense Power Systems

Dear Ms. Brown,

Your Department's recent proposal to expand the civilian nuclear infrastructure, as outlined in the Draft Programmatic Environmental Impact Statement, for accomplishing expanded civilian nuclear energy research and development and the isotope production mission in the United States, including the role of the Fast Flux Test Facility, raises significant nuclear weapons proliferation issues, as well as environmental issues and human health concerns.

As a concerned taxpaying and voting citizen living downwind of the INEEL, I have become aware of the serious nuclear waste and contamination problems at this facility, as well as the irresponsible attempts to cover up or downplay these problems. INEEL is one of the most contaminated areas in America. The Department's recent estimate on cleaning up this site is \$22 billion and is expected to take 50 years__longer than any other DOE facility. In addition, we have over 360 individual superfund sites within the 890 sq. mile area that comprises INEEL. With this known, the last thing we need is a plan to generate more nuclear waste at a site that can't handle the waste it already has. INEEL needs more waste like the DOE needs more security security scandals. Out of concern for Idaho's environment, I strongly urge you not to pursue the plutonium_238 production mission as outlined in your PEIS.

2014-1

Response to Commentor No. 2014

- 2014-1:** The commentor's position regarding waste generation and selection of INEEL's Fluorinel Dissolution Processing Facility for plutonium-238 production is noted. Waste management at INEEL is discussed in Volume 1, Section 3.3.11. Waste generation and disposition that would result from selection of the Fluorinel Dissolution Processing Facility to support plutonium-238 production is described in Section 4.3.2.1.13. Use of facilities considered in the NI PEIS would not impact the cleanup missions at their respective sites.
- 2014-2:** The use of proposed alternative facilities associated with processing of neptunium-237 targets would have no impact on schedules or available funding for high-level radioactive waste programs at either Hanford or INEEL. At INEEL, the tanks would not be used although certain facilities at the Idaho Nuclear Technology Engineering Center (INTEC) would be used to treat the wastes resulting from processing the irradiated targets. These are reliable systems that would process a maximum of 1,050 cubic meters of low-level radioactive waste over the 35-year nuclear infrastructure operational period. The higher activity waste would be treated as a solid form via a stand-alone vitrification system, separate from any tank waste treatment system. At Hanford, the existing high-level radioactive waste facilities would not be used, and as analyzed in the PEIS, no existing or planned high-level radioactive waste facilities would be used to treat the wastes resulting from processing the irradiated targets.
- 2014-3:** Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost.

Commentor No. 2014: Sally Yocum (Cont'd)

One of the most daunting problems confronting cleanup at major DOE facilities such as Hanford and INEEL, is the solidification of liquid high_level nuclear waste. Your current plan for plutonium_238 production entails the generation of approximately 288,000 additional gallons of this waste over the project's 35 year span. While this is a small portion of Hanford's high level waste, it is approximately one fifth of what is remaining in Idaho, which makes it a very significant amount. Previous leakage of this waste at INEEL and Hanford threatens our already contaminated water supplies. What we certainly don't need is any more of this most highly problematic of waste forms.

Given the certain risks inherent in production of plutonium, the justified need for this material would have to be tremendous, and the PEIS does a poor job of providing ample justification. Beyond the risks involved in production, and the aforementioned resulting waste problem, there is also the issue of an accident occurring upon lift_off or reentry of a space probe carrying this material. The Cassini probe, launched in 1997, carried 72 pounds of Pu_238. The potential for an explosion during lift_off or upon an inadvertent re_entry during the fly_by phase, gave many in the scientific community pause, including top scientists within NASA. According to NASA's own conservative estimate, a burn up upon reentry of the Cassini probe could have caused 2,300 cancer fatalities; independent analyses ranged much higher. This potential for a catastrophic release of this extremely toxic material will imminent, as long as the US government remains committed to the use of plutonium_238. If DOE is to have a role in developing power systems for NASA's instrumentation, it should focus on promising solar technology, an alternative that has been promoted in the European scientific community, or at best research other alternative power methods

There are also proliferation concerns as it pertains to this plan. A return to production of this isotope, however poorly justified, means a return to the use of aqueous reprocessing at DOE facilities where

2014-2

2014-3

2014-4

2014-5

Response to Commentor No. 2014

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concerns for nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Potential health and safety impacts associated with normal operations, facility accidents, and transportation as a result of the proposed production of plutonium-238 are relatively low and are discussed in detail in Chapter 4 of Volume 1, and Appendixes H, I, and J of Volume 2 in the Final NI PEIS.

2014-4: DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternative energy sources for space missions, although issues such as NASA research priorities are beyond the scope of this NI PEIS. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch.

2014-5: It is not true that resumption of plutonium-238 production constitutes a return to reprocessing. The aqueous technique that would be used to separate plutonium consisting of over 80 percent plutonium-238 and neptunium from the irradiated target is similar to the technology that was used in portions of the complex process to extract plutonium-239. However, as discussed in PEIS Sections S.3, 2.2.3 and A.1.4, this technology would be used to chemically separate plutonium-238 and neptunium from irradiated targets and not from irradiated or spent nuclear fuel, whereas reprocessing separates weapons grade plutonium-239 from irradiated nuclear fuel. Plutonium-238 extraction is not reprocessing. Unlike plutonium-239, plutonium-238 is not used in nuclear weapons, but rather it would be used as a power and heat source for NASA space missions.

Commentor No. 2014: Sally Yocum (Cont'd)

this dirty and ancient technology has been used to extract bomb material for the weapons program. From President Carter to presidents Bush and Clinton, US policy has been to halt reprocessing in this country in order to set a global precedent to curtail the spread of nuclear weapons material_a noble effort in serious need of bolstering through aggressive action.

Indeed, an otherwise lukewarm Nuclear Infrastructure Nonproliferation Impact Assessment conducted by your Office of Arms Control and Nonproliferation questions whether our commitment to nonproliferation isn't weakened by the use of the Fluorinel Dissolution Process Facility within Building 666 at INEEL. INEEL's reprocessing facility is next door to a wet storage unit for Navy spent fuel, which contains a greater than average amount of highly enriched uranium. It was reprocessed from 1953 to 1989 at INEEL for the weapons program. Use of this facility to carry out plutonium_238 extraction, especially considering the dubious need for this isotope, at the very least raises the concern that DOE is not fully committed to ending reprocessing. How can the international community be expected to trust DOE's civilian_mission claim when this agency is obviously devoutly committed to development of weapons by using nuclear weapons technology at a weapons facility?

The silent issue of transportation of these high_level radioactive materials has not been mentioned. As we well know, the inherent risks of transportation are of a huge concern, and not to include this in the PEIS is irresponsible and makes for an incomplete study.

Considering all these factors that could adversely affect our environment and commitment to nonproliferation, I strongly urge you to select alternative 5 in the current PEIS. This alternative would allow the Advanced Test Reactor at INEEL to continue producing medical and industrial isotopes for the commercial sector and would not lead to the production of anymore highly radioactive liquid waste at Hanford or INEEL. The main mission at these two facilities has been and should continue to be cleanup of the mess

2014-5
(Cont'd)

2014-6

2014-7

Response to Commentor No. 2014

The Nuclear Infrastructure Nonproliferation Impact Assessment, published in September 2000, confirms that extracting plutonium-238 from irradiated targets would not undermine nonproliferation goals. In this report, DOE recognizes that proliferation concerns might be raised related to one of the technical assessment factors, "reduction in attractiveness of material forms," due to the fact that, in the extraction of plutonium-238, the remaining unconverted neptunium, a weapons-useable fissile material used as target material for conversion into plutonium-238, must also be recovered (not produced), purified, and recycled. This is unavoidable (unless the United States elects to neither produce or purchase plutonium-238), and it impacts all PEIS alternatives and options, including the No Action Alternative and Alternative 5: permanently deactivate FFTF with no new missions at U.S. facilities. However, while the fact that concerns might be raised is a valuable input to the record of decision process, it does not constitute an inconsistency with or departure from nonproliferation policy, and plutonium-238 is needed to fulfill our missions. Further, in the event that plutonium-238 production is resumed in the United States, the total separated stocks of neptunium would be reduced over time in an irreversible manner since there is a moratorium on U.S. spent fuel reprocessing. This overall reduction in a weapons-useable material would mitigate the potential concerns related to material attractiveness, and offer an additional method to pursue U.S. nonproliferation goals. DOE's proposed approach in this mission, and its rigorous nonproliferation impact assessment, demonstrate its commitment to nonproliferation policy, domestically and in the international community.

The juxtaposition of Fluorinel Dissolution Process Facility (FDPF) in INEEL Building 666 to wet storage of highly enriched uranium Navy spent nuclear fuel, and its previous mission of reprocessing spent nuclear fuel, were rigorously and objectively evaluated in the Nuclear Infrastructure Nonproliferation Impact Assessment published in September 2000. In no uncertain terms, this report discusses the proliferation concerns raised in the areas of facilitating cost-effective international monitoring and supporting negotiation of a verifiable FMCT, and outlines what is needed to mitigate these concerns. This is a valuable input to the record of decision process.

Commentor No. 2014: Sally Yocum (Cont'd)

left over from previous nuclear weapons work. Additional waste production would interfere with this already difficult and expensive work. Alternative 5 also calls for the decommissioning of the FFTF reactor at Hanford. FFTF is an aging breeder reactor whose use would be inconsistent with United States policy to discourage use of this technology due to the capability this class of reactors has to produce more plutonium than is consumed.

Thank you for the opportunity to comment on this plan.

Sincerely,

Sally Yocum
P.O. Box 514
Wilson, Wy. 83014
307_733_6807

**2014-7
(Cont'd)**

Response to Commentor No. 2014

Most of the concerns and uncertainties surrounding the use of FDPF are associated with its history as a defense programs facility and the resulting lack of transparency that could be afforded in the event that international monitoring becomes desirable under an FMCT. This is a different set of concerns than those expressed in the comment. The fact is, that since it is well known that FDPF has a long history of Navy defense missions, and since the described mission (plutonium-238 extraction) in the PEIS does not involve the production of special fissile material, sufficient transparency could possibly be provided by a managed access regime that would meet the requirements of FMCT verification. If this could be done, the aforementioned concerns would be mitigated.

2014-6: Appendix J contains a comprehensive risk analysis of all materials transported under the alternatives defined in the NI PEIS. Table J-3 lists the number of shipments and the mass of all materials shipped. The results of the risk analysis is shown in detail in Table J-7 and J-8, and summarized in Chapters 2 and 4 of Volume 1 and the Summary Volume for this PEIS. These results indicate the transportation risks would be small. The waste generated from processing of irradiated neptunium-237 targets would be vitrified and stored, onsite pending availability of a suitable repository for permanent disposal.

The DOE Manual 435.1. Radioactive Waste Management defines high level radioactive waste as the highly radioactive waste material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid material derived from such liquid waste that contains fission products in sufficient concentrations; and other highly radioactive material that is determined, consistent with existing law, to require permanent isolation. DOE has prepared an implementation guide to DOE M 435.1 to assist in implementing the requirements contained in that manual. For this particular requirement, the definition of high-level radioactive waste, the guide is intended to facilitate the classification of indefinite waste as to whether or not they are high-level radioactive waste. It is recognized that the definition of high-level radioactive waste is not precise and is essentially a source-based definition that also alludes to concentrations of a given waste stream. Page II-8 of this guide notes that for the purpose of managing high-level waste under DOE M 435.1-1 [sic], spent nuclear fuel includes spent driver elements and/or irradiated target elements that contain transuranium elements. This statement was

Commentor No. 2014: Sally Yocum (Cont'd)

Response to Commentor No. 2014

included in the guide because the concentrations of long-lived isotopes are likely to be somewhat high during reprocessing and it also meets the source-based definition.

As a result of reviewing this guide and to address the comments raised, DOE is considering whether the waste from processing of irradiated neptunium-237 targets should be classified as high-level radioactive waste and not transuranic waste. As a result, the Waste Management sections (i.e., Sections 4.3.1.1.13; 4.3.2.1.13; 4.3.3.1.13; and 4.4.3.1.13) of this NI PEIS have been revised to reflect this different classification from what was assumed in the draft NI PEIS. As discussed in these revised sections, irrespective of how the waste is classified (i.e., transuranic or high-level radioactive waste), the composition and characteristics are the same and the waste management (i.e., treatment and onsite storage) for this NI PEIS would be the same. In addition, even if the waste is managed as high-level radioactive waste it would have no impact on the existing high-level radioactive waste management infrastructure (e.g., high-level waste storage tanks), since the high activity waste from processing of the targets would be initially stored and vitrified within the processing facility (i.e., FMEF, REDC, or FDPF).

2014-7: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. It should be noted that medical isotopes would continue to be produced at ATR regardless of which alternative is selected in the Record of Decision. The FFTF would produce spent nuclear fuel and low-level radioactive waste, and as discussed throughout Section 4.3 of Volume 1, none of the proposed alternatives would add waste to the high-level waste tanks at Hanford or INEEL. Also, it should be pointed out that while FFTF supported the breeder reactor program, it is not itself a breeder reactor, but rather a fast flux research reactor.

Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of

Commentor No. 2014: Sally Yocum (Cont'd)

Response to Commentor No. 2014

low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

With respect to cleanup of wastes at Hanford or INEEL, the proposed action and the existing cleanup missions are independent programs and actions related to one will not impact the other. While the cleanup activities at both Hanford and INEEL are high priority to DOE, it should be noted that the cleanup of legacy wastes is beyond the scope of the NI PEIS.

Commentor No. 2015: Norris Palmer

NI PEIS_Toll Free Telephone

9/20/00

Norris Palmer
Bingen, WA
817_481_9022

Yes, my name is Norris Palmer. I've got a house in Bingen, Washington at 2222 Laurie Circle. My phone number is, you can reach me at 817_481_9022. I want to leave my comments on the Environmental Impact Statement. They're definitely, we're totally against it. Everybody in that area is against it. Let's not open this Hanford back up again. We can't even clean it up the way it is. It's leaking currently. If you open it back up, we need to just take it out of there. So, please do not even think of opening that place up. Put it somewhere else away from a major river, like in the middle of Texas somewhere. We'd be happy to have it there. So, please do not think of opening this thing back up. Let's spend our money cleaning it up. Thank you.

2015-1

2015-2

2015-1

2015-2

Response to Commentor No. 2015

2015-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF. FFTF is located approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to the groundwater. The environmental impacts associated with operation of the FFTF during normal operations and from postulated accidents are presented and discussed in Section 4.3 of the NI PEIS. All impacts to human health and to environmental media including air, water, and land are shown to be small.

Specific sites for the new accelerator(s), Alternative 3, and new research reactor, Alternative 4, have not been selected. If Alternatives 3 or 4 are selected for implementation, site specific NEPA documentation will be prepared prior to site selection.

2015-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Hanford cleanup is funded by DOE's Office of the Assistant Secretary for Environmental Management (EM). FFTF funding is provided through the Office of Nuclear Energy, Science & Technology (NE). Further, two different congressional subcommittees oversee the appropriations for these activities. No monies have been or will be taken from any EM projects at Hanford to support the FFTF. Restart of FFTF would not impact current cleanup schedules. If the decision is made to shutdown the FFTF, then cleanup dollars will be needed to deactivate the facility, which will impact the Hanford cleanup budget.

Commentor No. 2016: Lynn Stricker

NI PEIS Toll_Free Telephone

9/19/00

Lynn Stricker
360_366_9108

My name is Lynn Stricker and I'm late on leaving a comment. I would like to please shut down the FFTF reactor and focus on clean_up. My phone number 360_366_9108. Thank you.

|| 2016-1
|| 2016-2

Response to Commentor No. 2016

2016-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2016-2: See response to comment 2015-2.

Commentor No. 2017: Floy Lilley
The University of Texas at Austin

09/20/00 07:56 512 471 5120

UT CHAIR FREE

001



COLLEGE OF ENGINEERING
THE UNIVERSITY OF TEXAS AT AUSTIN

Clas W. Murchison Sr. Chair of Free Enterprise
Petroleum/CPE 3.168 • Austin, Texas 78712 • (512) 471-7501 • Fax: (512) 471-5120

COMMENT FORM TO DOE FAX TO 301/428-1973 Cathy.H.

WE NEED THE FAST FLUX TEST FACILITY (FFTF). WE NEED THE WIDE VARIETY OF ISOTOPES REQUIRED FOR LEADING EDGE MEDICAL RESEARCH AND THERAPY.

WE NEED FFTF TO MAKE THE ISOTOPE OF PLUTONIUM TO POWER OUR DEEP SPACE PROBE BATTERIES.

PLEASE RESTART FFTF.

ANY SCARE OVER FFTF HAVING TO DO WITH WEAPONS IS FALSE. THIS NEWEST OF ALL DOE REACTORS HAS NEVER BEEN A DEFENSE REACTOR.

RESTORE OUR NATION AS THE ACKNOWLEDGED LEADER IN NUCLEAR SCIENCE AND TECHNOLOGY. SAVE LIVES. SAVE SCIENCE. RESTART FFTF.

FLOY LILLEY, J.D.
MURCHISON CHAIR OF FREE ENTERPRISE
PETROLEUM/CPE 3.168 C0300
THE UNIVERSITY OF TEXAS
AUSTIN, TX 78712

512/471-7501
llm@ce.utexas.edu

09-07-00P

College Affiliates: College of Engineering, College of Business Administration, College of Communications, College of Education, College of Liberal Arts, College of Natural Sciences and Leadership Studies, Johnson School of Public Affairs

Response to Commentor No. 2017

2017-1

2017-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 2018: Derek Campbell

From: derek campbell[SMTP:ACOUJAM@HOTMAIL.COM]
Sent: Thursday, September 21, 2000 10:28:34 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: ?Check_Subject
Auto forwarded by a Rule

Just another citizen expressing opposition to nukes in space.
Please find alternatives for the sake of us all.

Thank you,

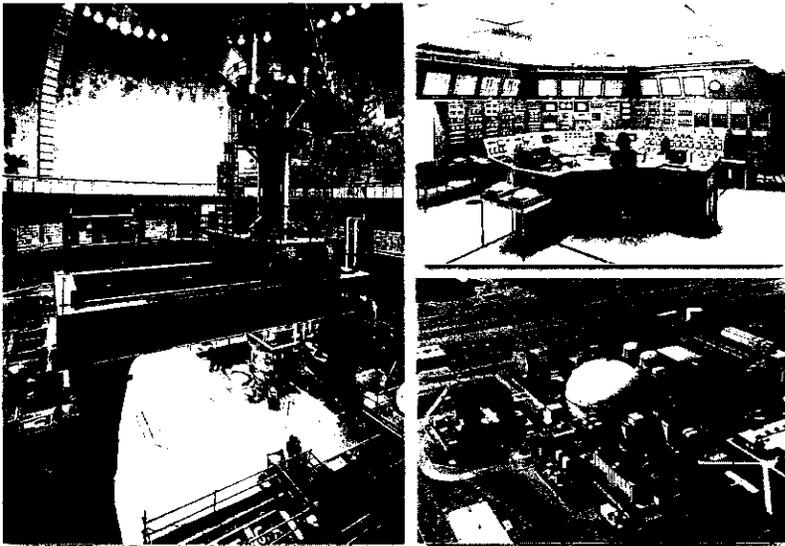
Derek Campbell

2018-1**Response to Commentor No. 2018**

2018-1: As part of its charter under the Atomic Energy Act, DOE and its predecessor agencies have been developing and supplying radioisotope power systems to NASA for space exploration for more than 30 years. It should be noted that NASA and not DOE determines the need for space power systems. When such a power system is required, NASA utilizes the NEPA process to evaluate all reasonable alternatives. Plutonium-238 sources are used when it is the only mission enabling technology or enhances mission capabilities. As stated in Section 1.2.2 of Volume 1, research has been conducted to identify other potential fuel sources to support these space exploration missions, but no viable alternative to using plutonium-238 has been established.

*Commentor No. 2019: Mary Lou Blazek
Oregon Office of Energy*

**THE
OREGON
APPROACH:** Involving the Public
in DOE's Nuclear
Infrastructure Proposals
Including Use of the
Fast Flux Test Facility



OREGON OFFICE OF ENERGY

September 2000

Response to Commentor No. 2019

Commentor No. 2019: Mary Lou Blazek (Cont'd)
Oregon Office of Energy

**THE
OREGON
APPROACH:** **Involving the Public
in DOE's Nuclear
Infrastructure Proposals
Including Use of the
Fast Flux Test Facility**

A report to the U.S. Department of Energy
from the Oregon Office of Energy
September 2000

Many people played a role in helping the Oregon Office of Energy test a new way to gather public opinion on Hanford issues. We thank them all. In particular, we would like to recognize the invaluable efforts of DOE/FFTF project staff member Al Farabee and participants Steve Binney, Adam Bless, Barbara Clark, Janet Franco, and Greg DeBruler.

To view this report on-line, please visit <http://www.energy.state.or.us/nucsafe/nucsafe.htm>. For more information about the report, please contact Mary Lou Blazek by telephone at (503) 378-5544, by e-mail at mary.l.blazek@state.or.us, or in writing at Oregon Office of Energy, 625 Marion St. N.E., Suite 1, Salem, Oregon, 97301-3742.

This report was prepared with funding from the U.S. Department of Energy. Any opinions, findings, conclusions or recommendations expressed herein are those of the authors and do not necessarily reflect the views of the U.S. Department of Energy.

Response to Commentor No. 2019

Commentor No. 2019: Mary Lou Blazek (Cont'd)
Oregon Office of Energy



Oregon
John A. Kitzhaber, M.D., Governor

Office of Energy
625 Marion St. NE, Suite 1
Salem, OR 97301-3742
Phone: (503) 378-4040
Toll Free: 1-800-221-8035
FAX: (503) 373-7806
www.energy.state.or.us

September 15, 2000

Ms. Collette Brown
Office of Nuclear Energy,
Science and Technology (NE-50)
US Department of Energy
19901 Germantown Road
Germantown, MD 20874

Dear Ms. Brown:

Enclosed is our report "*The Oregon Approach: Involving the Public in DOE's Nuclear Infrastructure Proposals Including Use of Fast Flux Test Facility.*" This report summarizes the results of an extensive public involvement effort to include Oregonians in evaluating the adequacy of the draft Programmatic Environmental Impact Statement (Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the U.S., Including the Role of the Fast Flux Test Facility). Our report includes public input on whether to restart the Fast Flux Test Facility. This information was collected from 20 focus groups in six Oregon communities. The public input provided in this report should be considered public comment on the Draft PEIS.

The report also provides a description of our process which involved a good number of Oregonians who had not previously commented on Hanford issues. I think you'll agree that the project and report provide you with meaningful public comment that DOE would not have otherwise received.

Sincerely,

Mary Lou Blazek, Administrator
Nuclear Safety Division

Response to Commentor No. 2019

Commentor No. 2019: Mary Lou Blazek (Cont'd)
Oregon Office of Energy

Appendix D

FOCUS GROUP ROUND ONE QUESTIONS

Key to Focus Group Abbreviations

OHSU = Oregon Health Sciences University
 CCS1 = Community Cross Section Group 1 (Portland)
 CCS2 = Community Cross Section Group 2 (Portland)
 MD = Market Decisions (Multnomah, Clackamas, Washington, Yamhill, Columbia Co.)
 HW = Hanford Watch
 OOE = Oregon Office of Energy (non-nuclear staff)
 C/A = Umatilla and Morrow County community leaders and agricultural interests
 E = Engineers
 OR = State of Oregon

Focus Group	Questions/Issues/Concerns/Interests to Address	Comments/Notes
1. OHSU	Does FFTF produce electricity?	No.
2. OHSU	Where did the tritium mission from FFTF's earlier proposals go?	To commercial reactors at Tennessee Valley Authority.
3. HW	Will PNNL be involved in the restart decisions? Will PNNL benefit from restart? Is there a conflict of interest?	The decision will be made by DOE headquarters. PNNL evaluated FFTF for restart and may be part of the operating group. The conflict of interest question is unclear.
4. HW	What is Gov. Kitzhaber's position on the restart of FFTF?	Currently, there is no official position on the restart of FFTF. In the past, the Governor opposed restart of FFTF to produce tritium. That mission is no longer proposed. The Governor will use the results of these Oregon focus groups along with staff's technical evaluation to guide his decision on this EIS.
5. HW	Will OOE demand a cumulative impacts analysis?	OOE will encourage USDOE to conduct a cumulative impacts analysis.
6. HW	Will OOE declare the EIS "illegal?"	No. The Attorney General makes legal decisions for the state.
7. HW	Will OOE articulate the public's opposition and Portland City Council's resolution against restart?	OOE will convey all the messages we've heard concerning restart of FFTF including these focus groups, the Portland City Council resolution, and others.
8. C/A	Does FFTF generate waste in standby mode?	Yes. Contaminated low level wastes are generated. Some radioactivity remains from past operations. Spent fuel from reactor is currently being processed for dry cask storage. This process generates caustic soda as a mixed waste.
9. CCS1	Can we process existing waste to get Pu238?	No, not from the waste at Hanford.
10. HW	What is Yttrium-90 that Hanford sells used for?	According to the Nuclear Medicine Research Council web site (http://www.cbvsp.com/nmrc/mia.html), Y-90 is used for "Internal radiation therapy of liver cancer, monoclonal antibodies, Hodgkin's disease, and hepatoma. Cellular dosimetry, treating rheumatoid arthritis, treating breast cancer, treatment of gastrointestinal adenocarcinomas."

Response to Commentor No. 2019

Commentor No. 2019: Mary Lou Blazek (Cont'd)
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Appendix D

Item #	Topic Group	Policy Issue or Intentional Question	Commentor's Answer
1.	OOE	If these missions go elsewhere, will that have an impact on (reduce) Hanford's budget?	There is the possibility that building of new DOE facilities such as a reactor or an accelerator might impact cleanup budgets complex wide.
2.	OCS2	Does use of FFTF focus attention and funding on Hanford and thereby help cleanup?	While it certainly may focus attention on Hanford it won't likely help the cleanup budget.
3.	OHSU, OOE, CCS1, CCS2, C/A	Is there a way to keep cleanup funds from being diverted to FFTF?	DOE's current plan for this is to fund FFTF from a separate part of DOE – Nuclear Energy vs. Environmental Management.
4.	OOE	If FFTF is re-started, could DOE then change its position and use the reactor for tritium production after all?	Not without going through the NEPA process to change the Record of Decision that sent this mission to TVA. However, it is possible that classified missions could be performed at FFTF without public input once it is re-started. (Post-meeting clarification: FFTF could not restart for defense missions without another EIS.)
5.	OCS1	If FFTF was built for the breeder reactor program which ended, if they restart could they use it for a breeder program again?	Yes, it would be possible to use the reactor to conduct research into breeder reactor materials, etc. However, it is highly unlikely this would occur since there is no breeder reactor program in progress in the US and it is very unlikely that there ever will be again. Note that FFTF is NOT a breeder reactor itself.
6.	OOE, C/A	Why has there been such a push to re-start the reactor? Is proposal for restart driven by politics, economics, or a business plan?	Part of DOE's official mission is to ensure an adequate supply of medical isotopes and an adequate nuclear research infrastructure in the US. The reason for the push to restart FFTF is many people feel that it is the best facility to accomplish these purposes in the US.
7.	OCS2	What is the larger public purpose of government facilities? Sometimes a federal vision/subsidy addresses things not commercially feasible or things the private sector cannot/will not undertake.	See the answer for the above question.
8.	C/A	What are we doing (differently) now to avoid the cleanup problems generated in the past?	FFTF is developing a Waste Minimization and Management Plan to help minimize the impact of FFTF's wastes on existing wastes. Currently, regulations on waste are much more stringent than they used to be and the public is much more aware of the dangers of these materials. However – wastes will be generated, and there will be an impact on current waste levels. The significance of this is controversial.
9.	C/A	Is the proposed FFTF mission(s) the only mission at Hanford other than cleanup?	In addition to cleanup there are various research missions going on. There is a commercial low-level radioactive waste dump in operation at Hanford, and there is a commercial nuclear power plant on Hanford site generating electricity for the region's power grid that are not DOE facilities.
10.	OCS2	Is Pu-238 a defense related mission for which the DOD should pay some of the cleanup costs?	This argument could be made if these generators are used in military satellites.

Commentor No. 2019: Mary Lou Blazek (Cont'd)
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1.	OHSU, C/A, OOE	What will happen to wastes from FFTF operations?	According to the latest version of FFTF's plan: Spent Nuclear Fuel would be stored on-site in dry storage casks, the disposition of the Transuranic Waste from target processing is unclear, low level waste will be disposed of at a commercial facility.
2.	OHSU	What kinds of "international research" are being considered for the new FFTF mission?	These research missions generally involve materials research. In other words, people want to know how a certain metal will behave when bombarded by radiation. This type of research is generally aimed at improving the strength of materials used in nuclear reactors.
3.	OHSU, HW, CCS2, C/A	What isotopes are proposed for FFTF; where are those isotopes currently produced; what are long range plans for each of those production facilities?	See table 1-1 in the EIS. Some examples are: Actinium-227, Iodine-131, Iridium-192, Krypton-81m, Rhenium-186, Thorium-228. Some of these are currently available commercially such as Iodine-131 and Iridium-192. These are generally produced in a Canadian reactor or by buying space in a research or DOE reactor. For example - OGSU has produced some medical isotopes in its research reactor.
4.	OOE, HW, CCS2	What is the need for medical isotope production?	This is controversial - some studies indicate there is a need, others indicate there isn't. Currently we buy many of our isotopes from Canada.
5.	OOE, HW, CCS2	What isotopes are currently being used for medical research and treatment?	Currently three radioisotopes dominate therapeutic applications: Iodine-131, Yttrium-90, and Phosphorus-32. Others in use are Strontium-89, Samarium-153 and Rhenium-186. These are currently in commercial production.
6.	HW, CCS1, C/A	What wastes and how much of each would be produced? Will liquid wastes be produced?	The following wastes would be produced: Spent Nuclear Fuel - 16 metric tons of heavy metal, Transuranic Waste from target processing, (numbers unavailable), Low-Level Radioactive Waste - from both target processing and operation of FFTF (about 23 cubic meters total for FFTF - numbers not available for processing facilities) Liquid wastes will be produced by both FFTF and the processing facilities. FFTF's liquid waste will be stabilized by drying and then it will be handled as dry waste. The processing liquid wastes have an unclear path.
7.	C/A	Is FFTF ready for proposed missions or would it have to be retrofitted?	It could physically perform the missions as it is without much retrofitting. However, there are plans to upgrade the control and protection systems since they are older technology and modify the reactor to allow on line insertion and retrieval of targets.
8.	C/A	How much waste would be generated from creating targets vs. processing targets?	More waste would be generated in the processing of targets than in the creation of them. Actual numbers are not provided in the EIS.
9.	HW	What type of fuel will be used? Can the fuel also be used for bomb production?	There are actually two plans for fuel. Both begin with using the current stocks on hand (about 6 years worth). This is Mixed Oxide (MOX) fuel - a mixture of plutonium and uranium. Once this fuel is exhausted there are two options - import MOX fuel from Germany or use domestically produced Highly Enriched Uranium (HEU) fuel. Both types of fuel contain weapons type materials. The fuel itself could not be used for bombs without significant re-processing.
10.	CCS1	Where will the fuel come from?	See above.
11.	HW	What alternate uses are being considered for FFTF?	Other than the missions discussed in this EIS, no alternate uses are being considered at this time.

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- 2019-1:** Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.
- 2019-2:** Researchers from many foreign countries use DOE's high-flux research reactors for materials testing and experimentation. These facilities have the capability to maintain a high density of neutrons in a given test volume for materials testing; shorten the time needed for such testing; tailor the neutron flux to simulate the different reactor types and conditions; and instrument the core for close monitoring of the test conditions. Although the NI PEIS analyzes the expansion of U.S. civilian nuclear research and development, it is anticipated that FFTF would play a role in the continuing international research conducted in the United States. As described in Section 1.2.3 of the NI PEIS, some specific areas of research identified are advanced reactor development including materials and nuclear fuel research for advanced terrestrial or space reactors and for the Accelerator Transmutation of Waste system.
- 2019-3:** For purposes of analysis in the NI PEIS, a representative set of isotopes was selected on the basis of recommendations of a thirteen member Expert Panel convened by DOE in 1998 to forecast future demand for medical isotopes, medical market forecasts, reviews of medical literature, and more than 100 types of ongoing clinical trials that use radioisotopes for the treatment of cancer and other diseases. These 37 representative isotopes are listed in Table 1-1 of the NI PEIS, along with a brief description of their medical and, in some cases, industrial applications. Some examples of isotopes included in the table

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Comment ID	Commenter	Comment	Response
12.	HW	Are some of the alternatives more easily adapted to future weapons related missions?	It would be easiest to conduct classified missions in FFTF, or another DOE controlled facility due to DOE's control and self-regulation status.
13.	HW	Is the FFTF reactor safe to operate?	The FFTF reactor is about 25 years old and its protection and control technology is of this vintage. There are commercial reactors operating safely with this technology.
14.	HW	Are the costs of making FFTF safe for particular missions included in the proposals?	We don't know -- we haven't seen the cost data yet. The latest word is that the cost study would be released September 5.
15.	HW	What other nuclear sites in the U.S. may be used for the proposed missions. What other facilities at the Hanford Site?	The sites with existing reactor facilities analyzed in this EIS are Hanford, Idaho National Engineering and Environmental Laboratory, the Oak Ridge Reservation in Tennessee, and a generic commercial light water reactor site. Processing facilities analyzed are at Hanford, Idaho, and Oak Ridge. The EIS discusses a generic DOE site for the possible construction of a new research reactor or accelerators.
16.	HW	Can the isotopes be produced elsewhere in the same amounts?	The EIS makes the statement that current facilities are unable to meet the demand for isotopes. The demand is currently being met mainly by purchase of isotopes from Canada. There are no commercial facilities in the U.S. now dedicated to the production of medical isotopes.
17.	HW	Can they use the large volume of waste at Hanford to process at FFTF and make something useful and profitable?	In general, no. Some things have been extracted from the waste in the past -- Cs and Sr, but it wasn't profitable.
18.	HW	How much Pu-238 will be produced; is there any foreign opposition?	The current EIS envisions 175 kilograms of Pu-238 being produced over a 35 year period. No foreign opposition that we are aware of.
19.	MD	Where else can Pu-238 be produced?	Pu-238 could be produced in another research type reactor, in a commercial light water reactor or in an accelerator.
20.	CCS1	Are there other materials besides Pu-238 that could be used for the space mission?	From a radioisotope standpoint, in theory -- any material that generates heat as it decays could be used. Practically, Pu-238 is probably the best material as other materials don't have as high a heat generating capacity and so would require bigger, bulkier batteries. Solar panels have, until recently (about 1995), been too inefficient.
21.	MD, OOE, CCS1, CCS2, OR, C/A	What will these proposals for FFTF cost (including startup, operation, shut-down, decommissioning)?	We haven't seen the cost data. The latest information we have is that this data will be released September 5.
22.	C/A	Will the government recoup its costs for this project?	It is the intention of the project to recoup its operating costs, but we are skeptical this can be done. The 35-45 million dollars per year spent thus far on keeping it in standby is not included in this.

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Response to Commentor No. 2019

are Actinium-227, Iodine-131, Iridium-192, Krypton-81m, Rhenium-186, and Thorium-228. Currently, the medical applications for the representative isotopes primarily involve the diagnosis and treatment of three major classes of disease - cancer, vascular disease, and arthritis. Although these isotopes are a representative sample of possible isotopes that could be produced, DOE expects that the actual isotopes that would be produced at FFTF would vary from year to year in response to the focus of clinical research and the specific market needs occurring at that time.

The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. Although other manufacturers produce medical radioisotopes, DOE remains the key provider for a large number of radioisotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially experimental, these isotopes are not generally purchased in large-enough quantities to make their production financially attractive to private industry.

Supplies of many research isotopes are not readily available from existing domestic or foreign sources, causing a number of medical research programs to be terminated, deferred, or seriously delayed. Under the NI PEIS proposed action and consistent with its mandates under the Atomic Energy Act, DOE would enhance its existing nuclear facility infrastructure to, among other things, more effectively support production of radioisotopes for medical applications and research. DOE's intent is to complement commercial sector capabilities to ensure that a reliable supply of isotopes is available in the United States to meet future demand, and to encourage the commercial sector to privatize the production of isotopes that have established applications to a level that would support commercial ventures.

A forecast for future demand for medical isotopes and the expected growth rate of medical isotope use during the next 20 years is provided in Section 1.2 of the NI PEIS. The growth projections were adopted by DOE as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual rate of growth of medical isotope use is consistent with the Expert Panel findings.

Commentor No. 2019: Mary Lou Blazek (Cont'd)
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#	Focus Group	Questions/Comments to be Addressed in EIS	Comments/Notes
23.	C/A	What does it cost to operate FFTF in standby mode?	About 35 to 45 million dollars a year.
24.	OR, C/A	Can we be sure operation of FFTF will not compromise Hanford cleanup funding, schedule or resources?	No.
25.	CCS2	Does EIS address suitability of FFTF for medical isotope production	In a general way. It does not do a detailed analysis of the suitability. In particular, there is no discussion of whether the advantages of fast neutrons are significant enough to warrant using this reactor, there is no discussion of the economics of using a reactor of this size for these missions. This material may be discussed in the economic information due out Sept 5.
26.	CCS1	Will the EIS assume all proposed missions are viable?	Yes. The EIS makes the assumption that these missions will be done and then analyzes their viability at various possible sites.
27.	OR	Does FFTF represent the best choice for any mission from economic, technical, public health & safety, and environmental standpoints.	This question is still under consideration. The Oregon Office of Energy is reviewing each mission to determine what we think is the most suitable facility rather than try to fit all the missions in at one facility. For example, using this criteria, a commercial light water reactor might be the best place for the Pu-238 mission.
28.	OR	Does the EIS include a broad selection of options including other DOE and private sites and modification of existing reactors and accelerators to meet the stated needs?	Yes – the EIS analyzes essentially about 21 different combinations of irradiation and processing facility options.
29.	CCS1, OR, E	Is there a compelling need for these missions?	For the medical isotopes there are conflicting reports, but due to the possibility that these materials could save lives, we will concede this point. For the other missions, there are alternatives such as purchase of materials from Russia. We will study this issue further before we make our recommendation to the Governor.
30.	OR	Has there been a detailed examination of DOE's projections for irradiation needs?	No, the EIS proceeds from the assumption that the needs are real and that these missions will be accomplished.
31.	OR	Has there been a thorough examination of all potential impacts of FFTF operations on all current and projected Hanford cleanup operations?	No. In particular, cost data and financing plans are still unavailable. The Waste Minimization and Management Plan is still in draft form and does not consider processing wastes in any detail.

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- 2019-4:** The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste volumes (both liquid and solids) are provided in Chapter 4 of the NI PEIS for each of the alternatives and alternative options under the Waste Management Sections. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.
- 2019-5:** FFTF can physically perform the missions in its current state without much retrofitting. However, there are plans to upgrade the control and protection systems since they are older technology, and modify the reactor to allow online insertion and retrieval of targets. These modifications are discussed in Section 2.3.1.1.2 of the NI PEIS.
- 2019-6:** The NI PEIS provides a total waste volume (by waste types) generated by the target processing and fabricating activities. However, these numbers are not broken out by these two activities since one would not be done without the other.
- 2019-7:** If a decision is made to restart FFTF, the first six years of operation would use existing onsite mixed oxide fuel. DOE expects that an additional 15-year supply of mixed oxide fuel in Europe, owned by Germany, would be available for FFTF. MOX fuel does not use highly enriched uranium. Further, use of the Hanford MOX fuel would dispose of a significant U.S. stockpile of highly attractive fresh plutonium fuel by conversion to spent fuel through irradiation in FFTF. This represents a safe, low-cost, high benefit opportunity to reduce U.S. civilian plutonium without chemical or bulk processing. Use of the German MOX represents a similar advantage with respect to the German stockpile of separated civilian plutonium. During the period of MOX fuel use, in support of U.S. nonproliferation policy directives, DOE's Office of Nonproliferation and National Security would undertake a study under Reduced Enrichment for Research and Test Reactors (RERTR) to consider the technical feasibility of using low enriched uranium to fuel the FFTF. Under this nonproliferation protocol, if use of low enriched uranium fuel is found infeasible in

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Oregon Office of Energy

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Item	Focus Group	Questions/Comments	Comments/Notes
32.	CCS2	Is the need to have trained people for any given mission at FFTF an argument for the missions?	No. This argument is not used in the EIS.
33.	C/A	How many people are employed by FFTF in standby mode? How many would be employed in operational mode?	Currently estimate about 120 workers at FFTF in standby. Operation would probably increase that number to about 250 to 300.
34.	C/A	Who pays for socio-economic impacts on Oregon local and county governments?	Other than possibly increased payments in lieu of taxes to Washington counties, there is no payment for socio-economic impacts. The EIS states that these impacts would be very small and absorbed within the normal population fluctuations for the area.
35.	C/A	Will FFTF operation mean more radioactive waste shipments on Oregon highways?	Yes. This increased transportation would at least involve shipment of FFTF's products to end-users. Additional transportation of radioactive materials would occur if the targets are fabricated and/or processed at a location other than Hanford itself. Also, much of FFTF's wastes are slated to go to a commercial repository. This could possibly involve transport of this waste to the repository through Oregon.

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2019-26

Response to Commentor No. 2019

FFTF for meeting assigned missions, policy would allow DOE to subsequently procure highly enriched uranium fuel for use in FFTF. Again, this approach is consistent with U.S. nonproliferation policy.

The use of mixed oxide or highly enriched uranium to fuel the FFTF has been rigorously evaluated in the Nuclear Infrastructure Nonproliferation Impact Assessment which was published in September, 2000. This report confirms that the manner in which these fuels would be used, as described in the PEIS, is consistent with nonproliferation policy

2019-8: Other than the missions discussed in the NI PEIS, no alternate uses for FFTF are being considered at this time. None of the alternatives in the NI PEIS include defense missions nor would any contribute to future weapons production. All missions considered in the NI PEIS are for civilian purposes.

2019-9: To address the question of whether it is safe to restart the FFTF, the risks associated with the restart of the FFTF have been analyzed in the NI PEIS. These risks include the impacts from normal operations, accidents, and the transportation of material (new and spent fuel, medical isotopes) to and from the facility. Information on each of these impacts is presented in Chapter 2, Chapter 4, and Appendixes H, I, and J of the PEIS. These risks have been presented in terms of the risk of additional fatalities (in most cases additional cancer fatalities) should the reactor be restarted. In all alternatives that include the restart of the FFTF, the most likely result of implementation of the alternative is that there will be no additional fatalities.

The FFTF can be operated safely to accomplish the mission as described in the NI PEIS. The analyses presented in this NI PEIS reflect the proposed changes to the reactor core (including fuel and irradiation targets) to perform the stated missions. In the event that FFTF restart is selected in the Record of Decision, a new Safety Analysis Report, including a Probabilistic Risk Assessment (PRA), will be prepared and it will address any changes in plant configuration, operating conditions and procedures. The revised safety analyses will be subjected to a thorough independent review process.

2019-10: The costs of FFTF restart presented in the Cost Report include facility and safety modifications as well as revision of the Safety Analysis Report.

Commentor No. 2019: Mary Lou Blazek (Cont'd) Oregon Office of Energy

Appendix E

FOCUS GROUP ROUND TWO ORAL COMMENTS

CITIZEN QUESTIONS AND COMMENTS TO BE ADDRESSED

Questions/comments on EIS purpose, assumptions and structure

- Until I read the EIS, I really did assume this was about the missions. It was only when I read it that I understood: No, it begins with the assumption that the purpose is to "enhance our domestic infrastructure capability." Once I got that in my head, I realized this is just a setup. Once that's established as the goal, it's just a matter of assembling the right information and numbers. Again, I'm reacting pretty strongly to the basic logic of the EIS. I disagree with this fundamental assumption.
- I want to react to a comment that really bothered me about the EIS's examination of validity. Until I read the EIS I was prepared to believe that. But it is, in my estimation, a very bad sales document, larded with all kinds of things about the need to maintain U.S. technology leadership in biomedical research and justification for reinvigorating the nuclear power industry. I found it offensive as a promotional document rather than an EIS. I'm reacting to the comment that it doesn't examine the validity of the proposed mission. In fact, it tries to sell us on those and I think it failed badly.
- I disagree with the assumption that enhancing sole U.S. technical capacity is a correct beginning assumption when so much of where we're going is the opposite direction in terms of both medical needs and something like space exploration with international cooperation, for example. It just seems obvious. The notion that somehow we need to capture the technology for doing medical isotope work in the U.S. and keep it from other people given the health needs of the world is just wrong-headed. Why aren't we exploring how we can do these things internationally in a way for cost reasons, for humanitarian reasons, for international relations reasons, for all kinds of reasons? The notion that we don't want to rely on Canada or we don't want to share this stuff is just flat-out wrong-headed.
- The EIS was not a 'programmatic' EIS. It did not address the overall program. This is just a political document that biased the ability of an EIS to look at the situation. When you get to this issue about reviewing the mission, it seems to me that we have not dealt with the program issues in the EIS the way an EIS ought to deal with them.
- They didn't really broaden the list of options. They just sliced and diced the same proposals more finely. If they really set out to accomplish the expansion of options, you wouldn't end up with this EIS.
- The draft EIS appears to be a justification for the restart of FFTF hidden in an invented need to improve the U.S. nuclear infrastructure. That makes us uncomfortable.
- EIS's are not always objective. You cannot assume that a given EIS is objective.
- Some of the technologies we've discussed are not considered in the EIS – like more, smaller production facilities instead of one or two large scale facilities.

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- 2019-11:** Sites with existing reactor facilities analyzed in this EIS are Hanford, INEEL, and ORR, and a generic CLWR. Processing facilities analyzed are at Hanford INEEL, and ORR. The NI PEIS discusses a generic DOE site for possible construction of a new research reactor or accelerator(s). DOE also analyzed a number of other sites and facilities within the DOE complex; however, these were dismissed for a variety of reasons as stated in Section 2.6.
- 2019-12:** For nearly 50 years, DOE's use of its unique technologies and capabilities to develop isotopes for civilian purposes has enabled the widespread application of medical isotopes seen today. While its market share is a small fraction of total world radioisotope production, DOE remains the key provider for a large number of radioisotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially experimental, these isotopes are not generally purchased in large-enough quantities to make their production financially attractive to private industry.
- The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, supplies of many research isotopes are not readily available from existing domestic or foreign sources, causing a number of medical research programs to be terminated, deferred, or seriously delayed. Under the NI PEIS proposed action and consistent with its mandates under the Atomic Energy Act, DOE would enhance its existing nuclear facility infrastructure to, among other things, more effectively support production of radioisotopes for medical applications and research.
- It appears from the flow of the commentor's comments that the question can be rephrased as "Can the isotopes produced by FFTF be produced elsewhere in the same amounts?" Operational facilities in the United States jointly do not have the available production capacity to match the variety and quantity of isotopes that could be produced at FFTF.
- 2019-13:** DOE notes the commentor's interest in processing nuclear wastes into useful products. In general, issues of waste processing are beyond the scope of this Nuclear Infrastructure PEIS. Normally pure target materials are selected for irradiation for the production of isotopes to assure that relatively pure materials are produced. Transmutation of nuclear wastes research and development experiments could be supported by FFTF.

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Appendix E

- Is there legal ground on which we can call this PEIS inadequate given that the cost study is late and non-proliferation is not available?
- How can DOE do an EIS that only evaluates effects for 35 years?
- Is there anything in the PEIS that allows the missions to be separated?
- Does (the EIS) assess questions like the fact that there is no permanent waste storage for this stuff here or anywhere else that is satisfactory? Do they talk about the impacts of waste that is not properly stored?

Questions/comments on the cost and non-proliferation studies and on general costs

- It is unacceptable for the public to be presented with an EIS lacking the cost and proliferation studies. The public has a right to see the costs involved before DOE makes a decision. The current process or policy of separating these facets out is part of the duping of the American public. Trust in our government is a thing of the past because of the way the DOE does business.
- If cost figures are not available for the DOE public meetings, it's a big waste of time.
- It is a waste of money to just let FFTF sit in standby. We need to spend the money to either run it or permanently shut it down.
- Of what value is the EIS without the cost study?
- There is not enough information to comment on the questionnaire on the economic viability of the alternatives because no economic information is included in the PEIS.
- The cost figures on the internet are shocking.
- Why did DOE fail to give us the cost and non-proliferation documents? How could DOE not provide this key information after the public asked for it as part of scoping?
- We need cost estimates on the use of the canister storage building to accommodate this new waste. It will be huge. It will also be hard to track costs because of the way DOE funding is decentralized.
- Some believe (restarting FFTF) would have a positive socio-economic impact.
- I am appalled at the amount of money this nation is spending (I wish they would put those costs in the EIS) on standby equipment for nuclear facilities, not just at Hanford. It's this great idea that if we keep all this on standby, our industry will eventually be able to make the leap and move forward.
- What is the likelihood that budget projections made today will hold true over a 35-year project?
- Is the agreement to pay for dismantlement of FFTF from the Nuclear Energy, Science and Technology

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2019-14: The NI PEIS projects that approximately 175 kilograms of plutonium-238 would be produced over a 35-year period. At this time, DOE is not aware of any foreign opposition to this mission.

Plutonium-238 can be produced in FFTF, another research reactor, a commercial light water reactor, or in an accelerator. Although research to identify other potential fuel sources to support these space exploration missions has been conducted, no viable alternative to using plutonium-238 has been established. DOE could purchase plutonium-238 from Russia to satisfy its responsibility to supply NASA with the necessary fuel to support future space exploration missions. Under the current contract set to expire in 2002, the United States is authorized to purchase up to 40 kilograms of plutonium-238, with the total available for purchase in any one year limited to 10 kilograms. However, DOE does not stockpile large quantities of Russian plutonium-238 long in advance of needs due to budget constraints and the additional processing required to remove decay products that occur following extended storage of the material. To date, DOE has purchased approximately 9 kilograms of plutonium-238 under this contract. Future purchases under the current contract with Russia are negotiable through calendar year 2003. DOE recognizes that this is a viable option and has analyzed this option under the No Action Alternative.

2019-15: The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such an ancillary document need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed this document to about 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. The cost report contains costs for FFTF standby mode, startup, operation, and deactivation. Since all of the missions are not generate revenue, DOE will not recoup its costs for the project. DOE has provided a summary of the Cost Report in Volume 2, Appendix P.

2019-16: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford

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Appendix E

budget enforceable and permanent?

2019-42
(Cont'd)

Questions/comments on selecting an alternative

- Now that the suboptions for each alternative are identified, has a rational decision making process been used, i.e., the Kepner/Traigo methodology, to make a decision?
- The U.S. Department of Energy needs to adequately address all of the unknowns prior to choosing any option.
- The 'no action' alternative should refer action back to prior decisions. 'No action' should mean that FFTF is shut down now. They must not continue to spend these huge sums of money to keep FFTF on standby.
- I'm concerned that the EIS is written to point to alternative one as the de facto preferred alternative. The EIS is difficult for a lay person to read.
- Do they address the suitability of any sites other than FFTF?
- Why are there so many options under each alternative?

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Questions/comments on medical isotopes

- I'm concerned about the physician experts who don't have breadth of vision. They are very narrowly focused and don't think of the broader societal issues. We are at crisis in medical technology. They need to say there are certain procedures we will not do. It is difficult to see a medical need for this isotope phenomena.
- Adding to the stream of nuclear waste so that older men can have erections doesn't seem right" (in reference to a statement that most isotopes are being used for prostate cancer therapy).
- What we need to do is ask whether there are other means to accomplish the research without the nuclear materials. The damage to the populace in the present may not be worth the potential future benefit from the nuclear materials.
- DOE needs to look into the reliability for predicting isotopic needs for future uses in research and medicine as it appears impossible to project an accurate need out more than three years.
- One consideration might be that medical isotope production is less hazardous to workers and the environment as opposed to plutonium production. Biologic and radiation hazards are greater.
- It doesn't make sense to not have any data on the need for industrial isotopes.
- FFTF could make research isotopes, but it would be overkill. Like digging a post hole with a backhoe.

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Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

2019-17: As discussed in Chapter 2 of the NI PEIS, FFTF has demonstrated its capability to function as a nuclear science and irradiation services user facility. Its large core size, flux spectrum, demonstrated testing capability, and rated power levels provide a multipurpose facility suitable for medical and industrial isotope production, plutonium-238 production, and nuclear research and development related to a broad range of materials, advanced reactors, advanced fuels, and waste transmutation. Although FFTF was used primarily to evaluate reactor fuels and different fuel assembly materials during its 10 years of operation, the reactor facility has also supported large and varied test programs for industry, nuclear energy (domestic and international), medical isotope applications and research, space nuclear power, and fusion research programs. A more detailed description of FFTF and its capabilities is included in Appendix D of the NI PEIS.

2019-18: All the alternatives evaluated for meeting requirements of the missions identified in the PEIS are reasonable.

2019-19: A preferred alternative is the alternative an agency believes best accomplishes the proposed actions, given consideration to environmental, technical, economic, and other information available at

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- You can have both (the isotope and plutonium 238) missions by using two different reactors.
- We should use existing research reactors to make medical and research isotopes.
- Did National Institutes of Health say we need more isotopes? NERAC says we need them, but they are hired by DOE.
- Medical isotopes are 'a chicken and egg' situation. The medical community doesn't know there's a shortage because many of the isotopes are so new doctors are not aware of their existence. A lot of doctors don't realize the isotopes are out there. There is a need for medical isotopes, but it is veiled. It is very hard to quantify the need.
- One of the strongest arguments for restarting FFTF is that the nation will be avoiding many millions of dollars in invasive surgeries through early detection, treatment of disease and lives saved through use of radioactive isotopes. These are 'real medical savings' of health costs and for the national health budget. The few millions that are spent on medical isotopes should be ramped up to get the public behind DOE instead of batting it around so much.
- The focus should be on the making of the isotopes and not the means for processing.
- What is the true need for medical isotope production?
- Are Russia, Canada, Belgium and other foreign countries currently producing medical isotopes, willing to produce medical isotopes to support the demand?
- Are other countries searching for other alternatives to cancer treatment rather than using medical radioisotopes?
- What are the risks associated with transporting medical radioisotopes?
- What percentage of medical radioisotopes is the U.S. is currently importing from foreign countries?
- If the Canadian reactors are shut down, we'd be in a tough situation for acquiring needed isotopes.
- The isotopes used for diagnostic purposes are different from those used for therapeutic purposes. Most nuclear medicine is diagnostic. Only a small fraction of nuclear medicine is therapeutic.
- It is hard to comment on proposals without knowing the economics of isotope supply and demand. Radiopharmacists should be consulted on economics of supply of medical isotopes.
- Currently there is a backlog of requests for some radioactive seeds that causes waits of as long as three months for some procedures such as iodine 125.
- There is a need to consider the human dimension of backlogs. Without the isotopes, the tumors grow.

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the time. In accordance with CEQ implementing regulations (40 CFR 1502.14(e)), DOE has identified its preferred alternative for accomplishing the stated missions in Section 2.8 of Volume 1 of this Final NI PEIS and includes a discussion of DOE's reasons for selecting it.

2019-20: DOE analyzed a range of reasonable alternatives and options. In fact, including the No Action Alternative, 23 different combinations of irradiation and processing facility options were examined. This was done in order to determine the range of environmental impacts that may be encountered. Since combinations of sites and facilities other than those set forth in the PEIS may be selected (see Section 1.3 of Volume 1), the broad range of reasonable alternatives analyzed also bounds these other possible options.

2019-21: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual rate of growth of medical isotope use is consistent with the Expert Panel findings. Section 1.2.1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for

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- Who made the decision that we can't use foreign isotopes, that we need our own domestic supply? **2019-54 (Cont'd)**
- If we want medical isotopes, do we have to accept one or more of these options? If we give up on domestic supply, then we would not need to restart or build anything. Would we need accelerators? If we build these new accelerators (and not restart FFTF) would that cut down net production of nuclear waste? **2019-55**
- How can we know if there really is a shortage of isotopes? **2019-56**
- Tri-Cities wants to be a regional medical hub. They want to move the patient to the isotope. **2019-57**
- Can the spallation neutron source at Oak Ridge be used for isotope production? **2019-58**
- It sounds like it's difficult to project need for isotopes. **2019-58**
- The Oregon Office of Energy said at the last FFTF hearing that DOE had to prove a need for specific isotopes. But the EIS does not do this. **2019-58**
- Can't we make medical isotopes at commercial power reactors? **2019-58**

Questions/comments on environmental impact and Hanford cleanup

- DOE's poor track record in managing Hanford cleanup gives me no confidence in their ability to handle any new mission on site. **2019-59**
- I refuse to consider the FFTF, given as much time as I've spent on cleanup activities. But I've reached the point that I just don't have any faith whatsoever in DOE at this point in time to continue a stabilization and cleanup program on that site. The last thing I want to do is have them start a new production. It seems to me that the only leverage we have is to say: "if you want new production, don't turn it over to DOE at this point in time." I have become a real skeptic. **2019-59**
- It's not a valid argument that adding a small percentage to the existing amount of waste has a minimal impact. The proposed amount to be added from FFTF operation (one percent of Hanford's total waste) is one percent of a huge amount, given the total size of the waste at Hanford. **2019-60**
- Portland is more and more concerned about contamination in the Columbia River because Portland is using more and more of the Blue Lake aquifer for drinking water. There is a lot of concern about contamination in the Columbia River. **2019-60**
- Has anyone tested the soils in the river for radioactive contaminants? You cannot even think about adding more to the waste stream! **2019-61**
- At what point would they shut the river down? **2019-61**
- Why aren't the plumes characterized? Why don't we know what will be entering the river? **2019-61**

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maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Under the No Action Alternative, DOE would continue to purchase plutonium-238 to meet the space mission needs for the 35-year evaluation period considered in the NI PEIS. However, DOE recognizes that any purchase beyond what is currently available to the United States through the existing contract would likely require negotiation of a new contract and may require additional NEPA review.

2019-22: Section 1.2.1 of Volume 1 discusses the need for isotopes based on the Expert Panel and NERAC subcommittee recommendations. As discussed in the previous response and presented in Section 1.5 of Volume 1, the recommendations of these independent review groups were taken into consideration in developing the range of reasonable alternatives evaluated in the NI PEIS. NERAC is an independent Federal advisory committee appointed by the Secretary of Energy to advise DOE on civilian nuclear energy research program as noted in Section 1.2 of Volume 1.

The need for plutonium-238 to support NASA's mission is discussed in the previous response and further in Section 1.2.2 of Volume 1.

2019-23: As discussed throughout Section 4.3 of Volume 1, none of the proposed alternatives would add waste to the high-level waste tanks at Hanford.

Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or

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- DOE works on one issue at a time. They don't want to look at cumulative impacts and don't want to find out that the problems are even bigger than we know now. As long as DOE convinces Congress that the waste is captured, no one in Washington will even say we have a problem at Hanford. The polluter always minimizes the harm and the impacts.
- It's the cleanup issue that makes us anxious. I'm concerned that DOE brings up FFTF to create a thought turmoil. It's a diversion. We don't want them to start up FFTF and take away from cleanup. Let's get to that discussion.
- Three years ago we said no FFTF for tritium and space. Now it's back again. It won't die.
- There is no mention of catastrophic events. What about earthquakes, fires, etc.?
- Under the environmental management of waste stream piece, they cite baseline and mention what waste might be produced in addition. There is a huge data gap for looking at the addition of new waste to existing waste (at Hanford, Oak Ridge, all sites.) The statement that 'we have considered it' isn't adequate reassurance. First of all the baseline data do not exist at any of the sites. It's incomplete. We know that from the Columbia River Comprehensive Impact Assessment.
- Nothing has been studied about the risk of transport of fuels, etc. This is a frightening prospect.
- Stack releases are not in the EIS.
- How many curies of tritium? Reactors put out a lot.
- What are the off gases?
- On-site vs. off-site production of targets. Wouldn't these missions add to already unsolved waste problems? The EIS makes the waste issue sound like no big thing. I disagree. It is not a small issue!
- The DOE assumes that cleanup is not a problem to be solved. Why is that not addressed in this EIS?
- There isn't any mention of how DOE will clean up wastes from operations of FFTF.
- The EIS says mixed low-level waste will be handled on site at a facility that is not yet constructed.
- We need to compare the waste from manufacturing plutonium 238 vs. decay during long-term storage. Will DOE process plutonium 238 on demand to avoid storage?
- Estimating health effects on humans seemed to be based on those people in the 50-mile radius over a 35-year period. A larger effect would be on workers. Literature shows employees in similar facilities have an increased incidence of cancers.
- I'm disappointed in the DOE. We fight to get money and they haven't used it well to clean up. This must be their number one mission, not new efforts. Keep FFTF at the ready for isotopes. I don't care about

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- other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4 3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.
- 2019-24:** The maintenance of certain technical capabilities represented in the employees at FFTF is not part of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development. However, DOE acknowledges that FFTF could provide a platform for training the next generation of nuclear scientists in the United States.
- 2019-25:** 33. Approximately 242 people are employed in maintaining FFTF in the standby mode. If FFTF is restarted, 410 people will be needed to operate it.
34. There is no direct payment for the socioeconomic impacts on local governments. As work expands within a region, the money spent on accomplishing this work flows into the local economy. It is spent on additional jobs, goods, and services within the region. The increased taxes realized by local governments, from income taxes, sales taxes, etc., are expected to cover the cost of any socioeconomic impact.
- 2019-26:** Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

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plutonium or nuclear research and development.

- Is there clear evidence of cleanup money being diverted to FFTF?
- The draft PEIS suggests there is no environmental impact.
- Can DOE clarify how the restart of FFTF would have an impact on Hanford cleanup funds? Whether FFTF is restarted or shutdown, it shouldn't have an impact on Hanford cleanup funding.
- How would restarting FFTF have an impact on the current waste problem at Hanford in terms of amount and handling?
- How does this affect Hanford cleanup? That has to be first! It's too expensive to keep FFTF in standby. That's money we need for cleanup.
- Spent fuel is an environmental impact. The EIS dismisses this! We can argue that proliferation creates an environmental hazard and therefore should be in the EIS.
- Where will the waste go? Yucca Mountain is already overbooked. That's the same lack of vision and blatant disregard that got us into the mess we're in now.
- The nuclear industry in this country has drained our pockets dry and left us with a legacy of waste that we have no way to deal with.
- Does this EIS address new earthquake standards?
- Could the sodium reactor blow up and damage the whole facility? Is this type of reactor more dangerous to operate than other types?
- Does the draft EIS actually talk about the environmental impacts? Does it include an analysis of impacts from waste that is not properly stored?
- If they restart FFTF, will they continue to do cleanup at Hanford?
- Would FFTF generate significant amounts of waste?
- Does DOE think the additional waste won't be significant?
- (The EIS) basically says, "Yes, there will be waste produced. But, just as (the government) claimed when we built these and produced waste during the war, we promise we'll find a place to put it. So don't worry about that." It's basically 50 years later, making the same claim: "don't worry."
- Is Hanford cleanup on schedule? How far behind are they? Is it all because of budget? How much does politics play in it? What are some examples of where the politics come in?

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If an exemption is approved to use commercial facilities, these facilities have not been identified at this time, therefore, it is premature at this time to determine whether or not wastes resulting from the operation of FFTF would be shipped across Oregon highways.

The NI PEIS addressed the environmental impacts due to the treatment storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

2019-27: DOE notes the commentor's concerns. The purpose of the NI PEIS is not to "enhance our domestic infrastructure capability." Rather, the purpose of the NI PEIS is to evaluate the potential environmental impacts associated with the proposed expansion of DOE's nuclear infrastructure which would enable DOE to fulfill three missions: ensuring the availability of isotopes for medical, industrial, and research applications; meeting the nuclear material needs of other Federal agencies (i.e., NASA); and undertaking research and development activities related to development of nuclear power for civilian use.

DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual rate of growth of medical isotope use is consistent with the Expert Panel findings. Section 1.2.1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

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- Isn't a large part of the cleanup problem DOE's failure to oversee its contractors?
- How does DOE prioritize FFTF restart in relation to cleanup?
- Won't income flow to the Tri-Cities be just as big for cleanup as it would be if they restarted FFTF?
- Have they begun moving any of FFTF's fuel into dry cask storage yet? Who is doing this? What success have they had?
- There needs to be an endowment to ensure cleanup and make sure that Hanford cleanup is not affected.

2019-78

Questions/comments on FFTF's effect on agricultural communities

- There are no added negative impacts to the agricultural community with the restart of FFTF. We are confident with the existing emergency planning efforts.
- I came to these focus groups with a bias of supporting the shut down of FFTF. Nothing from the focus groups or the EIS has persuaded me that there is a viable mission for FFTF. It appears that DOE is still looking for a way or a credible case to restart FFTF. I am hesitant to support restart of FFTF when Morrow and Umatilla counties won't benefit financially from it but will likely experience some of the negative impacts.
- What is the potential drain of restarting FFTF to an already limited pool of skilled labor in the surrounding area?

2019-79

2019-80

Questions/comments on groundwater issues

- Groundwater issues are complex, and the EIS needs to give more information about them.
- "When you get into the cones of depression and the tugging and pulling that occurs with groundwater, that should have been analyzed in the EIS. I don't know where the wells are and the depths in relations to the carbon tetrachloride plume and some of the other plumes. Any water that perks back into the ground will also affect the vadose zone before it affects groundwater."

2019-81

Questions/comments on public/state influence on DOE decision

- It doesn't matter whether DOE listens (to public input). You need to comment to preserve your dignity.
- I don't trust that the public process makes any difference. But we have to make our position known. It's a political decision. But I can only hope this is the last stop before the law suit and the withdrawal of funding from DOE.

2019-82

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Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Under the No Action Alternative, DOE would continue to purchase plutonium-238 to meet the space mission needs for the 35-year evaluation period considered in the NI PEIS. However, DOE recognizes that any purchase beyond what is currently available to the United States through the existing contract would likely require negotiation of a new contract and may require additional NEPA review.

The United States is and will continue to cooperate with foreign countries in medical research, space exploration, and nuclear energy research. For example, researchers from many foreign countries use DOE's high-flux research reactors for materials testing and experimentation. These facilities have the capability to maintain a high density of neutrons in a given test volume for materials testing; shorten the time needed for such testing; tailor the neutron flux to simulate the different reactor types and conditions; and instrument the core for close monitoring of the test conditions. Although the NI PEIS analyzes the expansion of U.S. civilian nuclear research and development, it is anticipated that DOE facilities would play a role in the continuing international research conducted in the United States.

2019-28: This NI PEIS presents a range of reasonable alternatives for consideration with respect to the decisions to be made for expansion of civilian nuclear energy research and development and isotope production missions in the United States. These actions are appropriately considered within the context of a programmatic EIS. While neither NEPA nor the CEQ implementing regulations provides a specific definition for what constitutes a "programmatic" EIS, CEQ's definition of a Major Federal Action (see 40 CFR 1508.18(b)(3))

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- Has Secretary Richardson taken a position? Is this whole thing a pointless exercise?
- How will these focus group comments influence the final decision on whether to restart FFTF?
- When this relationship started with us and the Oregon Office of Energy, the office wanted our values, not our scientific input. This (level of scientific detail) has no redeeming value.

2019-82
(Cont'd)

Questions/comments on the plutonium 238 mission

- Do we want to depend on Russia as a source of supply?
- It's stupid to not buy it from Russia when they've got the supply.
- There's also the importance of skill and expertise in making plutonium. We will lose that intellectual capital if we stop making it. It's another factor.
- In absence of a compelling defense necessity, it's stupid for us to make it at a risk to our people when someone else will sell it to us.
- We need to weigh one against the other because the reactors don't have the capacity to produce all needed of both" (regarding weighing the production of plutonium 238 vs. medical isotopes).
- It makes sense for the U.S. Department of Energy to continue to purchase plutonium from Russia. This way DOE can focus on the production of isotopes for medical and industrial uses domestically.
- Assuming we can continue to purchase plutonium from Russia or elsewhere without problems, the U.S. Department of Energy should shut down FFTF. The \$40 million a year used to keep the facility in standby should be put into an account, and the money should be offered to private industry to subsidize medical isotope production.
- NASA says they don't need plutonium 238.
- I'm intrigued about purchasing plutonium from Russia. Can we be sure they know what they are doing in terms of safe processing, safe operation, etc.? It may not be as simple as just making the purchase. How do we know they aren't using children and putting workers in unsafe situations to make our plutonium?
- There are other sources of plutonium if we choose to use them. Materials are there for purchase. NASA may not even need them. So we're back to the cognitive dissonance DOE creates to keep us off base. They just want to keep a mission at Hanford. As far as I'm concerned, they must shut down FFTF. It's simple.
- Currently 50 percent of isotope production is being used. This statement assumes a resurgence of need for nuclear power. I don't believe it. We must scrap the Atomic Energy Act of 1954.

2019-83

2019-84

2019-85

2019-86

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indicates, in part, that a group of actions undertaken to "implement a specific policy or plan" constitutes a program. Also, CEQ's guidelines for tiering EISs clearly state that broader EIS analyses are appropriate for "national program or policy statements" from which subsequent, more site-specific analyses may have to be prepared (40 CFR 1502.20 and 40 CFR 1508.28(a)). This NI PEIS has a broad, national-level scope associated with the selection of facilities and site locations for accomplishing multiple missions. However, the selection of facilities and site locations for accomplishing expanded civilian nuclear energy research and development and isotope production missions is not a political decision and is not biased. DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow for a fair comparison among the various alternatives.

2019-29: DOE notes the commentor's concerns regarding what is evaluated in the NI PEIS. Consistent with its mandates under the Atomic Energy Act, DOE is proposing the nuclear infrastructure expansion for the purposes of addressing three primary needs:

- 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;
- 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and for which the United States has no long-term, assured supply; and
- 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. The NI PEIS evaluates the environmental impacts of a range of reasonable alternatives for accomplishing this mission. In addition to restarting the FFTF, the NI PEIS also evaluates alternatives that would either employ the use of existing facilities or rely on the construction of new facilities.

2019-30: DOE has made every effort to make this NI PEIS objective. This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021),

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(To use FFTF) we must import mixed oxide fuel from Germany. That statement doesn't make sense given DOE's expressed concern about domestic supply.	2019-87
Is the only place we're currently purchasing plutonium 238 from Russia?	2019-88
Has the import of plutonium 238 from Russia been dismissed because of the transportation risk?	2019-89
Could a commercial reactor produce plutonium 238?	
Can plutonium 238 be used for anything else, like weapons?	
Was the validity of plutonium 238 for space missions discussed in the EIS or is it just a given that plutonium 238 supply will be needed for a 35-year period?	2019-90
The space mission need for plutonium 238 is not subject to the same kind of public scrutiny and public comment as this EIS. This is the same as our discussion of the tritium mission for FFTF. We couldn't question the need, only the impact. This is the same situation.	
Will NASA have the budget to do the missions for which they say they need plutonium 238?	2019-91
Does the no-action alternative address isotopes?	2019-92
Was there discussion about splitting the missions – plutonium 238 in one place and isotopes in another?	2019-93
Does the EIS say commercial light water reactors can't do the plutonium 238?	2019-94
I don't like the statement that solar panels are too inefficient. Germans are using them. They've been tested. There is pressure on NASA to go with plutonium 238 instead of photovoltaics. It's just too dangerous to have radioactive power sources in space. I'm concerned about accidental or purposeful distribution of plutonium in atmosphere upon reentry. That would result in total atmospheric dispersion of plutonium.	2019-95
How does the price compare between purchasing plutonium 238 as opposed to producing it?	2019-96
What is the current U.S. plutonium 238 stockpile and where is it located?	
It seems like an agreement to get hamburger from Jack-in-the-Box (in reference to buying plutonium 238 from Russia).	2019-97
We've heard about a letter saying NASA doesn't need the plutonium 238. Is that true?	
Is DOE saying there is enough plutonium from Russia if we carry through on the existing agreement?	
The way to go (on plutonium 238) is to buy the stuff from Russia.	
This idea of domestic supply is DOE's own fabrication and is not valid. DOE should adopt alternative five	2019-98

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respectively. DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives. This was accomplished through review and evaluation of site-specific information on the environmental conditions prevailing at ORR, INEEL, and Hanford to include a comprehensive analysis of the associated environmental and health risks of each alternative.

2019-31: A number of facilities, including smaller facilities, other than those selected for detailed analysis in the NI PEIS, were considered, but were dismissed from further consideration (see Section 2.6 of Volume 1). Among the reasons that some were dismissed was the fact that they lacked sufficient neutron production capacity, were fully dedicated to existing missions, were not capable of steady-state neutron production, had insufficient power to sustain adequate steady-state neutron production, were unable to produce a constant, reliable source of neutrons due to dependency on operating schedules of their primary missions, are under construction with capacity fully dedicated to other planned mission, or have been permanently shut down.

2019-32: The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS. DOE made every effort to obtain, analyze, and disclose all required information to make a decision on expanding nuclear infrastructure. The costs and nuclear nonproliferation impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such ancillary documents need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed these documents to more than 730 interested parties on August 24 and September 8, 2000, respectively. Both reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided summaries of the Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment in Appendixes P and Q, respectively, in the Final NI PEIS.

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and proceed immediately with cleanup.

- If we buy from Russia, that stops the proliferation of the stuff.
- It's deceptive to not let us know the material is available from Russia.
- Did the NERAC study look only at U.S. needs, or did they also look at possibly getting isotopes from Canada?
- Does DOE sell plutonium 238 to NASA? Are there other opportunities to sell it for a profit and help pay for cleanup?
- Do we know anything about the plutonium 238 we're buying from Russia? Is it already produced, or would they have to make it?
- What does it cost to purchase the plutonium from Russia?
- Is it cheaper to have commercial power reactors produce plutonium 238, as opposed to building a new reactor or re-starting FFTF?

Questions/comments on FFTF effect on Oregon State University

- Is there any way to quantify the effect of FFTF on OSU's program in terms of graduates employed and funding for research?
- The fate of FFTF has a pretty large impact on OSU. If it is restarted, there will be a demand for graduates of OSU's nuclear engineering and health physics programs as well as for the programs for training. OSU is the only educational research program in the West capable of supporting FFTF. Prior to shutdown, two-to-three graduates per year from OSU's program went to work at Hanford. About one quarter of the approximately 600 graduates of OSU's program work at Hanford. There is also funding for research that ended when FFTF was placed on standby. In this regard, FFTF restart has a very positive effect on OSU and the State of Oregon.

Miscellaneous questions/comments

- FFTF is fatally flawed and totally foolish.
- I have not seen, heard, nor read anything to this point that shows me there is a viable mission or credible case for restarting FFTF.
- Alternative 5 is pretty interesting. Can FFTF burn plutonium?
- Is there a hidden agenda for weapons research and use of FFTF for classified future missions?

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2019-33: For analysis purposes, the NI PEIS evaluates impacts from facility construction, modification, startup, and 35 years of operation, followed by decommissioning when applicable. The 35-year operating period is based upon the estimated length of time existing DOE irradiation facilities would continue operating if used for accomplishing the missions described in the NI PEIS. This timeframe also accommodates current projections that indicate the demand for radioisotopes and nuclear research and development requiring these expansion will extend for at least the next 20 years.

2019-34: The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste treatment, storage, and disposal facilities for the wastes expected to be generated are identified in Chapter 4 under the Waste Management sections of the NI PEIS. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. Mismanagement of wastes and its associated impacts are not discussed in the NI PEIS.

The NI PEIS assumes, for the purposes of analysis, that Yucca Mountain, Nevada, would be the final disposal site for DOE's high level radioactive waste and spent nuclear fuel. As directed by the U.S. Congress through the Nuclear Waste Policy Act, as amended, Yucca Mountain is the only candidate site currently being characterized as a potential geologic repository for high-level radioactive waste and spent nuclear fuel. DOE has prepared a separate EIS, "Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada" (DOE/EIS-0250D, July 1999), which analyzes the environmental impacts from construction, operation and monitoring related transportation, and eventual closure of a potential geological repository.

2019-35: The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS. DOE made every effort to obtain, analyze, and disclose all

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- FFTF would be available for any number of secret missions once it's restarted.
- The tourism slogan "Things look different here" shouldn't mean we glow! An accident or the fear of an accident can hurt tourism.
- When will FFTF be considered to be too old to operate?
- Was Argonne West at INEEL evaluated for the research missions?
- Has ATR been in cold standby?
- INEEL is also looking for a mission for its facilities.
- The conflict of interest/PNNL issue is not unclear. It's quite clear.
- Is NERAC appointed by DOE? Who are they? I'm immediately skeptical of a DOE-endorsed group.
- I read the National Research Council report on long-term management capabilities. It's chilling to read the degree to which they identify the institutional incapacity to deal with some of these issues. And then you read this (NERAC) which says: "Well, let's just keep kind of creating them." And meanwhile there is no mention at all of the institutional issues identified by NRC, which is at least independent, for dealing with this massive waste stream and the fruits of the technology. I find it very hard to put them in the same scale.
- "The only way, in my view, that this industry will make any leap to move forward is to start over again and build some credibility and build smaller. I see the stresses we have with nuclear power generation. I'm not in a good mood to be positive for this focus group and I apologize."
- "Is there any civilian nuclear energy research underway? There's been a 24-35 percent increase in the price of natural gas."
- "Is it technically feasible to build a 50 megawatt Triga type reactor?"
- "What is driving the numbers on the Latent Cancer Fatalities Table at S-46? Does one mission in particular drive the numbers? If not, why not? If the information that went into the table is available separately, why isn't it also presented separately in the Draft PEIS? The table should break out radiological impact by mission so that a cost-benefit analysis can be done. The table indicates that a new research reactor would not contribute any radiological risk."
- "Is there any analysis of cancer risk for deactivation?"
- "The Draft PEIS has a lot of analysis on non-traditional environmental (non-environmental) impacts."
- "Cost escalation in natural gas and other energy sources is making nuclear energy more cost-competitive. Is the underlying catalyst of the nuclear research the many relicensings of nuclear plants that are soon going to occur? 80-90 percent of current operating reactors will need relicensing. There's a big consolidation in the

2019-109
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2019-122

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- required information to make a decision on expanding nuclear infrastructure. The costs and nuclear nonproliferation impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such ancillary documents need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed these documents to more than 730 interested parties on August 24 and September 8, 2000, respectively. Both reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided summaries of the Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment in Appendixes P and Q, respectively, in the Final NI PEIS.
- 2019-36:** DOE notes the commentor's opinion. As stated in the Notice of Intent (64 FR 50064), one of the purposes of the proposed action is to determine the future role of FFTF.
- 2019-37:** The costs and nuclear nonproliferation impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such ancillary documents need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed these documents to more than 730 interested parties on August 24 and September 8, 2000, respectively. Both reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided summaries of the Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment in Appendixes P and Q, respectively, in the Final NI PEIS.
- 2019-38:** It is assumed that the commentor is referencing the use of the proposed Canister Storage Building that would be used for the interim storage of immobilized high-level waste canisters produced by the River Protection Project-Waste Treatment Plant. This facility would not be

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commercial nuclear energy industry occurring. In a deregulated energy market, nuclear operators are doing quite well because their costs per watt are so low.”

- “The fact that the plant has remained operationally ready over 25 years says a lot about the operational capabilities of management.”
- “If a 50 megawatt TRIGA is not feasible, can they use multiple, smaller reactors?”
- “Where does DOE want to locate the new reactors?”
- “In the combinations of options being considered, it looks like Hanford can’t have a new accelerator unless FFTF is restarted.”
- “Restarting FFTF is completely antithetical to our values.”
- “Who is the expert panel? The NERAC committee should have been named in the EIS.”
- “What about the bills, the MOU, the Oregon Legislature position to not make more waste, the City of Portland opposition. What else must we do to say we are unalterably and adamantly opposed to restart of FFTF?”
- “Hanford and Tri-Cities see financial gain in restarting FFTF.”
- “We want the Oregon Office of Energy to pass this message on to DOE: ‘We are unanimously opposed to the restart of FFTF.’”
- “What is this need for research and development? Is it being driven by the nuclear industry? This is the wrong direction to go. This is a violation of our values.”
- “Are there defense research missions that can lead to new bomb production? If there are defense projects that can be pursued with FFTF, how could they not do an EIS?”
- “Could they sneak in a tritium mission and keep it classified?”
- “I’ve heard concerns that some of the FFTF waste would go into Hanford’s underground tanks.”
- “I think some of the missions should not be done anywhere.”
- “Not in my backyard. Over my dead body!”
- “We’ve shown up in huge numbers and told them what we want, and it hasn’t made any difference.”
- “This is a snow job!”
- “I’m concerned about operation safety. If FFTF goes another 35 years it will be 55+ years old. No

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used as part of the proposed action and alternatives considered including activities under Alternative 1, Restart FFTF. Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13).

- 2019-39:** Restarting FFTF could have a positive socioeconomic impact on the Hanford area. Socioeconomic impacts associated with Alternative 1, Restarting FFTF, are discussed in Section 4.3 of the NI PEIS.
- 2019-40:** DOE notes the commentor’s concern over the costs of maintaining DOE facilities in standby. Cost concerns related to this, as well as to all the alternatives in the PEIS will be considered in reaching a decision on managing the DOE nuclear infrastructure. DOE prepared a separate Cost Report and Nuclear Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such ancillary documents need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed these documents to more than 730 interested parties on August 24 and September 8, 2000, respectively. Both reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided summaries of the Cost Report and Nuclear Nonproliferation Impact Assessment in Appendixes P and Q, respectively, in the Final NI PEIS.
- Reaching a decision will help DOE make best use of its nuclear facilities, and minimize the time any must remain in a standby condition. Even after a decision is made, however, DOE’s budget requests to use its facilities must be approved by the Congress.
- 2019-41:** The uncertainty of cost projections is well understood and is included in a separate Cost Report analyzing each of the PEIS alternatives. Future adjustments in project scope or schedule, or future policy changes, may change such projections beyond any uncertainties. Even so, the analyses in the Cost Report allow a comparative evaluation by the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS.

Even after a decision is made, however, DOE’s budget requests must be approved each year by the Congress, which

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reactor in history has operated safely for that length of time.”

- “I don’t trust that FFTF can operate another 35 years. Do previous safety analyses support another 35 years?”
- “What do the people in the Tri-Cities feel about this?”
- “Why are these missions being proposed? Is this a mandate from Congress?”
- “Are other linear accelerators in the United States being shut down?”
- “Would you outline the decision process which DOE will be following?”
- “Wasn’t NERAC’s final report very negative on the use of FFTF?”
- “I don’t understand what you’re talking about. It’s way too technical. I want to get to my concerns. What about the cleanup agreement? What about the Columbia? What about the groundwater?”

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(Cont’d)

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2019-141

Questions/comments about Oregon Office of Energy input on FFTF issues

- “Is it possible for the Oregon Office of Energy to take a position on whether to restart the Fast Flux Test Facility at this time without a cost analysis document and incomplete information on many of the proposed alternatives?”
- “There is a perception that the Oregon Office of Energy is anti-nuclear, even though it may not actually be so predisposed... There is a perception that staff are told what to think about the issues.”

Questions/comments on the Oregon Office of Energy/DOE public input process

- “Focus groups would be a lot more informative if the summary had been available for the first meeting and everyone had read it.”
- “I want to compliment the Oregon Office of Energy on its written and mailed info. It was very well put together.”
- “The Oregon Office of Energy did a great job on the last EIS. I expect this will be a great job as well.”
- “I would like a description of how this information will be used. I’m concerned about the format of any report of the process. Process is good for developing policy positions for the agency and governor. I don’t like it when DOE uses head counts and votes: They tend to pick and choose the parts they want.”
- “This is a good public process. I commend (the Oregon Office of Energy) for going through this exercise.”

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determines how funds are allocated. DOE spends monies consistent with Congressional direction.

- 2019-42: The Final PEIS does not address the dismantlement of the FFTF. If the Secretary of Energy decides in the Record of Decision to deactivate FFTF, DOE would request funding to implement this decision. In this budget request, DOE would indicate under which office FFTF deactivation would be funded and managed. Congress would determine where the funding would be appropriated and managed, either approving, denying or modifying DOE’s request. The budget decisions are thereby made binding.
- 2019-43: DOE notes the commentor’s view.
- 2019-44: The No Action Alternative, which is required by Council on Environmental Quality regulations (40 CFR 1502.14 (d)), requires DOE to consider the continuation of its present course of action, which includes maintaining FFTF in standby. The No Action Alternative provides an alternative to which the action alternatives may be compared. It should be noted that permanent deactivation of FFTF is a part of all other alternatives analyzed in the NI PEIS, except Alternative 1, Restart FFTF.
- 2019-45: This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives. No final decisions have been made with regard to the facilities and locations evaluated to fulfill the requirements of the stated missions, which include the production of medical and industrial isotopes, the production of plutonium-238 for NASA space missions, and nuclear research and development. However, in accordance with Council on Environmental Quality regulations (40 CFR 1502.14(e)), DOE has identified its preferred alternative in Volume 1, Section 2.8 of the Final NI PEIS and includes a discussion of DOE’s reasons for selecting it. DOE’s Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

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Appendix F

FOCUS GROUP WRITTEN COMMENTS

Focus Group Written Comments From Opinion Forms

- "No opinion on the issue." 2019-142
- "I lean toward the last alternative." 2019-143
- "PEIS needs to deal with issues at already contaminated groundwater under Hanford and how that might limit uses for FFTF operation or be affected by FFTF operation." 2019-144
- "There was an assumption that the missions were valid. Those assumptions were not justified, and seem to not be solid. Costs are important, but were not provided. Other seeming important issues were not well covered or not covered at all such as: processing waste disposal, groundwater impact, transportation safety accommodation, etc." 2019-145
- "I believe the other two facilities, at least together, can accomplish what can be accomplished at Hanford. The above questions do not provide an opportunity to do this." 2019-146
- "Assuming the needs are valid, and the need to do it in the USA is correct, then restarting FFTF is the best alternative. It is important to keep FFTF separate from cleanup or military activities." 2019-147
- "I have no faith in DOE's capability in stabilizing and clean up of legacy wastes. Until better progress is made for these wastes I cannot support any further production at Hanford." 2019-148
- "More info should be provided in the EIS to answer many questions we/I have. The FFTF could be shut down if other facilities can produce the Pu-238 and isotopes. Need costs if DOE can't get what is needed FFTF could restarted, but processes to develop fuel, extract Pu-238, etc need to be described accurately and adequately." 2019-149
- "The Department of Defense and other Federal Agencies have used Hanford facilities without paying for waste management and cleanup. Until Congress guarantees a budget that includes decommissioning and cleanup costs, I cannot support a restart option of FFTF." 2019-150
- "Shutdown now – costs will only continue to rise. I believe that other facilities can meet the proposed mission. Put the operating costs and/or maintenance costs into a fund to underwrite the production or purchase of product as needed." 2019-151
- "I suggest you provide a summary table of the costs, risks, options, and "others" factors for each mission. The state position should be tied to your original position or what the PEIS and the decision should cover. Most notably, diversion costs from clean up and production of new waste." 2019-152
- "Purchase Pu-238 from Russia. Restart FFTF for medical isotopes/industrial. Otherwise, decommission" 2019-152

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CEQ regulations for implementing NEPA require that EISs be written in plain language so that they can be more easily understood and that the EIS be accompanied by a summary of the EIS's content (40 CFR 1502.8 and 1502.12, respectively). DOE strives to produce NEPA documentation and related materials that are easily understood by the public by avoiding the use of jargon, defining technical terms and concepts through the use of common comparisons, avoiding the use of acronyms to the extent possible, and provision of a summary that is clear and concise, among other means. In order to improve the public's comprehension and understanding of the PEIS, this Final NI PEIS reflects revisions that have been made to eliminate some redundant and extraneous information while some sections have been reorganized to improve readability. For example, the summary of environmental impacts (Volume 1, Section 2.7) has been reorganized by environmental resource area so that impacts in each area (e.g., waste management) can be quickly gauged across all alternatives.

2019-46: See response to comments 2019-11 and 2019-20.

2019-47: DOE notes the commentor's concerns about the need for radioactive isotopes in medical procedures and the wastes produced in their production. Radioisotopes are used for both therapy and diagnosis. In ongoing clinical testing, therapeutic isotopes have proven effective in treating cancer and other illnesses by cell-directed localized radiation therapy (i.e., deploying antibodies or carriers of radioisotopes to seek and destroy invasive cancer cells). This directed therapy can minimize adverse side effects (e.g., healthy tissue damage, nausea, hair loss), making it an effective, attractive alternative to traditional chemotherapy or radiation treatments. In addition to therapy for cancer and other illnesses, radioisotopes are also used for diagnostic purposes, such as imaging internal organs. Unlike conventional radiology, imaging with radioisotopes reveals organ function and structure, which provides additional data for a more accurate diagnosis, and assists in the early detection of abnormalities. The generation of wastes from the production of medical isotopes, which are small in comparison to the candidate sites' current generation rates, are discussed for each alternative in Chapter 4 of the NI PEIS. The additional waste generated would only have a small impact on the management of wastes at the candidate sites.

DOE notes the difficulty in reliably predicting isotopic needs for future uses in research and medicine. DOE has sought independent analysis of

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FFTF.”

- “Comment on Question 5 – But what’s the cost of not having the medical isotopes available or not enough or too expensive due to lack of availability?”
- “Shutdown FFTF and put the \$40 million/yr savings from holding it in standby into a fund that incent [sic] the development of needed medical/industrial isotopes. NIH could do regular projections of need, RFPs could be issued and whoever can produce what’s needed would get up to \$40 million/yr. The Pu-238 can come from Russian (our space partner) and help their economy while meeting all our needs.”
- “This process does not seem effective. This is complex stuff which requires a greater level of knowledge to contribute effectively. We should read the summary (75 pages) prior to the first meeting. I’m not sure what you were trying to accomplish.”
- “EIS needs to address disposition of transuranic waste from target processing. This could have a significant environmental impact. Need cost study to determine if FFTF is the best alternative.”
- “EIS should demonstrate need for the proposed mission. DOE should either restart or permanently shutdown, but should not continue spending 35 –45 million indefinitely for hot standby. DOE should clearly state the decision criteria uses to make a final decision. FFTF was originally designed as a research reactor – the EIS should include detail on what kind a [sic] research would be done. A good summary should be widely distributed well in advance of the comment period. Two days with a 4-page summary is not enough.”
- “I am confident that an environmental and economic comparison of using as exiting facility (which otherwise requires \$35M/yr to maintain with no output) with building new facilities will definitely prove highly more favorable and wise for restarting FFTF.”
- “I feel other alternatives need to be considered i.e. can and should availability of material from outside the U.S. be used? What is the downside to doing this? I am still concerned about clean up at Hanford and the impact of restarting FFTF in practical and political terms.”
- “I ultimately believe that the good outweighs the bad.”
- “I would not be opposed to restarting the FFTF provided cleanup (current and future) is not endangered. The need for medical isotopes appears clear to me. I believe the U.S. should not be dependent on foreign countries for deep space missions. I very much appreciate this opportunity for input and information.”
- “The idea of using existing nuclear facilities for an expanded mission is a very good idea. Analysis of the PEIS is needed to establish if FFTF is the best place to do this. Some issues are problematic, such as generating nuclear waste at FFTF v. buying the materials elsewhere with no U.S. waste.”
- “I believe we need assurances to the public that there will be a strong and well funded Columbia River water monitoring program for the 35 year period. We need assurances that management turnovers at FFTF are in the best interests of the public and the environment. A well thought out cost-benefit analysis is needed

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trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual rate of growth of medical isotope use is consistent with the Expert Panel findings. Section 1.2.1 was revised to incorporate this information and to clarify DOE’s role in fulfilling the U.S. research and commercial isotope production needs.

2019-48: DOE radiological control requirements (for both workers and the public) are designed with the intent to meet the legal requirements for the safe operation of DOE facilities contained within 10 CFR 835. In order to meet these requirements, DOE has established the DOE Radiological Health and Safety Policy (DOE P 441.1, April 26 1996) and developed a DOE Standard: Radiological Control (DOE-STD-1098-99, July 1999). Worker safety (radiological protection) is a key element of the both the Policy and the Standard. The policy states in part that Department of Energy facilities must “conduct radiological operations in a manner that controls the spread of radioactive materials and reduces exposure to the workforce and the general public and that utilizes a process that seeks exposure levels as low as reasonably achievable.” Each DOE site, including Hanford, is required to implement a radiological control program with the intent to meet this policy goal, using as guidance the radiological control standard. The health and safety impacts on workers associated with both medical isotope production and plutonium production are presented in Appendix H of the NI PEIS. The worker dose associated with the irradiation of target materials is independent of the type of target material being irradiated. The worker dose is a function of the type of reactor, operating procedures and radiological control measures in use at the facility. The average worker dose associated with processing of the irradiated targets

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in terms which could be easily understood by typical people on the street. The medical needs present a unique human benefit perspective which bears enhancement and support in the political and academic communities."

- "I think the main use should be production of medical and research isotopes rather the "space battery" production. I feel there is strong need at present for these items."
- "I didn't get the summary of the PEIS prior to this meeting to review. I think the missions (especially medical isotope production) should be evaluated as separate entities. I don't want the facility kept on line, supposedly to produce medical isotopes, then have it used primarily as a research facility by a foreign country."
- "Without having seen the cost analysis, it appears that the cost of using FFTF for Pu-238 and medical missions will be significantly more expensive. However, it comes down to being prepared for future difficulties with supply and being able to respond."
- "(Comments) Will be submitted directly to USDOE."
- "I feel that the first two questions on this questionnaire are significantly biased toward the negative [disagree, strongly disagree]."
- "#3 Don't know what exploring they've already done. These questions obviously try to slant my response (#1-5)"
- "These questions are severely biased and lead to inconsequential results and answers."
- "Buying Pu-238 would not prevent any negative environmental impacts from occurring in the world."
- "Since we need it, it would be better for us to have the control of the process."
- "I have a serious concern that the numbers will be tallied and USDOE will not understand the overwhelming opposition to the restart of FFTF. There also needs to be mentioned the prior commitment made to shutting down FFTF by Admiral Watkins and Sec. O'Leary and that it was USDOE who placed FFTF in the TPA for the final termination!"
- "The emphasis at Hanford should focus on clean-up and not future production. Without the cost studies to demonstrate cost effectiveness the PEIS is ludicrous."
- "1) Any fuels purchased from foreign countries should be dependent on their adequate systems of disposal in accordance with U.S. standards. 2) NASA's needs should be reviewed on the basis of the percentage of missions funded by the Congress in the past. 3) Risk of transportation of radioactive materials should be ascertained using mathematical models and worse case scenarios. 4) DOE should research alternative forms of energy with the same vigor as they have pursued nuclear fuel research and development."
- "It's obvious the USDOE doesn't want public input on this scheduling the public comments the last week of

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are very similar for both medical isotopes and the irradiated neptunium targets. Based on the assessment of worker health impacts for the range of reasonable alternatives and options that make use of Hanford facilities, the most likely impact of the use of these facilities is no increase in cancer fatalities among the facility workers. For example in Alternative 1 option 3, all of the activities (target irradiation and processing) occur at Hanford facilities. As shown in Section 4.3.3.1.9, the expected consequences are less than one additional fatal cancer among the workforce; that is, no additional fatal cancers are expected.

The estimates of the potential human health impacts associated with the range of reasonable alternatives proposed for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems also shows that the impacts from the production of medical isotopes and from the production of radionuclide heat sources are very similar. Sections 4.3 through 4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from implementation of each of the alternatives including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with each alternative would be small.

2019-49: DOE has sought independent analysis of trends in the use of medical radioisotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert committees. In 1998, an Expert Panel convened to forecast future demand for medical isotopes estimated that the expected growth rate of medical isotope use during the next 20 years will range between 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by DOE's Nuclear Energy Research Advisory Committee (NERAC), established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. The growth projections were also adopted by DOE as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings.

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summer vacation and by not providing the public with necessary information in advance, i.e. cost study, nonproliferation study, and preferred alternative when it is obvious they have one already.”

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(Cont'd)

• “I would like to thank the Oregon Office of Energy for their effort to conduct these focus group meetings. They have help to further educate me as well as comment on the FFTF issue.”

• “I believe that main focus of DOE at Hanford should be CLEAN UP to original state before nuclear missions were started at Hanford Site. I also would highly recommend that no further production missions are pursued and rather than production a new push toward radiation neutralization research should be pursued and funding through Congress be found. This way the biggest reason - self-perpetuation of DOE and saving jobs will be funded and secured.”

2019-179

• “The missions stated do not support restarting the FFTF. What other missions are being considered? What proposals have DOD made in relation to the FFTF restart?”

2019-180

• “This is the latest smoke and mirror show from the DOE. The FFTF should be shut down ASAP - you told us you would shut it down - there is overwhelming public support of shutting it down and should live up to your word - shut it down.”

2019-181

• “Shut down the FFTF. Concentrate solely on clean up. Do not import any more radioactive materials to this site.”

2019-182

• “There doesn't seem to be any question that the condition of Hanford Facility will not improve (environmentally) by re-starting the FFTF. Knowing that, and speaking simply as a concerned Oregonian, I believe that the only right thing to do is to shut down FFTF and continue clean up.”

2019-183

• “You have not addressed the effect that non-cleanup would have to the environment. You must consider the river and do long term effects of this nuclear waste. Hardly any emphasis has been given to this topic. Other facilities with the U.S. can be adjusted to “cover” any needs of the FFTF. You can buy plutonium from Canada/Russia, etc.”

2019-184

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• “It appears that the PEIS report has ignorantly and disapprovingly ignored options such as purchasing [Pu]238 from Russian and using commercial reactors to make the plutonium and/or isotopes. Also, by dismissing the nuclear waste's threat as minimal they are ignoring a huge known fact and insulting many people's intelligence. This is disappointing considering that a several hundred page scientific report could ignore such blaring facts.”

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• “PEIS[sic] cannot be credible unless it deals straight up with permanent waste disposal. Likewise unless it is willing to look at option involving international sources. More comments to follow.”

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• “The over 25 individuals that I have daily contact with from varying social-economic backgrounds have basically voiced the same opinion about this site. Why would you even have to ask if there is a choice, clean it up, close it down.”

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DOE notes the commentor's concern that producing research isotopes at FFTF would be “overkill.” It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: “In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production.” In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without disturbing the existing missions of these facilities.

The Final Report issued in April 2000 by the NERAC Subcommittee for Isotope Research and Production Planning identifies the need for expanded production of both medical and industrial isotopes. The proposed action similarly includes expanded production of industrial isotopes, as discussed in Section 1.2 of the NI PEIS. Industrial isotopes are needed to support both academic research, and industrial research and development applications. These applications fall into the three broad categories of nucleonic instrumentation, irradiation and radiation processing, and technologies that use radioactive tracers.

The Expert Panel and NERAC reports were each used in developing the NI PEIS, and made available to the public at the NI PEIS public information centers and on the Internet at www.nuclear.gov.

2019-50: As presently structured, the alternatives do not provide for the production of medical/industrial isotopes and plutonium-238 in two different reactors; however, as stated in Section 1.3 of Volume 1, DOE could choose to combine components of several alternatives in selecting the most appropriate strategy. Thus, it is possible that such an alternative could be developed. It should be noted that at the present time existing research reactors do make medical/research isotopes;

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- “In the overall scheme of things I don’t think running it would make a difference, i.e. it’s going to take “billions of years” however a little helps I guess – so let someone else do it!! How does the cost i.e. buy from Russia, buy from Canada affect our balance of payments?”
- “The information available generally tends to support the interests of those providing it. Seems the biggest concern should be cleanup. I can’t understand this from only one perspective. Couldn’t they build some sort of retaining wall between and under the 177 tanks at Hanford and the Columbia River? (very costly – sure).”
- “Interesting that plutonium 238 is so lucrative – just happens to be the fuel for so many technologically unobtainable (at least to the comprehension of many) “implements.”
- “It’ll be interesting to see how the public opinion “falls out” – considering how one sided and uneducated (to the issues) we as a whole are.”
- “Actually I do need more data on this and study this subject on my own.”
- “Discussion of Hanford tank pool cleanup – irrelevant; disposal of reopened FFTF waste is crucial. Is dry cask storage possible? Successful? – e.g., Trojan.”
- “PEIS is inadequate because 1) it doesn’t include cost issues, which are integral to the analysis 2) it doesn’t include the NN issues - undermining the nonproliferation regime poses and environmental hazard 3) it doesn’t include environmental impact of potential defense-related missions that could be done on FFTF once it’s restarted 4) doesn’t look at all possible catastrophic failures over 35 years of operation (these are also dependent on operational funding levels, staffing, training, and safety budgets over the 35 years period).”
- “Not in my backyard. Over my dead body.”
- “I object to the rip-off of American taxpayers to subsidize the nuclear industry - an effort to create missions to keep this toxic program going. DOE so readily spends millions that create toxic wastes and accepts little responsibility for spending the millions needed to clean up the mess that has been made. We demand the right to speak out - direct the use of our money as we see fit.”
- “(You have them in your computer.) To the US DOE: The whole process for considering the restart of the FFTF over the past several years has been duplicitous to say the least. Budgets have been shuffled to deceive us; the PEIS is full of vague and misleading statements, a skirting around the real issues and deep concerns of the larger public. The explanation of environmental impacts and risks is a sham: you will move ahead without looking far out into the future, merely to create your own empires and pad your pockets. You do not have the best interest of the real public in mind. It is obvious.”
- “We do not wish to repeat the lack of vision, mismanagement, the production of waste, the disregard for the earth and future generations. No more waste production at Hanford that is not directly involved in effective cleanup.”
- “Hanford cleanup should carry primary priority. Many of the missions (question 4) I see no reason for.”

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however, these facilities would be fully used within a 5- to 10-year period if no enhancements to the existing nuclear facility infrastructure are implemented.

- 2019-51:** DOE notes the difficulty in reliably predicting isotopic needs for future uses in research and medicine. Section 1.2.1 of Volume 1 discusses the need for isotopes based on the Expert Panel and NERAC subcommittee recommendations. As further discussed in Section 1.5 of Volume 1, the recommendations of these independent review groups were taken into consideration in developing the range of reasonable alternatives evaluated in the NI PEIS. NERAC is an independent Federal advisory committee appointed by the Secretary of Energy to advise DOE on civilian nuclear energy research program.

DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual rate of growth of medical isotope use is consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE’s role in fulfilling the U.S. research and commercial isotope production needs.

For nearly 50 years, DOE’s use of its unique technologies and capabilities to develop isotopes for civilian purposes has enabled the widespread application of medical isotopes seen today. While its market share is a small fraction of total world radioisotope production, DOE remains the key provider for a large number of radioisotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially experimental, these isotopes are not generally purchased in large-enough quantities to make their production financially attractive to private industry.

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- "The lack of a cost analysis and limiting the scope of the alternative hinders the ability to make a conclusive decision. The social-economic impacts to communities outside the immediate Tri-Cities, WA area are very real but not addressed. Lack of management by the DOE in past issues increases the skepticism as to their ability to follow through. By not addressing fabrication and processing scenarios it can't be determined as to the level of exposure to the general public."
- "Future alternatives should be made for such needs. Alternatives that will not produce future long term hazardous cleanups. A hazardous material should not be produce if clean-up, or proper storage cannot be addressed. The negative impacts of the current hazardous wastes are undetermined and will impact all of us/or my lifetime and others."

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The United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. However, supplies of many research isotopes are not readily available from existing domestic or foreign sources, causing a number of medical research programs to be terminated, deferred, or seriously delayed. Under the NI PEIS proposed action and consistent with its mandates under the Atomic Energy Act, DOE would enhance its existing nuclear facility infrastructure to, among other things, more effectively support production of radioisotopes for medical applications and research.

Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions (basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short term (less than 5 years). DOE has not received any comments or input from the National Institutes of Health on the NI PEIS.

2019-52: The commentor's interests in foreign medical research and alternative cancer treatments are noted, although these topics are outside of the scope of the NI PEIS. As discussed in Section 1.2.1 of Volume 1, one of the DOE's missions is to insure a reliable supply of medical isotopes for clinical applications and medical research.

2019-53: Risks associated with transporting medical radioisotopes are included in the analysis described in Chapter 4 of Volume 1 and Section J.5.3 of Appendix J. The analysis conservatively assumes that all medical, industrial and research and development isotopes are shipped via air to an east coast distribution facility. The maximum transportation impacts for these isotopes are given in Table J-7. The incident-free risk to the public is 0.0037 latent cancer fatalities and the accident risk is 0.53 latent cancer fatalities. Transportation risks are summarized in Section 2.7.1.6 of Volume 1.

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Other written comments

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2019-54: Diagnostic radioisotopes are used for imaging internal organs. Unlike conventional radiology, imaging with radioisotopes reveals organ function and structure, which provides additional data for a more accurate diagnosis, and assists in the early detection of abnormalities. In ongoing clinical testing, therapeutic isotopes have proven effective in treating cancer and other illnesses by cell-directed localized radiation therapy (i.e., deploying antibodies or carriers of radioisotopes to see and destroy invasive cancer cells). This directed therapy can minimize adverse side effects (e.g., healthy tissue damage, nausea, hair loss), making it an effective, attractive alternative to traditional chemotherapy or radiation treatments.

The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, supplies of many research isotopes are not readily available from existing domestic or foreign sources, causing a number of medical research programs to be terminated, deferred, or seriously delayed. Under the NI PEIS proposed action and consistent with its mandates under the Atomic Energy Act, DOE would enhance its existing nuclear facility infrastructure to, among other things, more effectively support production of radioisotopes for medical applications and research.

For nearly 50 years, DOE's use of its unique technologies and capabilities to develop isotopes for civilian purposes has enabled the widespread application of medical isotopes seen today. While its market share is a small fraction of total world radioisotope production, DOE remains the key provider for a large number of radioisotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially experimental, these isotopes are not generally purchased in large-enough quantities to make their production financially attractive to private industry.

DOE has sought independent analysis of trends in the use of medical radioisotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it has established two expert committees. The first, a thirteen-member Expert Panel convened in 1998 to forecast future demand for medical isotopes, included academicians from leading medical universities and schools of public health, and professional affiliations ranging from the National Cancer Institute to manufacturers of radiopharmaceuticals. The second

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Office of Planning & Development Review • Transportation

Charlie Hales
Commissioner, City of Portland

Phone: 503/823-4688;
FAX: 503/823-4044;
e-mail: chales@ci.portland.or.us
Web site: <http://www.ci.portland.or.us/node>

August 24, 1999

For More Information Contact:
Marc Zolton - 823-4682

Commissioner Charlie Hales' statement on Hanford Cleanup

It is time for Portland citizens to recognize the serious threat to their health and welfare posed by the Hanford nuclear reservation. As the largest city on the Columbia River, we can no longer ignore this significant issue of local concern.

I call upon the federal government to meet its obligation to clean up the highly radioactive soup that now pollutes the Hanford site and threatens groundwater and the Columbia River. A serious commitment on the part of the U.S. Department of Energy to fully characterize and clean up the site to the highest regulatory standards is long overdue.

In addition, any serious consideration of a restart of any of Hanford's reactors should be seen for what it truly is - pure and dangerous folly. There is absolutely no justification for a restart for any purpose without a fully funded and verifiably safe cleanup regime. The DOE's current position on FFTF represents a dangerous abandonment of common sense as well as their obligation to protect the health and safety of citizens of the Pacific Northwest.

1221 S.W. Fourth Ave., Room 210 • Portland, OR 97204-1997

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consists of a subcommittee of DOE's Nuclear Energy Research Advisory Committee (NERAC), established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. The members of this Subcommittee were selected based upon their expertise and experience in the production, processing, distribution, and application of stable and radioactive isotopes in the biological and physical sciences, and in medicine. The members included basic and clinical scientists, administrators, the radiopharmaceutical industry, and users of isotopes from academia and the federal government. The studies that were conducted by these expert committees looked at the economics of medical isotope production. The Expert Panel and NERAC reports were each used in developing the NI PEIS, and made available to the public at the NI PEIS public information centers and on the Internet at www.nuclear.gov

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2019-55: Medical isotopes are currently being produced in the United States; however, the United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs. Supplies of many research isotopes are not readily available from existing domestic or foreign sources, causing a number of medical research programs to be terminated, deferred, or seriously delayed. Under the NI PEIS proposed action and consistent with its mandates under the Atomic Energy Act, DOE would enhance its existing nuclear facility infrastructure to, among other things, more effectively support production of radioisotopes for medical applications.

As noted in Table 2-7 of the PEIS, the total volume of radioactive waste produced by use of either the FFTF or a new accelerator would be close to the same, with the accelerator alternative actually producing

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Memorandum

To: Oregon Office of Energy
 From: David V. Yaden
 Date: 8/14/00
 Subj: Comments on DEIS for restart of FFTF

The following comments are based on reading of the summary, not the full document. The cost study was not available for review. In addition, the National Research Council report *Long-Term Institutional Management of U.S. Department of Energy Legacy Waste Sites* was reviewed.

- The DEIS is disingenuous in presenting the alternatives as a response to critical DOE "programmatic needs." The document reads more as a justification than an evaluation.
- The missions proposed for FFTF are not compelling. The "needs" it presents are promotional (nuclear energy), problematic (medical isotopes), or not pressing (space exploration).
- The DEIS rests heavily on an underlying ethos of wanting to maintain US technological leadership when the needs themselves suggest at least a much more aggressive look at international solutions. E.g., medical isotopes.
- The use of the DEIS to promote nuclear energy is inappropriate.
- The DEIS presents technology as both the problem and the solution for reinvigorating nuclear energy while ignoring the main obstacle: institutional capacity to deal with the waste stream.
- Even though DOE asserts that there will be a firewall between funding of NE programs and Hanford cleanup, this is not true for Congress and administrations who set overall funding levels for DOE.
- Unfortunately, due to its abysmal record on cleanup, DOE has lost credibility I used to grant it. I now believe DOE should not be allowed any further mission that will promote and prolong its nuclear activities until it demonstrates even a modicum of competence and commitment to cleanup.

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slightly more waste. However, it should be noted that a reactor produces spent nuclear fuel, while an accelerator does not.

- 2019-56:** DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual rate of growth of medical isotope use is consistent with the Expert Panel findings. Section 1.2.1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.
- 2019-57:** The Spallation Neutron Source at ORR was considered, but was dismissed since once completed it will be fully dedicated to other planned missions (see Section 2.6.1 of Volume 1).
- 2019-58:** See response to 2019-56.
- 2019-59:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

DOE's also notes the commentor's lack of confidence in DOE.

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- 2019-60:** The waste generated by each alternative and alternative option were compared to the site's current waste generation. Section 4.8.3 was revised to include waste treatment, storage and disposal facility capacities so that the total maximum waste volume that would be generated for each site in addition to current site activities and reasonably foreseeable activities can be compared to the site's storage, treatment and disposal capacities.
- 2019-61:** All environmental parameters (e.g. air, soil, surface water, groundwater, vegetation, animals, fish, etc.) in and around the Hanford Site are monitored on a set frequency. The information is available to the public in annual environmental monitoring reports. Cumulative impacts as a result of the proposed action are included in Section 4.8 of the PEIS.

DOE notes the commentor's concerns regarding the risk of contamination to the Columbia River. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted

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funds designated for Hanford cleanup, regardless of the alternative(s) selected.

- 2019-62:** FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The accident analysis included a review of internal events (e.g., equipment failures, human errors), external events (e.g., airplane crashes, nearby explosions, fires), natural phenomena (e.g., floods, tornadoes, earthquakes), common-cause events, and sabotage and terrorist activities. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.
- 2019-63:** The individual site baselines for the 35-year nuclear infrastructure operation were obtained from the best available site information. The sources for this information are cited in the Section 4.8 of the NI PEIS. The cumulative impact tables for waste management have been revised to include the individual site's storage, treatment and disposal capacities for comparison.
- 2019-64:** Alternative 1 does postulate that DOE might decide at some point to import mixed oxide fuel from Europe to fuel FFTF. At this time, however, DOE has not proposed to import this fuel through any specific port. If DOE ultimately decides to import fuel from Europe, it would perform a separate NEPA analysis to select a port. This review would address all relevant potential impacts of overseas and inland water transportation, shipboard fires, package handling, land transportation, as well as safeguards and security associated with the import of SNR-300 mixed oxide fuel through a variety of specific candidate ports on the east and west coasts. It would consider all public comments, including local resolutions, concerning the desirability of bringing mixed oxide fuel into the proposed alternative ports.

In the event that DOE decides to enhance its nuclear infrastructure, it would not expose any population to high, unacceptable risks under any alternative. Any transportation activities that would be conducted by DOE would comply with U.S. Nuclear Regulatory Commission and U.S. Department of Transportation regulations. Associated

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transatlantic shipment would comply with International Atomic Energy Agency requirements. In Section J.6.2, DOE reviewed the potential maximum impacts from the marine transportation of mixed oxide fuel from Europe to a representative military port, Charleston, South Carolina, and overland transportation to Hanford. Also in that section, a bounding analysis demonstrates that the maximum potential radiological risks to the surrounding public from mixed oxide fuel shipments would be extremely small (e.g., less than 1 chance in a trillion for a latent cancer fatality per shipment from severe accidents at docks and in channels and less than 1 chance in 50 billion for a latent cancer fatality per shipment from overland highway accidents).

- 2019-65:** The off gases released from FFTF, including those released from the facility stack, during normal operation are provided in Appendix H Table H-7 and consist of tritium, argon, and cesium. As discussed in Section 2.3.1.1.3 of Volume 1, if Alternative 1, Restart FFTF, is selected for implementation, then the reactor would operate at a nominal 100 megawatts with periodic excursions to no more than 400 megawatts. Based on operational data from FFTF, the amount of tritium released during normal operations at 400 MW would be expected to be no more than 4 curies per year (See Table H-7, Appendix H). The release of tritium, and other radionuclides, was used to determine the public health impacts from normal operation of the FFTF. The analysis showed that the most likely health impact from these releases was no additional health impact among the population surrounding the Hanford.
- 2019-66:** The NI PEIS addresses the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste treatment, storage, and disposal facilities for the wastes expected to be generated are identified in Chapter 4 under the Waste Management sections of the NI PEIS. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

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Hanford, INEEL, and ORR environmental restoration activities are conducted in accordance with the individual DOE site's agreements with their appropriate regulatory agency. These agreements specify milestones and schedules for restoration of the individual DOE sites. These cleanup agreements are discussed in Chapter 3 of the NI PEIS under the waste management sections for each of the DOE sites under consideration.

DOE does not stockpile large quantities of Russian plutonium-238 long in advance of needs due to budget constraints and the additional processing required to remove decay products that occur following extended storage of the material.

- 2019-67:** Worker safety (radiological protection) is a key element of DOE's Radiological Health and Safety Policy (DOE P 441.1, April 26 1996) This policy states in part that Department of Energy facilities must "conduct radiological operations in a manner that controls the spread of radioactive materials and reduces exposure to the workforce and the general public and that utilizes a process that seeks exposure levels as low as reasonably achievable." Each Department of Energy site, including Hanford, is required to implement a radiological control program with the intent to meet this policy goal. The health and safety impacts on workers associated with both medical isotope production and plutonium production are presented in Appendix H of the NI PEIS, see Table H-13. Based on the assessment of worker health impacts for the range of reasonable alternatives and options that make use of Hanford facilities, the most likely impact of the use of these facilities is no increase in cancer fatalities among the facility workers. For example in Alternative 1 option 3, all of the activities target irradiation and processing) occur at Hanford facilities. As shown in Section 4.3.3.1.9, the expected consequences are less than one additional fatal cancer among the workforce; that is, no additional fatal cancers are expected.
- 2019-68:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and

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schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

- 2019-69:** The environmental impacts associated with all nuclear infrastructure activities are addressed in Chapter 4 of the NI PEIS. The results of the detailed assessments are included for each of the alternative options evaluated. It is not suggested that there are no associated environmental impacts; these are presented in detail in Chapter 4. However, for options that do not require new construction, e.g., all options under the Restart FFTF Alternative, there would be no impacts on certain disciplines such as land use, visual resources, and cultural and paleontological resources; these specific situations are also addressed in the pertinent sections of Chapter 4.
- 2019-70:** See response to 2019-61.
- 2019-71:** The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. The cumulative impact tables for waste management in Section 4.8.3 of the NI PEIS have been revised to include the individual site's storage, treatment and disposal capacities for comparison. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.
- 2019-72:** See response 2019-61.
- 2019-73:** The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for

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all alternatives and alternative options. Waste treatment, storage, and disposal facilities for the wastes expected to be generated are identified in Chapter 4 under the Waste Management sections of the NI PEIS. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. Spent nuclear fuel disposition is detailed in Chapter 4 of the NI PEIS for each of the alternatives that would involve spent nuclear fuel generation.

The NI PEIS assumes, for the purposes of analysis, that Yucca Mountain, Nevada, would be the final disposal site for DOE's high level radioactive waste and spent nuclear fuel. As directed by the U.S. Congress through the Nuclear Waste Policy Act, as amended, Yucca Mountain is the only candidate site currently being characterized as a potential geologic repository for high-level radioactive waste and spent nuclear fuel. DOE has prepared a separate EIS, "Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada" (DOE/EIS-0250D, July 1999), which analyzes the environmental impacts from construction, operation and monitoring related transportation, and eventual closure of a potential geological repository.

- 2019-74:** FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The accident analysis included a review of internal events (e.g., sodium spills, equipment failures, human errors), external events (e.g., airplane crashes, nearby explosions, fires), natural phenomena (e.g., floods, tornadoes, earthquakes), common-cause events, and sabotage and terrorist activities. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small. Prior to an FFTF restart, a revised safety analysis report and a probabilistic risk assessment would be prepared which would address any changes in plant configuration,

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operating conditions and procedures. The revised safety analyses would be based on all applicable orders and standards, including current seismic requirements, and then subjected to a thorough independent review process.

2019-75: The environmental impacts associated with all nuclear infrastructure activities are addressed in Chapter 4 of the NI PEIS. Specific to waste management, the NI PEIS addresses the environmental impacts due to the treatment, storage, and disposal of all wastes generated by the stated missions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable federal and state laws and regulations and appropriate DOE Orders.

The accidents considered in the NI PEIS are based on a complete spectrum of postulated accidents, ranging from high-probability low consequence events to extremely unlikely and incredible events. The consequences and risks associated with waste storage would be bounded by these accidents. Appendix I of the NI PEIS addresses all accidents in detail.

2019-76: See response 2019-61.

2019-77: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposal) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions

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for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed.

2019-78: Although beyond the scope of this NIPeIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Spent FFTF fuel is currently stored onsite in 50-year storage containers.

2019-79: DOE notes the commentor's hesitance to support restarting FFTF for expanding its existing nuclear facility infrastructure. Consistent with its mandates under the Atomic Energy Act, DOE is proposing this enhancement for the purposes of addressing three primary needs:

1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;

2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and

3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio.

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- 2019-80:** The FFTF is currently being maintained in a standby condition by approximately 242 personnel. These make up the a large portion of personnel needed to restart FFTF. The Hanford site estimates only 168 additional workers would be required. It is possible that some of these positions could be filled from other projects at Hanford.
- 2019-81:** DOE notes the commentor's concerns for additional detail on groundwater conditions at Hanford, including effects of withdrawals on contaminant plumes and effects on groundwater quality from percolation sources.

CEQ regulations for implementing NEPA specify that affected environment descriptions and environmental impact analyses in an EIS are to be discussed at a level of detail proportionate to expected level of impact (40 CFR 1502.2 and 40 CFR 1502.15). This NI PEIS meets or exceeds the CEQ requirements. Section 3.4.4.2.1 provides a general description of the Hanford groundwater environment. Discussions of groundwater resources and quality in the Hanford 400 Area are provided in Section 3.4.4.2.2. These sections describe the general extent of groundwater contamination across the Hanford Site. Generalized groundwater contamination maps have been added under Section 3.4.4.2 in the Final NI PEIS as a visual aid to understanding discussions of groundwater contamination at the Hanford Site.

Analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4) indicate that there would be no measurable impact on regional groundwater levels from increased groundwater withdrawals that would result from restarting FFTF. While restart of FFTF could potentially affect groundwater flow direction on a localized basis (i.e., around the well field), it would not be sufficient to measurably affect regional groundwater levels or contaminant plumes within the unconfined aquifer system. Little or no effect would be expected on the 400 Area nitrate plume that originates just to the north of the FFTF complex or on the site-wide tritium and nitrate plumes which originate outside of the 400 Area. There is no indication that the 197 million liters (52 million gallons) of groundwater withdrawn annually in the 400 Area has had any effect on area or regional groundwater flow or on plume configurations. Water-level elevation maps published in annual site groundwater monitoring reports indicate that there was no discernible effect attributable to FFTF on water-table elevation and groundwater

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flow during the period when FFTF was last fully operational. Therefore, additional discussion of groundwater flow parameters, modeling results, or well completion data is not warranted.

No impacts on groundwater quality would be expected as a result of FFTF restart. As described in Volume 1, Section 3.4.4.1.2 of the NI PEIS, the only liquid effluent discharged from FFTF during current standby operations consists of process wastewater from the facility's cooling towers. This wastewater is discharged to the 400 Area Pond that allows the effluent to percolate to the subsurface. These discharges are regulated under State Waste Discharge Permit No. 4501. The effluent is continuously monitored before discharge with periodic sampling and analysis to determine compliance with effluent limitations. Aside from cooling water treatment chemicals added to control corrosion and algae growth, the only chemical and radiological constituents in the discharge are those that occur in the groundwater used for cooling tower makeup. As discussed in Section 4.3.1.1.4, restart of FFTF would increase the volume of process wastewater discharged to the pond system but would not measurably affect the quality of the effluent. There are no radiological liquid effluent pathways from FFTF.

- 2019-82:** DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and to providing ample opportunity for public comment on those actions. Selection of facilities and site locations for accomplishing expanded civilian nuclear energy research and development and isotope production missions is not a political decision. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.
- 2019-83:** DOE could purchase plutonium-238 from Russia to satisfy its responsibility to supply NASA with the necessary fuel to support future space exploration missions. Under the current contract set to expire in 2002, the United States is authorized to purchase up to 40 kilograms of plutonium-238, with the total available for purchase in any one year limited to 10 kilograms. To date, DOE has purchased approximately 9 kilograms of plutonium-238 under this contract. Under the No Action Alternative, DOE would continue to purchase plutonium-238 to meet the space mission needs for the 35-year evaluation period considered in the NI PEIS. However, any purchase of plutonium-238 from Russia beyond what is currently available to the

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United States through the existing contract would likely require negotiation of a new contract and may require additional NEPA review.

DOE also notes the commentor's concern that intellectual capital will be lost if the United States stops producing plutonium-238. DOE currently has the technical capability and human resources to carry out the plutonium-238 mission.

The May 22, 2000, correspondence from NASA to DOE identifies that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, SRTG development efforts were stopped in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires one-third less plutonium-238 as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000, letter to DOE that large RTGs be maintained as backup. Section 1.2.2 of Volume 1 was revised to clarify plutonium-238 mission needs.

2019-84: DOE notes the commentor's interest in the safety of the Russian nuclear program. As discussed in Volume 1, section 1.2.2, information is limited concerning nuclear safety and domestic safeguards of foreign plutonium-238 production facilities.

2019-85: As explained in Section 1.2.2 of the final NI PEIS, the current inventory of plutonium-238 will be exhausted by 2005. DOE could purchase more plutonium-238 from Russia, but its preference is to reestablish a domestic production capability, because of the Russian supply uncertainty and nonproliferation concerns. See also response to 2019-83.

DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2019-86: Chapter 1 of Volume 1 of the NI PEIS makes the statement that "currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions..."

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This statement does not assume a resurgence of need for nuclear power. As stated in the EIS, these primary missions include basic energy sciences, as well as national defense.

- 2019-87:** The use of mixed oxide fuel that was originally fabricated for a German nuclear reactor constitutes use of nuclear fuel which has been fabricated, but no longer required by the Germans. This unused nuclear fuel is a resource which has been in storage and available since the 1980s. The Nuclear Infrastructure Nonproliferation Impacts Assessment report for the NI PEIS alternatives indicated that using the two different sources of existing mixed oxide fuel for FFTF (existing FFTF fuel and German MOX fuel) would result in significant mitigating factors, indicating that substantial nonproliferation benefits could be gained by disposing of this inventory as spent fuel.
- 2019-88:** Currently, DOE only purchases plutonium-238 from Russia. Under the current contract with Russia set to expire in 2002, the United States is authorized to purchase up to 40 kilograms of plutonium-238, with the total available for purchase in any one year limited to 10 kilograms. To date, DOE has purchased approximately 9 kilograms of plutonium-238 under this contract. Future purchases from Russia would require the negotiation of a new contract with Russia. DOE recognizes that this is a viable option and has analyzed this option under the No Action Alternative.
- 2019-89:** The import of plutonium-238 from Russia is part of the No Action Alternative. Transportation risks for importing plutonium-238 from Russia would be 0.0099 latent cancer fatalities to the public from incident free transportation and 4.4×10^{-4} latent cancer fatalities to the public from radiological accidents (See Section 4.2.1.1 of Volume 1). While there are differences in the total shipping distances and risks among the alternatives, the risks from transportation are small for all of the alternatives. Figures and tables in Section 2.7.1.6 summarize transportation risks and provide comparisons of transportation risks among the alternatives. Transportation risk is only one factor in DOE's decision.
- 2019-90:** The NI PEIS states that commercial light water reactors (CLWRs) can produce the necessary plutonium-238 to meet NASA space mission needs. Alternative 2, Options 4, 5, and 6 include CLWRs for the production of plutonium-238.

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Plutonium-238 should not be confused with weapons-grade plutonium (plutonium-239) used for defense purposes. The plutonium-238 that would be produced as a result of this proposed action would only be used for NASA space missions. The need for NASA space missions, however, is outside the scope of this NI PEIS. NASA must also comply with the National Environmental Policy Act when considering major Federal actions such as space missions. NASA has its own public participation processes to involve interested parties in its decision making processes. The need for DOE production of plutonium-238 to support NASA space missions, is however, discussed in Section 1.2.2 of Volume 1 of the NI PEIS.

- 2019-91:** DOE notes the commentor's interest in NASA's funding, although this issue is beyond the scope of this Nuclear Infrastructure EIS.
- 2019-92:** The No Action Alternative, which is required by Council on Environmental Quality regulations (40 CFE 1502.14 (d)), requires DOE to consider the continuation of its present course of action, which includes production of currently produced isotopes. Thus, the current production of medical isotopes in existing operating reactors and accelerators would continue under No Action (and all other alternative as well). The No Action Alternative provides an alternative to which the action alternatives may be compared.
- 2019-93:** The potential to split missions and consider new combinations of alternatives was considered. As addressed in Section 1.3 of Volume 1, in addition to the range of reasonable alternatives evaluated in the PEIS, DOE could choose to combine components of several alternatives in selecting the most appropriate strategy. For example DOE could select a low-energy accelerator to produce certain medical, research, and industrial isotopes, and an existing operating reactor to produce plutonium-238 and conduct nuclear research and development.
- 2019-94:** The NI PEIS states that commercial light water reactors (CLWRs) can produce the necessary plutonium-238 to meet NASA space mission needs. Alternative 2, Options 4, 5, and 6 include CLWRs for the production of plutonium-238.
- 2019-95:** DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternative energy sources for space missions, although issues such as NASA research priorities are beyond the scope of this PEIS. Through

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a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch.

2019-96: As presented in the Cost Report, the annual total cost for the purchase of Russian plutonium-238 is \$8.84 million (excluding the \$40 million annual cost for maintaining FFTF in standby mode). Conversely, the annual operating costs for producing plutonium-238 range from \$14.8 million (using FDPF in combination with existing irradiation facilities) to \$77.2 million (using FFTF with FMEF). These estimated production costs exclude the costs for facility modification and startup and target development, testing, and evaluation.

2019-97: There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory (stored at the Los Alamos National Laboratory) available to support future NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

The May 22, 2000, correspondence from NASA to DOE identifies that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, SRTG development efforts were stopped in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power

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system, referred to in the subject correspondence, requires one-third less plutonium-238 as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000, letter to DOE that large RTGs be maintained as backup. Section 1.2.2 of Volume 1 was revised to clarify plutonium-238 mission needs.

- 2019-98:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2019-99:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is committed to honoring this agreement.
- 2019-100:** As stated in PEIS Section 1.2.2 Volume 1, DOE has had a contract with Russia to purchase plutonium-238 since 1992 and is aware of the existence and production capability of plutonium-238 in Russia. However, according to the Nonproliferation Impact Assessment, "the status of Russian domestic safeguards of ANM (alternate nuclear material, neptunium and americium) is largely unknown. Moreover, since there is currently no Russian moratorium on spent fuel reprocessing, and neptunium recovery is part of the Russian reprocessing flowsheet, the Russian inventory of separated weapons usable neptunium could continue to increase, even if smaller quantities of neptunium were destroyed in the production of plutonium-238." The potential nonproliferation impacts of continued purchases from Russia are discussed in Section 8.2 of the Nuclear Infrastructure Nonproliferation Impact Assessment which was published in September, 2000.
- 2019-101:** DOE notes the commentor's view. However, as stated in the NI PEIS, DOE signed a 5-year contract in 1992 to purchase plutonium-238 from Russia. Under the current contract set to expire in 2002, the United States is authorized to purchase up to 40 kilograms of plutonium-238, with the total available for purchase in any one year limited to 10 kilograms. However, DOE does not stockpile large quantities of

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Russian plutonium-238 long in advance of needs due to budget constraints and the additional processing required to remove decay products that occur following extended storage of the material. To date, DOE has purchased approximately 9 kilograms of plutonium-238 under this contract. DOE recognizes that this is a viable option and has analyzed this option under the No Action Alternative.

- 2019-102:** The NERAC study looked at U.S. isotope research and production planning. It evaluated domestic capabilities to support domestic isotope needs. It should be noted, however, that the United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada.
- 2019-103:** NASA would be the only end user of any plutonium-238 produced as a result of the NI PEIS Record of Decision. While NASA does not provide funds to DOE on an annual basis for the production of plutonium-238, payments to offset expenses are made by NASA to DOE upon delivery of radioisotope power systems.

The supply of plutonium-238 in the Russian inventory is limited. The inventory on hand is not adequate to meet the long-term needs of NASA. Russia would have to fabricate targets, irradiate targets, and startup their reprocessing plants to produce the plutonium-238. The public health and safety and the environmental impacts associated with the plutonium-238 production would be under Russian control.

- 2019-104:** A separate Cost Report was prepared to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. The Cost Report presents the costs associated with purchasing plutonium-238 from Russia under the No Action Alternative as well as the use of Commercial Light Water Reactors to produce plutonium-238 under Alternative 2 (Options 4, 5, and 6). Cost associated with the construction of new accelerator(s) and a new research reactor to meet production requirements under Alternatives 3 and 4, respectively, are also presented. Specifically, the annual total cost for purchasing Russian plutonium-238 is \$8.84 million (excluding the \$40 million annual cost for maintaining FFTF in standby). The annual operating costs for producing plutonium-238 in a CLWR range from \$14.8 million (using FDPF) to \$23.4 million (using FMEF). These estimated production costs exclude the costs for facility modification and startup and target development, testing, and evaluation which range

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from in total cost from \$342.4 million to \$374 million in combination with the same two processing facilities. Construction of a new research reactor is estimated to cost \$312 million. DOE has provided a summary of the Cost Report in this Final NI PEIS.

2019-105: This is not an area that is evaluated in the NI PEIS. DOE of Energy estimates that restarting FFTF will only require 168 additional personnel, in addition to the staff of approximately 242 which currently maintain FFTF in standby mode. As for funding for research, there are too many uncertainties to quantify any impact on OSU.

2019-106: The commentor's opposition to the use of FFTF, alternative 1 of this EIS, is noted.

2019-107: Consistent with its mandates under the Atomic Energy Act, DOE is proposing this expansion for the purposes of addressing three primary needs:

- 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;
- 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and for which the United States has no long-term, assured supply; and
- 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio.

2019-108: The commentor's interest in Alternative 5 is noted. FFTF is capable of reducing the inventory of plutonium (i.e., burning it) during normal operation.

2019-109: DOE has no hidden agenda for weapons research and use of FFTF for classified missions. The only missions being considered are those analyzed in the NI PEIS, which are the production of isotopes for medical, research, and industrial uses; plutonium-238 production for future NASA space exploration missions; and U.S. nuclear research and development needs for civilian application. Any future uses of FFTF

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and other facilities evaluated in the NI PEIS that are not addressed in the NI PEIS would require additional NEPA assessment.

- 2019-110:** The environmental impacts associated with operation of the FFTF for the stated missions are addressed in detail in Section 4.3 of the NI PEIS. This section specifically evaluates the incremental radiological impact to the public associated with both normal operation and postulated accident conditions. As discussed, if FFTF were to operate for 35 years, this risk would be small (less than 1 latent cancer fatality). For perspective, the radiation dose the average American receives from natural sources is about 300 mrem each year. Based on the same 35 year time period used above, approximately 2,600 latent cancer fatalities would be expected among the same population as a result of this natural (non-Hanford related) radiation exposure. In that same 35 years, about 19,000 cancer fatalities from all causes (nonradiological causes included) would be expected in the same population.
- 2019-111:** Although the FFTF is 20 years old, it is DOE's newest reactor, it is in excellent condition and evaluations have been performed to show that it has sufficient life remaining to fully support the proposed 35 year mission.
- 2019-112:** Facilities at Argonne National Laboratory-West were considered but dismissed from further consideration (see Section 1.3 of Volume 1). The Neutron Radiographic Reactor lacks sufficient neutron production capacity to support the NI PEIS proposed action without impacting existing missions, and the Transient Reactor Test Facility is not capable of steady-state neutron production. Processing facilities considered but dismissed included the Hot Fuel Examination Facility, Analytical Laboratory, and Fuel Conditioning Facility. These were not considered to be the most suitable facilities at INEEL in terms of capability, capacity, and availability.
- 2019-113:** ATR is an operating reactor (see Volume 1, Section 2.3.1.2).
- 2019-114:** The programmatic alternatives and options analyzed in the NI PEIS focus on the use of irradiation facilities that are currently operating, could be brought on line, or constructed and operated to meet DOE's irradiation needs. The Advanced Test Reactor (ATR) at INEEL is an existing DOE irradiation facility that would meet DOE's irradiation needs and is considered under Alternative 2. The NI PEIS also looks at

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facilities for fabrication, storage, and postirradiation processing of targets. The Fluorinel Dissolution Process Facility (FDPF) and Building CPP-51 (storage only) would accomplish these activities under Alternatives 1 through 4. The selection of an alternative and option or combination of alternatives and options for meeting the purpose and need described in Section 1.2 would be based on a number of factors including environmental impacts, costs, public input, nonproliferation concerns, program objectives and schedules, technical assurance and national policy considerations.

2019-115: PNNL has not prepared this PEIS. It has been prepared by a contractor under contract to DOE. (See Volume 1, Chapter 6, List of Preparers, and the contractor's disclosure statement in Volume 2, Appendix O, indicating no conflict of interest.) As the responsible Federal agency, DOE has provided guidance, reviewed, evaluated, and approved its contents, including the responses to comments. In exercising these responsibilities, DOE has provided and considered information, analyses, and data from many sources, including PNNL. All such sources are noted in the text of the PEIS and shown in the report References. Consequently, DOE does not believe that its independent consideration of referenced sources, including those of PNNL, represents a conflict of interest. DOE exercises full control over the preparation, and takes full responsibility for the contents of this PEIS.

2019-116: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert

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Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost-efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

DOE has taken the Expert Panel and NERAC report recommendations under consideration in developing the range of alternatives evaluated in the NI PEIS. These reports were made available to the public at the NI PEIS public information centers and on the Internet at www.nuclear.gov.

2019-117: DOE notes the commentor's concern over the credibility of the nuclear industry, although this issue is beyond the scope of this NI PEIS. The scope of this EIS is limited to analysis of alternatives to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development.

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Civilian nuclear energy research initiatives are discussed in Volume 1, section 1.2.3. Further information can be found at the Office of Nuclear Energy, Science, and Technology web site, <http://www.nuclear.gov/>.

2019-118: Although the 50 megawatt power level of the new TRIGA research reactor is larger than the largest currently operating TRIGA reactor power of 16 megawatts, the fuel design is almost identical to the current TRIGA 10 megawatt high power design and the system thermal hydraulic performance represents a linear extrapolation of existing designs. The 50 megawatt TRIGA reactor design has been discussed with General Atomics, the TRIGA reactor design corporation. It is technically feasible to build a 50 megawatt TRIGA research reactor.

2019-119: As discussed in the text that accompanies the figure on page S-46 of the draft Summary, radiological accident risks are driven by activities at the fabrication/processing facilities that support the production of radioisotopes. Production of radioisotopes is discussed in Sections 1.2.1 and 1.2.2 of Volume 1. The figure summarizes information that is separately available throughout Chapter 4. Information is not presented by mission because the alternatives (described in Section 2.5 of Volume 1) provide multiple options for accomplishing the missions listed in Section 1.2 of the NI PEIS. A cost-benefit analysis is optional under the Council on Environmental Quality implementation regulations and none was prepared for the NI PEIS. The figure on page S-46 illustrates that the radiological accident risk that would result at a new reactor would be small relative to the risks attributable to accidents at the fabrication/processing facilities.

2019-120: Impacts from the deactivation of FFTF are presented in section 4.4.1.2. of the NI PEIS. Specifically risks associated with normal operations are presented in Section 4.4.1.2.9, accident risks are presented in Section 4.4.1.2.10, and transportation risks are presented in Section 4.4.1.2.11. The environmental analysis showed that radiological and nonradiological risks associated with deactivating FFTF would be small.

2019-121: In Chapter 4 of the NI PEIS, the impact analyses assess all disciplines where the potential exists for effects on the environment. These disciplines are the same as those generally assessed in environmental impact statements prepared by DOE. None of the disciplines is considered to be “non-traditional.”

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- 2019-122:** Clean, safe, reliable nuclear power has a role today and in the future for our national energy security. In recognition of this need, nuclear energy research and development programs have been initiated to address potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) and to ensure that current nuclear power plants can continue to deliver adequate and affordable energy supplies. Because it is unlikely that existing facilities could fully and effectively support these nuclear energy research and development initiatives without disturbing their existing missions, DOE is proposing to enhance its nuclear facility infrastructure to also support these activities. Further information on the need for nuclear energy research and development is provided in Section 1.2.3 of Volume 1.
- 2019-123:** See the response to Comment 2019-118. No single irradiation facility can meet all the NI PEIS mission needs (see Section 2.7 of Volume 1) (e.g., the current TRIGA reactor design), nor will multiple small reactors completely meet these needs.
- 2019-124:** If a Record of Decision selects Alternative 4, Construct New Research Reactor, it would be located at an existing DOE site. However, the specific site is unknown at this time. If Alternative 4 is selected, site specific NEPA documentation would be completed prior to site selection and the start of detailed design.
- 2019-125:** Alternative 3 involves constructing a new accelerator(s) at an existing, but as yet unidentified DOE site. Alternative 3 as written does include the permanent deactivation of FFTF; however, since a decision can include components of various alternatives, a combination of restarting FFTF and the construction of an accelerator can be selected. The siting of that accelerator would be determined through a separate site-specific NEPA review.
- 2019-126:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 2019-127:** DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. The first, a thirteen member Expert Panel convened in 1998 to forecast future demand for medical isotopes, included academicians from leading medical universities and schools of public health, and professional affiliations

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ranging from the National Cancer Institute to manufacturers of radiopharmaceuticals. The second consists of a subcommittee of DOE's Nuclear Energy Research Advisory Committee (NERAC), established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. The members of this Subcommittee were selected based upon their expertise and experience in the production, processing, distribution, and application of stable and radioactive isotopes in the biological and physical sciences, and in medicine. The members included basic and clinical scientists, administrators, and users of isotopes from academia, industry, and the federal government.

DOE is aware that there is a considerable difference of public opinion regarding the alternatives evaluated in this NI PEIS to accomplish the DOE missions, including direct support as well as opposition to Alternative 1, Restart FFTF, on the part of members of the public, interest groups, and government bodies. It is further recognized that waste generation and its management is of particular concern. Analyses presented in Chapter 4 of the NI PEIS (e.g., Sections 4.3.1.1.13, 4.3.3.1.13) assess the impact on waste management infrastructure from operation of existing facilities (FFTF, FMEF, and 300 Area facilities) at Hanford in support of the missions. Further, the waste generated from the facilities proposed for use at Hanford will be managed (i.e., treated, stored, and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and DOE orders. The Hanford Site also has a comprehensive waste minimization and pollution prevention program in place as summarized in Volume 1, Section 3.4.11.8 that would govern any proposed site activities. The Record of Decision for the PEIS will be based on a number of factors including environmental impacts, costs, public input, nonproliferation issues, schedules, technical assurance, policy, and program objectives.

2019-128: Socioeconomic impacts associated with Alternative 1, Restarting FFTF, are discussed in Section 4.3 of the NI PEIS.

2019-129: See response to comment 2019-126.

2019-130: In January 1997, President Clinton tasked his Committee of Advisors on Science and Technology (PCAST) to evaluate the current national energy research and development portfolio and to provide a strategy that ensures the United States has a program to address the Nation's

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energy and environmental needs for the next century. In its November 1997 report responding to this request, the PCAST Energy Research and Development Panel determined that restoring a viable nuclear energy option to help meet our future energy needs is important and that a properly focused research and development effort to address the potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) was appropriate. The PCAST panel further recommended that DOE reinvigorate its nuclear energy research and development activities to address these potential barriers.

It is current U.S. policy that clean, safe, reliable nuclear power has a role today and in the future for our national energy security. Recognizing this need, the U.S. has initiated two new significant nuclear energy research and development programs: the Nuclear Energy Research Initiative and Nuclear Energy Power Optimization. The Nuclear Energy Research Initiative program sponsors new and innovative scientific and engineering research and development to address the potential long-term barriers affecting the future use of nuclear energy identified by the PCAST panel. The Nuclear Energy Power Optimization program, a cost-shared program with industry, sponsors applied research and development to ensure that current nuclear plants can continue to deliver adequate and affordable energy supplies up to and beyond their initial 40-year license period by resolving open issues related to plant aging and by applying new technologies to improve plant reliability, availability, and productivity.

The Nuclear Energy Research Advisory Committee (NERAC) Subcommittee on Long-term Planning for Nuclear Energy Research, an independent expert panel established by DOE, has set forth a recommended 20-year research and development plan to guide DOE's nuclear energy programs in areas of material research, nuclear fuel, and reactor technology development. This plan stresses the need for DOE facilities to sustain the nuclear energy research mission in the years ahead. Such nuclear research and development initiatives requiring an enhanced DOE nuclear facility infrastructure fall into three basic categories: materials research, nuclear fuel research, and advanced reactor development.

2019-131: Other than the missions discussed in the NI PEIS, no alternate uses for FFTF are being considered at this time. None of the alternatives in the

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NI PEIS include defense missions and would not contribute to future weapons production. Any future uses of FFTF and other facilities evaluated in the NI PEIS that are not addressed in the NI PEIS would require additional NEPA assessment.

2019-132: The additional radioactive waste that would be generated from the restart of FFTF (i.e., low-level radioactive waste) would not be stored in the high-level radioactive waste tanks located at Hanford.

Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

2019-133: DOE notes the commentor's opposition to some of the missions addressed in the NI PEIS.

2019-134: DOE policy encourages effective public participation in its decision making process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

2019-135: This NI PEIS has examined the risks associated with the operation of the FFTF for 35 years for the purpose of producing isotopes for medical use, research and development, and for the production of

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radioactive heat sources for power supply systems. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. Accident analysis is described in Appendix I and the normal operations risk analysis is described in Appendix H.) The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small. Based upon these analyses, as well as the previous safe operation of the facility, FFTF can be operated safely to accomplish DOE missions. Additionally, in the event that FFTF restart is selected, a new Safety Analysis Report will be prepared and subjected to a thorough independent review process. The facility reanalysis as part of the Safety Analysis Report update process would ensure that the analyses bound the reactor-operating envelope for the duration of FFTF operation, The Safety Analysis Report would be routinely reassessed and updated when required to address any changes in plant configuration or changes in plant operation procedures. This continuing safety analysis updating would include analysis of changes that may occur as a result of facility aging during the 35 years of operation

2019-136: DOE has assumed that the commentor is questioning the general view of the public in the Tri-Cities region of Washington State toward the alternatives, particularly Alternative 1, Restart FFTF, to accomplish the missions alternatives evaluated in this NI PEIS. The transcript from the public hearing and DOE's responses to all comments made or submitted during the hearing are contained in the Comment Response Document of this NI PEIS. At the Richland, Washington public hearing held on August 31, 2000, there were a total of 93 commentors. Of these, 75 or about 81 percent expressed support for Alternative 1 while 16 or about 17 percent were opposed; 2 commentors did not specifically state an alternative preference in their comments.

2019-137: The purpose of the NI PEIS is to evaluate the potential environmental impacts associated with the proposed enhancement of DOE's nuclear infrastructure to fulfill three missions DOE is responsible for under the authority of the Atomic Energy Act: ensuring the availability of isotopes for medical, industrial, and research applications; meeting the nuclear material needs of other Federal agencies (i.e., NASA); and

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undertaking research and development activities related to development of nuclear power for civilian use.

DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual rate of growth of medical isotope use is consistent with the Expert Panel findings. Section 1.2.1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Under the No Action Alternative, DOE would continue to purchase plutonium-238 to meet the space mission needs for the 35-year evaluation period considered in the NI PEIS. However, DOE recognizes that any purchase beyond what is currently available to the United States through the existing

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contract would likely require negotiation of a new contract and may require additional NEPA review.

It is current U.S. policy that clean, safe, reliable nuclear power continue as a viable component of the United States' energy portfolio. In recognition of this need, the U.S. has initiated nuclear energy research and development programs to address potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) and to ensure that current nuclear power plants can continue to deliver adequate and affordable energy supplies. An enhanced DOE nuclear facility infrastructure is required to support such nuclear energy research and development for civilian applications.

- 2019-138:** DOE evaluated the capabilities and availability of existing government, university, and commercial accelerators (see Volume 1, section 2.6.1). There were no accelerators identified which could be used to meet the stated mission requirements.
- 2019-139:** DOE's decisionmaking procedures are outlined in 10 CFR 1021.210, which have been adopted in accordance with CEQ regulations (40 CFR 1505.1). DOE will consider the information presented in the NI PEIS as well as public and agency comments, including DOE's responses to those comments. Information contained in the Cost Report and the Nuclear Infrastructure Nonproliferation Impacts Assessment will also be considered. These information sources taken in consideration with the technical merits and timelines required to meet DOE policy and mission objectives will be used by the decisionmaker (The Secretary of Energy) in selection of an alternative, or alternative elements, from the range of alternatives evaluated in the NI PEIS. This decision will be published in a Record of Decision along with the supporting information required by CEQ and DOE regulations (40 CFR 1505.2 and 10 CFR 1021.315, respectively). DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.
- 2019-140:** The conclusions presented in the "NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000" regarding the suitability of the Fast Flux Test Facility (FFTF) to produce research isotopes in a timely and cost-efficient manner were made in the context of the facility producing research isotopes as its sole mission.

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DOE agrees that the FFTF's large size and configuration are not particularly well suited for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of the FFTF for the production of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates use of the FFTF when coupled with the other proposed missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without disturbing the existing missions of these facilities.

2019-141: See response 2019-61.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

2019-142: See response to comment 2019-98.

2019-143: The reader is referred to the response to Comment No. 2019-81 above.

Analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4) indicate that restart of FFTF under Alternative 1 and subsequent operations would neither be expected to affect nor be affected by existing groundwater contamination. As discussed in Section 3.4.4.2.2, the quality of water supplied via the 400 Area's three wells is closely monitored and, thus, any deterioration in water quality supplied to FFTF would be detected.

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2019-144: DOE notes the commentor's views that assumptions and bases for the proposed action are not valid. Consistent with its mandates under the Atomic Energy Act, DOE is proposing this enhancement for the purposes of addressing three primary needs:

- 1) to support the increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;
- 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and for which the U.S. has no long-term, assured supply; and
- 3) to support civilian nuclear energy research and development in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio.

A separate Cost Report was prepared to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. The Cost Report was mailed to interested parties on August 24, 2000 and made available on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has provided a summary of the Cost Report in Appendix P of the Final NI PEIS. The NI PEIS adequately address such issues as target processing waste disposal, groundwater impacts, and transportation impacts. Groundwater quality and usage impacts were determined to be negligible to relatively minor for most alternatives and options with the exception of the projected requirement for relatively large quantities of water groundwater or surface water) for operation of the high-energy accelerator and research reactor under Alternatives 3 and 4, respectively. Also, the risks and potential human health risks from roadway and marine (for Alternative 1) transportation of all materials (mixed-oxide fuel under Alternative 1, target materials, and isotopes) are addressed in the applicable sections of Chapter 4. All environmental and human health impacts are assessed, with a revised summary of impacts provided in Volume 1, Section 2.7 of this NI PEIS.

2019-145: The nuclear infrastructure missions as set forth in the NI PEIS can be accomplished without the use of Hanford facilities. For example, a new

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accelerator(s) or research reactor (and support facility) could be constructed at a DOE site other than Hanford and plutonium-238 target fabrication and processing accomplished at either ORR or INEEL.

- 2019-146:** DOE notes the commentor's support for Alternative 1, Restart FFTF. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected. . Further, none of the stated missions are defense- or weapons-related.
- 2019-147:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.
- 2019-148:** DOE has made every effort to provide the public with adequate information in the NI PEIS. The FFTF could be deactivated if other facilities are selected (in the Record of Decision) to produce plutonium-238 and medical and research isotopes. In fact, permanent deactivation of FFTF is a part of each alternative except the No Action Alternative and Alternative 5, Permanently Deactivate FFTF. The commentor is referenced to Appendixes A through F for technical information related to target fabrication and processing and reactor operations. With respect to costs, DOE has prepared a separate cost report that it has made available to the public.
- 2019-149:** See response 2019-61.
- 2019-150:** See response to comment 2019/98. DOE notes the commentor's concern about the cost of operating FFTF. Cost issues would be among the factors considered in connection with decisions on FFTF implementation. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he

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may make an informed decision with respect to the alternatives presented in the NI PEIS. Such an ancillary document need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed this document to about 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P in the Final NI PEIS.

- 2019-151:** Volume 1, Section 2.7 of this NI PEIS has been revised to include a summary of environmental impacts organized by environmental resource and includes impacts summary tables so that the incremental impacts to each area (e.g., occupational and public health and safety, waste management) can be easily compared across all alternatives and between options. In addition, a summary of cost impacts has also been added to this Final NI PEIS. However, costs associated with waste production and cleanup of existing contamination are beyond the scope of this PEIS. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram funds designated for Hanford cleanup, regardless of the alternative(s) selected.
- 2019-152:** DOE notes the commentor's support for an alternative that combines elements of the No Action Alternative (purchase plutonium-238 from Russia) and Alternative 1, Restart FFTF (for medical/industrial isotopes), or their desire to see FFTF permanently deactivated (Alternative 5) if the suggested alternative is not selected.
- 2019-153:** The estimated costs of the range of reasonable alternatives are presented in the Cost Report, summarized in Appendix P of the Final NI PEIS. However, the Cost Report is not a cost-benefit analysis. While it is reasonable to believe that the benefits of medical isotopes are substantial, the purpose of this NI PEIS is to describe the nuclear infrastructure missions (Section 1.2 of Volume 1), a range of reasonable alternatives for satisfying the mission requirements (Section 2.5 of Volume 1), and the environmental impacts that would result from implementation of the alternatives. According to 40 CFR Section 1502.23, if a cost-benefit analysis exists, it must be reported and summarized in the NI PEIS.

2019-154: See response to comment 2019-150.

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- 2019-155:** DOE notes the commentor's concern that the NI PEIS and the associated decisions to be made are complex. DOE strives to produce NEPA documentation and related materials that are easily understood by the public by avoiding the use of jargon, defining technical terms and concepts through the use of common comparisons, avoiding the use of acronyms to the extent possible, and provision of a Summary that is clear and concise, among other means. In order to improve the public's comprehension and understanding of the PEIS, this Final NI PEIS reflects revisions that have been made to eliminate some redundant and extraneous information while some sections have been reorganized to improve readability. In accordance with CEQ requirements for implementing NEPA, DOE provided a relatively brief summary document for both the Draft and Final NI PEIS to facilitate the public's understanding of the purpose and need, alternatives being considered for implementation, and associated incremental and cumulative impacts of the proposed actions.
- 2019-156:** Sections 4.3.1.1.13, 4.3.2.1.13, 4.3.3.1.13, and 4.4.3.1.13 were revised to address comments received during the public comment period. This section now states that "DOE is considering whether the waste from processing of irradiated neptunium-237 targets should be classified as high-level radioactive waste and not transuranic waste. Irrespective of how the waste is classified (i.e., transuranic or high-level radioactive waste), the composition and characteristics are the same and the waste management activities (i.e., treatment and onsite storage) as described in this NI PEIS would be the same. In addition, either waste type would require disposal in a suitable repository. If it is transuranic waste, it would be nondefense waste and could not be disposed of at WIPP under current law. Because nondefense transuranic waste has no current disposal path, DOE Headquarters' approval would be necessary before a decision is made to generate such waste, as required by DOE Order 435.1. If the waste is classified as high-level radioactive waste, it is assumed for the purposes of this analysis that Yucca Mountain, Nevada, if approved, would be the final disposal site for DOE's high level radioactive waste."
- 2019-157:** The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the

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alternatives presented in the NI PEIS. Such an ancillary document need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed this document to about 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P in the Final NI PEIS.

2019-158: The purpose of the NI PEIS, as discussed in Section 1.2, is to evaluate the potential environmental impacts associated with the proposed enhancement of DOE's nuclear infrastructure to fulfill three missions DOE is responsible for under the authority of the Atomic Energy Act: ensuring the availability of isotopes for medical, industrial, and research applications; meeting the nuclear material needs of other Federal agencies (i.e., NASA); and undertaking research and development activities related to development of nuclear power for civilian use.

DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual rate of growth of medical isotope use is consistent with the Expert Panel findings. Section 1.2.1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of

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Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Under the No Action Alternative, DOE would continue to purchase plutonium-238 to meet the space mission needs for the 35-year evaluation period considered in the NI PEIS. However, DOE recognizes that any purchase beyond what is currently available to the United States through the existing contract would likely require negotiation of a new contract and may require additional NEPA review.

It is current U.S. policy that clean, safe, reliable nuclear power continue as a viable component of the United States' energy portfolio. In recognition of this need, the U.S. has initiated nuclear energy research and development programs to address potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) and to ensure that current nuclear power plants can continue to deliver adequate and affordable energy supplies. An expanded DOE nuclear facility infrastructure is required to support such nuclear energy research and development for civilian applications.

2019-159: DOE notes the commentor's opinion that the cost of indefinitely maintaining FFTF in standby mode is unacceptable. As stated in the Notice of Intent (65 FR 50064), one of the purposes of the proposed action is to determine the future role of FFTF in support of the expanded nuclear energy research and development and isotope production missions.

2019-160: A discussion of DOE's decisionmaking procedures is contained in response to comment no. 2019-139. This NI PEIS provides an adequate bounding description of nuclear energy research and development for civilian applications which DOE is responsible for supporting under the Atomic Energy Act. Appendix D of the NI PEIS specifically provides a summary of the nuclear energy research and development which could be accomplished in FFTF in overall support of the DOE missions.

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DOE provided the Summary concurrent with distribution of the Draft and Final NI PEIS as required by CEQ regulations for implementing NEPA (40 CFR 1502.12). The Summary and Draft NI PEIS were distributed well in advance of the 15 days prior to the public hearings that is specified by CEQ regulations (40 CFR 1506.6). Also, the Summary and Draft were mailed starting one week prior to the start of the public comment period on July 28, 2000.

- 2019-161:** DOE notes the commentor's support for Alternative 1, Restart FFTF.
- 2019-162:** An alternative which involves acquisition of material from foreign sources, such as suggested by the commentor, would fail to meet the goal of the proposed action, which is to accomplish expanded civilian nuclear energy research and development and isotope production missions in the United States. It should be noted that the No Action Alternative does consider the purchase of plutonium-238 from Russia and that the United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada.
- 2019-163:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.
- 2019-164:** DOE notes the commentor's support for Alternative 1, Restart FFTF. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram funds designated for Hanford cleanup, regardless of the alternative(s) selected.
- 2019-165:** All environmental parameters (e.g. air, soil, surface water, groundwater, vegetation, animals, fish, etc.) in and around the Hanford Site are monitored on a set frequency. The information is available to the public in annual environmental monitoring reports.

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The management of the FFTF Facility has been retained through contractor changeovers, and the qualifications of the FFTF management are excellent.

- 2019-166:** The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such an ancillary document need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed this document to about 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P in the Final NI PEIS. NEPA does not require that cost-benefit analyses be provided in an EIS, and none have been provided in this Final NI PEIS or in the Cost Report. The Cost Report is not a cost-benefit analysis. While it is reasonable to believe that the benefits of medical isotopes are substantial, the purpose of this NI PEIS is to describe the nuclear infrastructure missions (Section 1.2 of Volume 1), a range of reasonable alternatives for satisfying the mission requirements (Section 2.5 of Volume 1), and the environmental impacts that would result from implementation of the alternatives. According to 40 CFR Section 1502.23, if a cost-benefit analysis exists, it must be reported and summarized in the NI PEIS.
- 2019-167:** DOE notes the commentor's support for medical and research isotope production and opposition to plutonium-238 production for space missions.
- 2019-168:** The NI PEIS was not structured to separately determine the environmental impacts of each DOE mission within each alternative, rather it sought to identify the overall impacts of each alternative or option. In order to do this impacts were identified for each facility regardless of the number of missions that might take place in that facility. Thus, for HFIR or ATR only one mission was analyzed (plutonium-238 production) whereas for FFTF all three mission were addressed.

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If the facility (it is assumed that the commentor is referring to FFTF) is restarted, it would be used for the production of plutonium-238, medical/research isotopes, and for nuclear energy research and development for civilian application. While FFTF could be utilized to some extent by foreign researchers (as are other DOE research reactors), these would not be its primary users.

- 2019-169:** The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such an ancillary document need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed this document to about 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P in the Final NI PEIS.
- 2019-170:** DOE notes the commentor's support for producing plutonium-238 in the United States rather than purchasing it from Russia.
- 2019-171:** DOE notes the commentor's views regarding opposition to Alternative 1 options, Restart FFTF. DOE is aware that there is a considerable difference of public opinion regarding the alternatives evaluated in this NI PEIS to accomplish the DOE missions, including direct support as well as opposition to Alternative 1, Restart FFTF. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the environmental impact analysis of DOE's proposed alternatives for meeting the mission requirements, and gave equal consideration to all comments, regardless of how or where they were received. All comments received during the public comment period have been responded to in this NI PEIS. While the number of comments for or against a particular alternative may be recorded, it does not automatically constitute a "vote" for or against the alternative.
- 2019-172:** A previous change to the Tri-Party Agreement (TPA) removed the planned milestone for deactivation of the FFTF until its ultimate fate was assessed. That proposed TPA milestone change was the subject of previous public meetings and approved by the U.S. Environmental Protection Agency and the State of Washington Department of Ecology. DOE is fully committed to honoring this agreement.

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- 2019-173:** The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such an ancillary document need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed this document to about 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P in the Final NI PEIS.
- 2019-174:** Any foreign country fuel, after its use in the operation of FFTF would be under the custody of the U.S. Department of Energy, and will be managed and disposed of in accordance with U.S. standards. The spent nuclear fuel management is discussed in Section 4.3.1.1.14 of the NI PEIS.
- 2019-175:** Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. DOE bases its planning for plutonium-238 requirements for space missions on NASA estimations, not on past funding. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Under the No Action Alternative, DOE would continue to purchase plutonium-238 to meet the space mission needs for the 35-year evaluation period considered in the NI PEIS. However, DOE recognizes that any purchase beyond what is currently available to the United States through the existing contract would likely require negotiation of a new contract and may require additional NEPA review.

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2019-176: The methods for calculating transportation risks are discussed in Appendix J of the NI PEIS. Following is a discussion of the methods and approach used for these calculations.

The RADTRAN 5 (Neuhauser and Kanipe, 2000) computer code was used for incident-free and accident risk assessments to estimate the impacts on population. RADTRAN 5 contains the mathematical models needed to calculate the incident free and accident risk of transporting radioactive materials. For accident analysis, RADTRAN 5 calculates distinct probability-consequence products for multiple exposure pathways for each accident severity category for all route segments. The RADTRAN 5 accident consequence assessment models were used to provide an estimate of the potential impacts posed by the maximum foreseeable (1 X 10⁻⁷ per year or once in 10 million year) transportation accident. As discussed in sections J.4 and J.6.1, RADTRAN 5 also takes into account the risk of accidents with frequencies that are less than 1 X 10⁻⁷ per year and this risk is included in the NI PEIS risk analysis results.

2019-177: DOE notes the commentor's interest in alternative energy sources, although issues of research and development of alternative energy sources are beyond the scope of this Nuclear Infrastructure PEIS. The DOE missions to be addressed in this EIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies.

2019-178: The schedule for the public hearings was determined in part by CEQ guidelines for implementing NEPA that require that the hearings be held no sooner than 15 days after release of the Draft NI PEIS. DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and holding public hearings is an essential and required part of the NEPA process. In compliance with NEPA and CEQ regulations, DOE provided opportunity for the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

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CEQ (40 CFR 1500 et seq.) and DOE (10 CFR Part 1021) implementation regulations do not require inclusion of cost and nonproliferation studies in an environmental impact statement. The basic purpose of the NI PEIS is to describe the alternatives under consideration for implementation (Section 2.5 of Volume 1) and the environmental impacts that would occur if these alternatives were implemented (Chapter 4 of Volume 1). Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. The associated cost report and nonproliferation report were made available to the public on August 24, 2000 and September 8, 2000, respectively. DOE mailed these documents to approximately 730 interested parties, and these reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in public reading rooms.

DOE has also provided summaries of the Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment in Appendixes P and Q, respectively, in the Final NI PEIS.

As outlined in 40 CFR 1502.14 (e), an agency is not required to specify a preferred alternative or alternatives in the Draft EIS if one does not exist, but must do so in the Final EIS. Accordingly, DOE has identified its preferred alternative in Volume 1, Section 2.8 of the Final NI PEIS.

2019-179: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

DOE also notes the commentor's suggestion concerning radiation research.

2019-180: DOE notes the commentor's concern that the missions described in the NI PEIS do not support restarting the FFTF. Other than the missions discussed in the NI PEIS, no alternate uses for FFTF are being

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considered at this time. None of the alternatives in the NI PEIS include defense missions and would not contribute to future weapons production. Any other use of FFTF beyond what is described and evaluated in the Final NI PEIS would require additional NEPA assessment.

- 2019-181:** See response to comment 2019/98. With respect to previous commitments to deactivate FFTF, a change to the Tri-Party Agreement (TPA) removed the planned milestone for total deactivation of the FFTF until its ultimate fate was assessed. That proposed TPA milestone change was the subject of previous public meetings.
- 2019-182:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.
- Both government and commercial waste disposal sites are operated within the Hanford Site. These are permitted by the State of Washington.
- 2019-183:** See response to comment 2019/98. DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site.
- 2019-184:** FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to

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groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

2019-185: In addition to the FFTF, other facilities within the United States (i.e., those that are currently operating, could be brought on line, or that could be constructed and operated) were assessed as reasonable alternatives in the PEIS.

DOE could continue to purchase plutonium-238 from Russia to satisfy its responsibility to supply NASA with the necessary fuel to support future space exploration missions. Under the current contract set to expire in 2002, the United States is authorized to purchase up to 40 kilograms of plutonium-238, with the total available for purchase in any one year limited to 10 kilograms. However, DOE does not stockpile large quantities of Russian plutonium-238 long in advance of needs due to budget constraints and the additional processing required to remove decay products that occur following extended storage of the material. To date, DOE has purchased approximately 9 kilograms of plutonium-238 under this contract. Future purchases from Russia would require the negotiation of a new contract with Russia. DOE recognizes that this is a viable option and has analyzed this option under the No Action Alternative.

2019-186: The purchase of plutonium-238 from Russia is considered in the No Action Alternative. Options 4-6 of Alternative 2, Use Only Existing Operational Facilities, considers the use of existing CLWRs to produce plutonium-238. It is not practical to produce medical or research isotopes in a commercial reactor and at the same time efficiently manage it for power production.

2019-187: The NI PEIS addresses the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste treatment, storage, and disposal facilities for the wastes expected to be generated are identified in Chapter 4 under the Waste Management sections of the NI PEIS. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner

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and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS assumes, for the purposes of analysis, that Yucca Mountain, Nevada, would be the final disposal site for DOE's high level radioactive waste and spent nuclear fuel. As directed by the U.S. Congress through the Nuclear Waste Policy Act, as amended, Yucca Mountain is the only candidate site currently being characterized as a potential geologic repository for high-level radioactive waste and spent nuclear fuel. DOE has prepared a separate EIS, "Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada" (DOE/EIS-0250D, July 1999), which analyzes the environmental impacts from construction, operation and monitoring, related transportation, and eventual closure of a potential geological repository.

2019-188: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram funds designated for Hanford cleanup, regardless of the alternative(s) selected.

2019-189: See response to comment 2019-98.

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2019-190: DOE notes the commentor's views and concern. The United States balance of payments in the world economy is not within the scope of the NI PEIS.

2019-191: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Hanford tank waste issues are not within the scope of this PEIS, as none of the alternatives considered would add to these waste volumes.

2019-192: NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. Plutonium-238 sources are used only when required by the space mission or enhance mission capabilities.

2019-193: DOE notes the commentor's remarks concerning the public involvement effort sponsored by the Oregon Office of Energy and for the outcome of public opinion in the decisions to be made.

2019-194: DOE notes the commentor's concern with FFTF waste. As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

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The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

FFTF spent nuclear fuel is currently stored onsite safely in 50 year dry cask storage containers.

2019-195: The NI PEIS is adequate. This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS.

The costs and nuclear nonproliferation impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such ancillary documents need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed these documents to more than 730 interested parties on August 24 and September 8, 2000, respectively. Both reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided summaries of the Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment in Appendixes P and Q, respectively, in the Final NI PEIS.

The purpose of this NI PEIS is to evaluate the environmental impacts of reasonable alternatives to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238 for NASA space missions, and civilian nuclear energy research and development. As evaluated under Alternative 1 in this NI PEIS, FFTF would be restarted to

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accomplish these nondefense-related missions. All missions considered in the NI PEIS are for civilian purposes.

2019-196: FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The accident analysis included a review of internal events (e.g., equipment failures, human errors), external events (e.g., airplane crashes, nearby explosions, fires), natural phenomena (e.g., floods, tornadoes, earthquakes), common-cause events, and sabotage and terrorist activities. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

2019-197: The purpose of the NI PEIS is not to subsidize the nuclear industry. Rather, DOE is proposing a nuclear infrastructure enhancement for the purposes of addressing three primary needs:

- 1) to support the increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;
- 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and for which the U.S. has no long-term, assured supply; and
- 3) to support civilian nuclear energy research and development in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio.

2019-198: DOE notes the commentor's concern regarding the funding for cleanups. Use of any of these facilities for the stated missions would not impact the schedule or available funding for existing cleanup activities.

2019-199: DOE notes the commentor's concerns. This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively.

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DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives. DOE policy encourages effective public participation in its decisionmaking process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

2019-200: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

DOE notes the commentor's opposition to new waste generation. As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

2019-201: The purpose of the NI PEIS is to evaluate the potential environmental impacts associated with the enhancement of DOE's nuclear infrastructure to fulfill three missions. Under the authority of the Atomic Energy Act, DOE is responsible for ensuring the availability of

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isotopes for medical, industrial, and research applications; meeting the nuclear material needs of other Federal agencies (i.e., NASA); and undertaking research and development activities related to development of nuclear power for civilian use.

DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual rate of growth of medical isotope use is consistent with the Expert Panel findings. Section 1.2.1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Under the No Action Alternative, DOE would continue to purchase plutonium-238 to meet the space mission needs for the 35-year evaluation period considered in the NI PEIS. However, DOE recognizes that any purchase beyond

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what is currently available to the United States through the existing contract would likely require negotiation of a new contract and may require additional NEPA review.

It is current U.S. policy that clean, safe, reliable nuclear power continue as a viable component of the United States' energy portfolio. In recognition of this need, the U.S. has initiated nuclear energy research and development programs to address potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) and to ensure that current nuclear power plants can continue to deliver adequate and affordable energy supplies. An enhanced DOE nuclear facility infrastructure is required to support such nuclear energy research and development for civilian applications.

2019-202: DOE notes the commentor's concerns about the inclusion of cost in the NI PEIS and analysis of alternatives in the decisionmaking process. The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such an ancillary document need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed this document to about 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P in the Final NI PEIS.

In accordance with NEPA and CEQ regulations, this NI PEIS analyzes a range of reasonable alternatives for accomplishing the DOE missions which include the production of medical and industrial isotopes, the production of plutonium-238 for NASA space missions, and civilian nuclear energy research and development.

2019-203: The PEIS includes a detailed examination the socioeconomic impacts of the Region of Influence, which is the area in which 90 percent of the Hanford workers live, to determine the impacts on population, housing, and public services. For Hanford, the Region of Influence is defined as Benton and Franklin counties. It also includes a broader examination of the Regional Economic Area, defined as those counties that will be

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economically impacted by actions at the Hanford site. The Regional Economic Area is comprised of Adams, Benton, Chelan, Douglas, Franklin, Grant, Kittitas, Okanogan, and Yakima counties. See Appendix G for an in-depth discussion of the impact assessment method.

2019-204: The fabrication and processing of the target materials were considered in the development of the risks associated with each of the alternatives. Fabrication and processing activities were analyzed for several different facilities, including Fuels and Materials Examination Facility (FMEF), Fluorinel Dissolution Process Facility (FDPF), Radiochemical Engineering Development Center (REDC), Radiochemical Processing Laboratory (RPL), and a generic processing facility. In all cases the processing (versus fabrication) of the irradiated targets is the dominant contributor to both worker and population health impacts. The fabrication of unirradiated targets results in essentially no radiological consequences. The health impacts from processing the irradiated targets are included in the information provided for each alternative where needed. For example Section 4.3.1.1.9 includes information on the health impacts from normal operation for both REDC and RPL; Section 4.3.2.1.9 for FDPF and RPL, Section 4.3.3.1.9 for FMEF, and Section 4.5.1.1.9 for a generic support (processing) facility. Similar information is provided for a processing facility for each of the options in alternatives 2, 3, and 4. (Processing of targets does not occur in Alternatives 1 and 5.)

2019-205: The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. The action to be addressed in this NI PEIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies.

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2019-206: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

2019-207: See response to comment 2019-126. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram funds designated for Hanford cleanup, regardless of the alternative(s) selected.

2019-208: Consistent with its mandates under the Atomic Energy Act, DOE is proposing this enhancement for the purposes of addressing three primary needs:

- 1) to support the increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;
- 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and for which the U.S. has no long-term, assured supply; and

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3) to support civilian nuclear energy research and development in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio.

DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual rate of growth of medical isotope use is consistent with the Expert Panel findings. Section 1.2.1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Under the No Action Alternative, DOE would continue to purchase plutonium-238 to meet the space mission needs for the 35-year evaluation period considered in the NI PEIS. However, DOE recognizes that any purchase beyond what is currently available to the United States through the existing

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contract would likely require negotiation of a new contract and may require additional NEPA review.

It is current U.S. policy that clean, safe, reliable nuclear power continue as a viable component of the United States' energy portfolio. In recognition of this need, the U.S. has initiated nuclear energy research and development programs to address potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) and to ensure that current nuclear power plants can continue to deliver adequate and affordable energy supplies. An enhanced DOE nuclear facility infrastructure is required to support such nuclear energy research and development for civilian applications.

2019-209: Consistent with its mandates under the Atomic Energy Act, DOE is proposing this enhancement for the purposes of addressing three primary needs:

- 1) to support the increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;
- 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and for which the U.S. has no long-term, assured supply; and
- 3) to support civilian nuclear energy research and development.

It is current U.S. policy that clean, safe, reliable nuclear power continue as a viable component of the United States' energy portfolio. In recognition of this need, the U.S. has initiated nuclear energy research and development programs to address potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) and to ensure that current nuclear power plants can continue to deliver adequate and affordable energy supplies. An enhanced DOE nuclear facility infrastructure is required to support such nuclear energy research and development for civilian applications.

2019-210: The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste treatment, storage, and

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disposal facilities for the wastes expected to be generated are identified in Chapter 4 under the Waste Management sections of the NI PEIS. The cumulative impact tables for waste management in Section 4.8 of the NI PEIS have been revised to include the individual site's storage, treatment and disposal capacities for comparison. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS assumes, for the purposes of analysis, that Yucca Mountain, Nevada, would be the final disposal site for DOE's high level radioactive waste and spent nuclear fuel. As directed by the U.S. Congress through the Nuclear Waste Policy Act, as amended, Yucca Mountain is the only candidate site currently being characterized as a potential geologic repository for high-level radioactive waste and spent nuclear fuel. DOE has prepared a separate EIS, "Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada" (DOE/EIS-0250D, July 1999), which analyzes the environmental impacts from construction, operation and monitoring related transportation, and eventual closure of a potential geological repository.

2019-211: DOE notes the commentor's opinions and concern for funding of the Hanford cleanup. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Commentor No. 2020: Chuck Lennox Seattle Audubon Society

09-20-2000 10:34 AM FHL21 TO 18775624592 P.02



20 September, 2000

Ms. Colette E. Brown, NE-50
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

RE: Fast Flux Test Facility

Dear Ms. Brown,

I write on behalf of Seattle Audubon Society and its 5,600 members to express our opposition to the restart of the Fast Flux Test Facility (FFTF) that is proposed in the recent Nuclear Infrastructure Programmatic Environmental Impact Statement (NI-PEIS). Thank you for the opportunity to comment on this important matter.

After reading the NI-PEIS, we were concerned to learn that the U.S. Department of Energy (DOE) appears to be leaning towards Action Alternative 1(AA1), i.e. the "Restart FFTF" alternative over all other alternatives. This choice would pose the highest public health risks according to your NI-PEIS. We base this conclusion on the bar graphs of the NI-PEIS in pages S-48, S-49, S-51 and S-52. The diagrams in S-48 & 49 that summarize "Expected Latent Cancer Fatalities" due to (a) radiological accidents at sites (b) radiological transportation accidents and (c) risks due to incident free transportation, clearly display the high level of risk to public health, involved in proceeding with AA1. From the bar graphs in page S-51 & 52 similar conclusions can be reached regarding collision and emission fatalities from the various transportation parameters.

We urge the DOE to consider Action Alternative 5. Only AA5, that "Permanently deactivates the FFTF with no new missions" seems to provide the safest and cleanest route to travel from a public health standpoint. This decision would help the DOE reorient itself firmly in the direction of its core mission in Hanford, which is one of cleanup of all the nuclear wastes in the site. Moreover, the AA5 would help the DOE recover around \$30 million per annum, which is currently used to keep the FFTF in a "hot standby".

We would like to add further that the primary goals of the DOE: the (1) production of isotopes for medical and industrial uses (2) the production of Plutonium-238 for NASA and (3) other nuclear research for civilian uses are in no way jeopardized in abandoning the "Restart FFTF" alternative.

In April of 2000, the DOE's chosen panel of experts the "Nuclear Energy Research Advisory Committee" or NERAC, recommended that "the FFTF will not be a viable source of research isotopes". These research isotopes can be generated in a cost effective manner in the accelerators of various universities and research institutions. The added benefit would be one of less nuclear waste in the production process. This committee further states that DOE should not be in the business of producing either medical or industrial isotopes (violation of their mandate), that can and are currently

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- 2020-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.
- 2020-2:** No final decisions have been made with regard to the facilities and locations evaluated to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238 for NASA space missions, and civilian nuclear research and development. However, in accordance with Council on Environmental Quality regulations (40 CFR 1502.14(e)), DOE has identified its preferred alternative in Volume 1, Section 2.8 of the Final NI PEIS and included a discussion of DOE's reasons for selecting it. The Record of Decision for the PEIS will be based on a number of factors including environmental impacts, costs, public input, nonproliferation issues schedules, technical assurance, policy, and program objectives.
- 2020-3:** FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Sections 4.2-4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from implementation of the alternatives, including normal operations and a spectrum of accidents that included severe accidents. Although there are minor differences in the risks among alternatives, the environmental analysis showed that radiological and nonradiological risks associated with all of the alternatives would be small.
- 2020-4:** While there are differences in risks among the alternatives and among options within alternatives, risks from incident free transportation and transportation accidents are small for all of the alternatives and options. Figures in Volume 1, Section 2.7.1, show that the risk of an additional fatality as a result of implementing any alternative is low. However, transportation risk is only one factor in DOE's decision. Accordingly, DOE has identified its preferred alternative in Section 2.8 of Volume 1 and included a discussion of DOE's reasons for selecting it. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.
- 2020-5:** See responses to comments 2020-1 and 2020-4.

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Seattle Audubon Society

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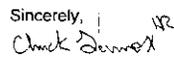
produced by the commercial industry, at great benefit to the US taxpayer. Moreover, the Washington State Medical Association and Physicians for Social Responsibility have stated that medical isotopes are readily available from Canada and other non-DOE sources. How can DOE justify the cost of restarting the FFTF at a cost of over \$423 million, when research isotopes can be produced using accelerators at \$106 million?

The second major reason in proposing "Restart FFTF" in this NI-PEIS is to supply the National Aeronautics and Space Administration (NASA) with Plutonium-238 for power generation in space reactors. Whereas NASA has unequivocally stated on May 22nd of 2000 that, "NASA has no longer an identifiable planned requirement for Small Radioisotope Thermoelectric Generator (STRG) power systems.", the DOE manages to insist to the contrary. Notwithstanding the fact that there is always a significant risk in sending nuclear powered space probes, these stated goals by the DOE make no sense either scientifically or economically.

Seattle Audubon can only conclude that to propose restarting of the FFTF just for civilian nuclear research no longer holds any validity.

Seattle Audubon is also quite concerned about the negative impacts to the environment that would result in the "Restart FFTF" alternative. Hanford, by all independent estimates, has a poor record of confining the nuclear wastes it already possesses. There are credible reports that indicate 68 of the 177 High-Level Nuclear Waste tanks are leaking. These wastes might have already polluted the ground water and may be proceeding towards the Columbia River. The untold damages that could accrue to the recently declared "Hanford Reach National Monument" are staggering. This 195,000 acre shrub-steppe ecosystem is the last free flowing non-tidal stretch of the Columbia river, that is home to the spawning of at least 80% of fall Chinook Salmon. The "Hanford Reach" is one of the keystones to recovery salmonid species in the recently declared Endangered Species Act listing. To add more nuclear waste to the Hanford complex, as the "Restart FFTF" would do, would be clearly counterproductive.

We urge the Department of Energy permanently deactivate the Fast Flux Test Facility. Thank you for your careful consideration of our comments.

Sincerely, 
Chuck Lennox
Conservation Chair
206-523-8243 ext. 13

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2020-6: The conclusions presented in the "NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000" regarding the suitability of the Fast Flux Test Facility (FFTF) to produce research isotopes in a timely and cost-efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of the FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates use of the FFTF when coupled with the other proposed missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without disturbing the existing missions of these facilities.

DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert committees, the Expert Panel and NERAC. In 1998, an Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years will range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings.

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Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

The United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. Although other manufacturers produce medical isotopes, DOE remains the key provider for a large number of radioisotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially experimental, these isotopes are not generally purchased in large-enough quantities to make their production financially attractive to private industry. Under the NI PEIS proposed action and consistent with its mandates under the Atomic Energy Act, DOE would enhance its existing nuclear facility infrastructure to, among other things, more effectively support production of radioisotopes for medical applications and research. DOE's intent is to complement commercial sector capabilities to ensure that a reliable supply of isotopes is available in the United States to meet future demands, and encourage the commercial sector to privatize the production of isotopes that have established applications to a level that would support commercial ventures.

Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions (basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term (less than 5 years).

2020-7: The commentor is comparing the cost of the low-energy accelerator, a element of Alternative 3, Construct New Accelerator(s), with the FFTF. The low-energy accelerator's only mission is to produce a select set of medical isotopes. The FFTF can produce a diverse set of medical and industrial isotopes, plus meet the requirements of the plutonium-238

Commentor No. 2020: Chuck Lennox (Cont'd)
Seattle Audubon Society

Response to Commentor No. 2020

production mission, and the nuclear energy research and development mission. DOE considers all three missions of equal importance.

2020-8: The May 22, 2000, correspondence from NASA to DOE identifies that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, SRTG development efforts were stopped in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires one-third less plutonium-238 as its fuel source. However, the Stirling technology is developmental, and NASA has requested in a September 22, 2000, letter to DOE that large RTGs be maintained as backup. Section 1.2.2 of Volume 1 was revised to clarify plutonium-238 mission needs.

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately only 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Under the No Action Alternative, DOE would continue to purchase plutonium-238 to meet the space mission needs for the 35-year evaluation period considered in the NI PEIS. However, DOE recognizes that any purchase beyond what is currently available to the United States through the existing contract would likely require negotiation of a new contract and may require additional NEPA review.

2020-9: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of

***Commentor No. 2020: Chuck Lennox (Cont'd)
Seattle Audubon Society***

Response to Commentor No. 2020

additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposal) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

2020-10: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Commentor No. 2022: David Leon Johnson

September 16, 2000

Collette Brown
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

Dear Ms. Brown,

Enclosed are my comments on the "Draft Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Missions in the United States, Including the Role of the Fast Flux Test Facility", (Nuclear Infrastructure Programmatic Environmental Impact Statement [NI-PEIS] (DOE/HIS-0310D)

Much has been made about the need for medical radioisotopes as outlined in the scope of the NI-PEIS. While I agree that medical isotopes are a high priority need, there are several serious flaws in the scope of the draft NI-PEIS.

It does not include the requirements for finding a new steady-state neutron source for doing world-class neutron scattering research. Furthermore, it does not include in its scope a facility that could perform such neutron scattering research. Finally, it does not show that a specially designed accelerator based steady-state neutron source facility could satisfy all the research and production needs outlined in the draft NI-PEIS as well as the need for neutron scattering research.

The following background material will explain the deficiencies in the scope of the draft NI-PEIS.

Attachment 1 (Titled Research Reactor of the Future: The Advanced Neutron Source) shows a description of the Advanced Neutron Source (ANS) that was to be built at Oak Ridge National Laboratory (ORNL). Attachment 1 also shows the needs for the facility. This steady-state neutron source facility was designed primarily to bring the U.S. back into world leadership in the field of neutron scattering research as noted in attachment 1. It was also designed to produce radioisotopes for use in medicine and other fields, and also various neutron research activities. It was to be the replacement for the aging High Flux Isotope Reactor (HFIR) at ORNL. The ANS project was funded by congress for about 10 years until about fiscal year 1996. It was terminated largely because its cost had grown to about \$3 Billion.

The requirements for a new steady-state neutron source to do world-class neutron scattering research have not gone away. In fact, they have actually increased! In about December of 1999, the U.S. Department of Energy (USDOE) permanently shut down the High Flux Beam Reactor (HFBR) at Brookhaven National Laboratory for environmental reasons. This reactor was one of the few steady-state neutron sources available in the US for doing world-class neutron scattering research.

Response to Commentor No. 2022

- 2022-1:** DOE notes the commentor's support for the production of medical isotopes and concerns with the scope of the PEIS. The scope of this NI PEIS does not include finding a new steady-state neutron source for conducting neutron scattering research.
- 2022-2:** Neutron scattering research is not a primary area of interest in the proposed nuclear research and development program. The proposed nuclear research and development program is focused in the support of civilian nuclear energy programs.

The NI PEIS evaluated a steady state spallation neutron source, the high energy accelerator as part of Alternative 3, Construct New Accelerators. As stated in Volume 1, Section 2.3.1.5.2, the design of the high-energy accelerator presented in the NI PEIS focused on supporting the plutonium-238 production mission, but the design could be refined and expanded to perform additional missions such as the production of a select set of medical and industrial isotopes. The modified high-energy accelerator and low-energy accelerators could jointly produce a broad spectrum of medical and industrial isotopes.

DOE is aware of longer-term concepts that would apply high-energy accelerators to produce "tunable" neutrons in a subcritical assembly. Such a facility could be used to address some of the missions more familiar to reactor facilities and may hold considerable promise for future science and technology research. A facility of this nature could provide unique capabilities in areas such as the testing of many different nuclear system coolant, fuel, and materials interactions.

Commentor No. 2022: David Leon Johnson (Cont'd)

The USDOE is currently designing a new pulsed neutron source for doing neutron scattering research. It is called the Spallation Neutron Source (SNS) and is to be built at ORNL. However, there is a critical need for **both** a steady-state and a pulsed neutron source for doing neutron scattering research.

Attachment 2 (Titled: A History of the ANS: Going Back to the Source) shows a history of the ANS concept. In this document, there is a description of the need for **both** a steady-state and a pulsed neutron source for doing neutron scattering research. This document is quoted below.

In 1991, the Basic Energy Sciences Advisory Committee (BESAC) of DOE's Office of Energy Research (OER) was asked by OER Director Will Happer to form a panel to revisit the question of whether a reactor or spallation source would make the best neutron source. The panel was headed by Walter Kohn of the University of California at Santa Barbara, who had been a member of the Seitz-Eastman committee.

In June 1992, the Kohn committee issued its report. According to the report, the BESAC panel concluded that "the nation has a critical need for a complementary pair of sources: a new reactor, the Advanced Neutron Source (ANS), which will be the world's leading neutron source, and a pulsed spallation source. . . . The ANS is the Panel's highest priority for rapid construction. In the Panel's view, any plan that does not include a new, full-performance high-flux reactor is unsatisfactory because of a number of essential functions that can best or only be performed by such a reactor."

Again, it is pointed out that the needs for a steady-state neutron source to enable world-class neutron scattering research have not gone away, they have increased.

It is noted here that an accelerator based steady-state neutron source facility could supply all the needs outlined in the scope of the draft NI-PEIS and, in addition, could provide for doing world-class neutron scattering research. A proposal for such a facility was outlined in a document that I co-authored 15 years ago. Attachment 3 (Titled: An Accelerator Based Steady State Neutron Source) is a copy of that proposal. This was to be an accelerator facility that used the spallation principal, just like that employed for the SNS. However, the beam energy was to be much less, hence the capital cost would be less. Furthermore, it was to be steady-state so as to provide a steady-state source of neutrons, just as in a reactor.

Technical details are outlined in attachment 3. One point that should be made is that such a facility would be capable of producing all the same radioisotopes that could be made in the FFTF and in the same or greater quantities. However, they would be made without any of the same nuclear wastes that would be produced by the FFTF. There would be NO production of hard-to-deal-with fission products or transuranic isotopes such as Plutonium. Furthermore, the safety is dramatically improved compared to the FFTF. For example, accelerators do not generally require containment vessels as reactors do. Moreover, there are no criticality issues as in a reactor. When the accelerator beam goes away, the neutrons go away.

2022-2
(Cont'd)

Response to Commentor No. 2022

Commentor No. 2022: David Leon Johnson (Cont'd)

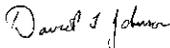
The proposal in attachment 3 was made at the initial conference in 1985 to select what eventually became the ANS. It was rejected, in my opinion, because the people reviewing the proposals had reactor proposals that were in competition for the funding to proceed. In other words, they were biased in favor of getting funds for their own reactor proposals. However, the reactor proposal that eventually emerged became too expensive to build.

Since 1985, when the original accelerator proposal was made, there have been significant advances in accelerator technology. These advances, particularly at Los Alamos National Laboratory (LANL), have demonstrated beyond any doubt the ability to provide the very high steady-state beam currents that are needed for the proposed accelerator source. Furthermore, there have been advances that allow significant reduction in accelerator costs. These reductions are both for construction costs and for operating costs. The cost to build such an accelerator facility should be considerably less than the \$3 Billion required to build the cancelled ANS.

In summary, I propose that the final NI-PEIS be modified to incorporate the following items.

- 1) Include neutron scattering research as proposed for the ANS facility as the primary mission.
- 2) Include analysis of a variant of the accelerator based steady-state neutron source similar to what was proposed in attachment 3 to do all the missions in the current draft NI-PEIS and also world-class neutron scattering research
- 3) Do a better job of providing a design for an accelerator based steady-state neutron source that is cost competitive with restarting the FFTF. The cost estimate of over \$1 Billion for a spallation accelerator for making only the isotope Pu-238 in the draft NI-PEIS seems obviously too high. The spallation accelerator at LANL called the Los Alamos Meson Physics Facility (LAMPF) was built about 30 years ago and has the same beam energy and a beam current similar to what was proposed for the draft NI-PEIS. That design could be used without outrageous cost contingency factors.
- 4) Do not include the \$281 Million cost that was estimated for dismantling the FFTF as part of the cost to build an accelerator facility. The cost for dismantling the FFTF should be tacked onto its cost for restart since it will eventually be shut down and should come out of the same budget.

Sincerely,

David L. Johnson	David Leon Johnson	phone/FAX: 360-825-0480
	P.O. Box 1034	
	Enumclaw, WA 98022	e-mail: dave.dlj@gtc.net

Attachment 1 - Research Reactor of the Future: The Advanced Neutron Source
 Attachment 2 - A History of the ANS: Going Back to the Source
 Attachment 3 - An Accelerator Based Steady State Neutron Source

Response to Commentor No. 2022

**2022-2
(Cont'd)**

2022-3

2022-3: Deactivation of FFTF is not part of implementing Alternative 1, Restart FFTF. Deactivation of FFTF is part of Implementing Alternative 2, 3, 4, and 5 and including the cost of deactivation in the implementation costs for these alternatives is appropriate.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Commentor No. 2023: Lynn Sims

DOE

From: Lynn Sims <dwac@teleport.com> on 06/13/2000 08:53 AM GMT

To: president@Whitehouse.GOV
cc:
Subject: NO TO PLUTONIUM USED AS FUEL!!!

Dear President Clinton

The use of plutonium in nuclear reactors is an insane program. It is tremendously expensive and risky. Moreover it promotes more handling and transport of plutonium, increases risk of accident and complicates spent fuel "disposition."
Instead, immobilize plutonium and turn towards more sustainable energy sources.

Lynn Sims
3959 NE 42
Portland, OR
97213

|| 2023-1
|| 2023-2
|| 2023-3
|| 2023-4
|| 2023-5

Response to Commentor No. 2023

- 2023-1:** The commentor's position on the use of plutonium in nuclear reactors is noted. Human health effects that would result from any of the range of reasonable nuclear infrastructure alternatives analyzed (described in Section 2.5 of Volume 1) are described in Chapter 4. Plutonium is one of the radioisotopes included in the analysis of health and safety impacts. Both radiological and chemical impacts were addressed. (See Appendix H) Plutonium was identified as a primary contributor to the health impacts that would result from processing irradiated neptunium targets at candidate processing facilities. Sections 4.3 through 4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from implementation any of the range of reasonable alternatives (Alternative 1 includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with each analyzed alternative and with restarting FFTF would be small.
- 2023-2:** While there are differences in risks among the alternatives, the risk from transportation accidents is small for all the alternatives. Figures and tables in Section 2.7.1 of Volume 1 summarize transportation risks and provide a comparison of transportation risks among alternatives and among options within alternatives. Transportation risk is only one factor in DOE's decision. Accordingly, DOE has identified its preferred alternative in Section 2.8 of Volume 1. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.
- 2023-3:** The NI PEIS assumes that FFTF would initially be fueled by a mixed oxide (MOX) fuel, essentially the same as that used successfully during the previous ten years of safe operation. While there are differences associated with the use of MOX fuel versus uranium fuel, these differences are not expected to significantly affect the safety of the FFTF. Differences between MOX fuel and uranium fuel are well characterized and can be accommodated through fuel and core design.
- 2023-4:** As stated in section 4.3.1.1.4 of the NI PEIS, "the spent [FFTF] nuclear fuel would be packaged in acceptable containers and shipped to a geologic repository for ultimate disposal." The NI PEIS assumes, for the purposes of analysis, that Yucca Mountain, Nevada, would be the final

Commentor No. 2023: Lynn Sims (Cont'd)

Response to Commentor No. 2023

disposal site for DOE's high-level radioactive waste and spent nuclear fuel. As directed by the U.S. Congress through the Nuclear Waste Policy Act, as amended, Yucca Mountain is designated, and is currently being characterized, as the candidate site for constructing a geologic repository for disposal of high-level radioactive waste and spent nuclear fuel. DOE has prepared a separate EIS, "Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County Nevada" (DOE/EIS-0250D, July 1999), which analyzes the environmental impacts from construction, operation and monitoring, related transportation, and eventual closure of a potential geological repository. Based on the categorization of DOE fuel types provided in Appendix A of the EIS, the spent mixed oxide fuel from FFTF is expected to be disposable in its current form and does not need to be immobilized.

2023-5: DOE notes the commentor's interest in alternative energy sources, although issues of research and development of alternative energy sources are beyond the scope of this Nuclear Infrastructure PEIS. The DOE missions to be addressed in this EIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies. Immobilization of weapons-grade plutonium is discussed in the Surplus Plutonium Disposition Final Environmental Impact Statement, DOE/EIS-0283, published in November 1999. Plutonium-238 is not used to manufacture nuclear weapons.

Commentor No. 2024: Andrew Eisman

NI- PEIS Comment from Andrew Eisman Page 1

9/18/2000

Colette E. Brown, Document Manager
Office of Space and defense Power Systems (NE-50)
Office of Nuclear Energy, Science & Technology
US Dept. Of Energy
19901 Germantown Road Valued Gateway Client Page 1 9/18/2000
Germantown, MD 20874
Attention: NI PEIS

Dear Ms. Brown:

Thank you for the opportunity to respond to the FFTF DEIS, formally known as "Draft Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility." I am a former nuclear and aerospace engineer and have direct experience working the computer controls of a nuclear power plant, with over 25 years of professional computer systems and network systems experience.

I am submitting testimony that can only bring one to the conclusion that the FFTF facility needs to be decommissioned ASAP. And I support NI PEIS alternative 5, which states "Permanently deactivate FFTF (with no new mission)".

The over all stated mission is misguided in many ways. The production of isotopes for medical purposes can be accomplished in other safer manners, and existing international supplies now and in the future will out strip the needs.

Current manual override controls are not being reviewed. Past problems with these controls caused over 1 million dollars of damage to the FFTF facility. Future abuse of such controls by FFTF staff could cause a catastrophic failure of the facility and a possible meltdown. Such a scenario has not been analyzed or commented upon in this document.

The reality of this issue is that the FFTF facility is designed and planed for use to produce Tritium for the production of Nuclear Warheads. This hidden agenda is spelled out clearly in two documents. U.S. Senator Slade Gorton (R-WA) press release dated January 15, 1997 he states: "I will be working side by side with my Washington state colleagues to see that FFTF becomes an integral part of the nation's tritium mission, ultimately phasing into the production of medical isotopes.". Additionally, in an article written by Bob Ferguson (who was director of the Fast Flux Test Facility from 1973 to 1980) that appeared in the Tri-City Herald (© 1997), he states: "Evaluations by DOE and by the JASON Group, an independent panel of nationally recognized scientists, has determined FFTF can supply most of the tritium needed to meet the presidentially determined national stockpile requirement. ...In this sense, FFTF should be considered as the most flexible way to reliably produce tritium now while efforts to reduce the need for tritium are pursued." This proves that this DEIS is complexly inadequate because it ignores the real processing issues that are going to be secretly pursued. Until this DEIS includes the

2024-1

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2024-3

2024-4

Response to Commentor No. 2024

- 2024-1:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2024-2:** DOE acknowledges that other manufacturers can produce certain isotopes that are economically attractive. In fact, the United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.
- 2024-3:** Although it is not practical to analyze every conceivable accident scenario a representative spectrum of bounding accidents was evaluated in the NI PEIS. The accident analysis included a review of internal events, external events, natural phenomena, common-cause events, and sabotage and terrorist activities. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected from implementation of Alternative 1. The environmental analysis showed that radiological and nonradiological risks associated with restarting the FFTF would be small.
- 2024-4:** DOE notes the commentor's views. The NI PEIS evaluates a range of reasonable alternatives for expanding DOE's existing nuclear facility infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. However, no component of the proposed action is for the purpose of producing tritium or supporting any defense or weapons-related mission. Tritium for national security needs will be produced in commercial light water reactors (65 FR 26259). Section 1.2

Commentor No. 2024: Andrew Eisman (Cont'd)

NI- PEIS Comment from Andrew Eisman Page 2

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risk analysis of Tritium production and the associated impact to the Worldwide efforts to reduce the Nuclear arms threat, it will remain inadequate and incomplete.

There are issues in the DEIS that are poorly researched. For example, experimental research has a much higher risk of catastrophic failure than standard operation. Such research is included in the scope of this DEIS. With out exact specifics on the scientific methodologies and technologies that will be studied and the exact experiment that will be conducted, it is impossible to calculate the risk factors to the public and working population. It is also impossible to calculate the actual cost benefit analysis.

The future NASA missions may not happen. Any analysis conducted on the need for plutonium-238 is speculative at best and cannot be included in an DEIS. Additionally, the former Soviet Union has dangerous supplies that should be purchased before they are sold on the open market. This could prevent the spread of nuclear materials to those who should not have them. Russia has a large black market that must already be attempting to gain access to these materials.

I have reviewed the DEIS and can go on for hundreds of pages about its' inadequacies. It is unfortunate that the DEIS comment period is so limited. It requires a team of over a hundred people at least 6 months to fully understand the entire scope of this proposal/analysis. As a result, I have limited my analysis to several narrow areas, pointing out the inaccuracies of analysis as examples of this document. There is a lack of mandate and scientific justification for the restart of the FFTF facility.

2024-4
(Cont'd)

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Response to Commentor No. 2024

of Volume 1 was revised to clarify the purpose and need of the proposed action.

2024-5: The NI PEIS accident analysis evaluated a representative spectrum of accidents, including severe accidents which involved damage to the entire FFTF core. In contrast, accidents involving experiments in a research reactor usually result in damage to the experiment itself and relatively limited damage to the reactor. Hence, the accidents reported in the NI PEIS are considered to bound the consequences of typical experiments.

The NI PEIS stated in Section 1.2.3 that “reactor physics and criticality safety data for benchmarking computational codes and analytical methods used in fuel design and performance analysis would also be required.” Such data are readily obtained by the use of well designed, safe experiments that do not involve the risk of an inadvertent criticality and are able to provide useful data for validating computer codes and other computational methods. It is neither necessary nor desirable to “push the safety limits of the material being tested past the limits of safety” in order to obtain this data.

2024-6: DOE agrees with the commentor that the benefits of experimental research are difficult to quantify. The estimated costs of the range of reasonable alternatives are presented in the Cost Report, summarized in Appendix P of the Final NI PEIS. However, the Cost Report is not a cost-benefit analysis. The purpose of this NI PEIS is to describe the nuclear infrastructure missions (Section 1.2 of Volume 1), a range of reasonable alternatives for satisfying the mission requirements (Section 2.5 of Volume 1), and the environmental impacts that would result from implementation of the alternatives. According to 40 CFR Section 1502.23 if a cost-benefit analysis exists, it must be reported and summarized in the NI PEIS.

2024-7: DOE notes the commentor’s opposition to production of plutonium-238 for use in future NASA space exploration missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE’s charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to

Commentor No. 2024: Andrew Eisman (Cont'd)

NI- PEIS Comment from: Andrew Eisman Page 3

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ISSUE 1

In Vol. 1 of the Draft EIS, Page 1-2 States "For analysis purposes, this NI PEIS evaluates impacts from facility construction, modification, startup, and 35 years of operation, followed by decommissioning when applicable."

This statement indicates that eventual decommissioning is required. In the cost analysis of operation, this needs to be calculated in the overall financial equation. Increased costs of decommissioning in the future due to shortage of appropriate waste sites and inflation need to be considered. Additionally, a 35 year life expediency is absurd and has not scientific data to support it with in the body of the EIS. This would, with the already 15 years of life (10 active years which saw several significant accidents (not reported in this report)that effected safety for its' workers and the general population)), far out last any other nuclear power plant and raises serious safety questions. The facilities designed life cycle is much less. Thus, all calculations based on this unrealistic life expectancy are thus inaccurate and misleading.

ISSUE 2

Page 3-7 of the Cost report for Alternatives Presented in the Draft Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and development and Isotope Production Missions in the United States, including the Role of the Fast Flux Test Facility. Paragraph 1 states "Current DOE plans, therefore, are to focus initially on the production of medical isotopes that exhibit the most significant medical potential, given an adequate supply, and to look to other promising areas of production when that potential is realized and sustained by supplies from private resources."

This statement has several problems. One would be the lack of specifics on the " other promising areas of production...". What are the risks associated with his on specified research? What are the costs and benefits? Where is the analysis of this information in the DEIS? It sounds like the DOE will be in direct competition with the private sector- I believe this would be counter to the mission of the DOE.

ISSUE 3

Volume 1, Chapter 1 Section 1.2.2 of the *Draft Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States*, states "Because it is not in the best interest of the United States to continue relying on foreign sources to provide an assured, uninterrupted supply of plutonium-238 to satisfy future NASA space exploration mission requirements, DOE proposes to re-establish a domestic capability for producing and processing this material. Since the SRS facilities previously used for plutonium-238 production are no longer available, DOE needs to evaluate other DOE irradiation and chemical processing facilities, as well as potential commercial light water reactors (CLWR), for this mission."

2024-10

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2024-12

Response to Commentor No. 2024

provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

2024-8: As stated in EIS Volume 1, Section 1.2.2, DOE has had a contract with Russia to purchase plutonium-238 since 1992 and is aware of the existence and production capability of plutonium-238 in Russia. However the political and economic climate in Russia creates uncertainties that could affect the reliability of plutonium-238 supply from this source. This is the reason for evaluating alternatives to plutonium-238 purchase from Russia in this EIS. The potential nonproliferation impacts of continued purchases from Russia are discussed in Section 8.2 of the Nuclear Infrastructure Nonproliferation Impact Assessment which was published in September, 2000.

2024-9: The original comment period on the Draft NI PEIS was set at 45 days according to the Council on Environmental Quality's (CEQ) "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act" (40 CFR 1506.10(c)). As stated in the Notice of Availability (65 FR 46443 et seq.), the public comment period extended from July 28, 2000 to September 18, 2000. In preparing the Final PEIS, DOE has assessed and considered both oral and written comments received on the Draft PEIS during the public comment period and has responded to these comments in the Final PEIS. Volume 3 of the NI PEIS contains public comments received on the NI PEIS and DOE responses to those comments. Moreover, late comments were considered to the extent practicable.

Commentor No. 2024: Andrew Eisman (Cont'd)

NI- PEIS Comment from Andrew Eisman Page 4

9/18/2000

This is subjective speculation not support by any information. I would argue it is in the best interest of the United States to complete purchase down all of the Russian supply of plutonium 238. It would be a safer would if we did! Additionally, there is the assumption that the production would not be interrupted because of the mixed missions of the FFTF facility, nor the high potential for accident (given the DOE's history and the age of the FFTF facility- its' recent past history of operation and the lack of experienced operators.

ISSUE 4

Volume 1, Chapter 1 Section 1.2.4 under the paragraph "Materials Research" of the *Draft Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States*. states "The high radiation fields, high temperatures, and corrosive environments in nuclear reactors (terrestrial or space) and other complex nuclear systems (e.g., accelerator transmutation of waste [ATW] systems) can accelerate the degradation of pressure vessels and structural material, component materials, material interfaces, and joints between materials (e.g., welds). Radiation effects in materials can cause a loss of mechanical integrity (fracture toughness and ductility) by embrittlement, dimensional changes (creep and swelling), and fatigue and cracking (irradiation-assisted stress corrosion cracking). Acquiring a fundamental understanding of radiation effects in current and future reactor materials (engineered steel alloys, ceramics, composites, and refractory metals), as well as the experimental validation of analytical models and computational methods, would require material irradiation testing over a range of neutron energies (thermal and fast flux) and doses. Material testing under simulated reactor conditions would be required to ensure the compatibility of advanced materials with the various moderators/coolants of future reactor concepts. In addition, the thermophysical properties and behaviors of liquid metal coolants being considered for advanced reactor (terrestrial or space) and ATW systems would require further irradiation testing. One key area of materials research that is important to plant safety and the license renewal of existing nuclear power plants is the accelerated aging of materials to simulate radiation effects over a plant lifetime."

This statement indicates the pure absurdity of starting up the FFTF. The statement can be summarized as "The DOE wants to start the FFTF so we can find out exactly how dangerous the FFTF is under operation!" This is unscientific! We need more information on exactly what the experiments will be as well as independent scientific peer-review before this have thought out idea is pursued. This section goes on to talk about "criticality safety" data that would be acquired. In order to obtain this data, one needs to push the safety limits of the material being tested past the limits of safety to study its effects. This in it self is a huge risk to the general population. The DOE has already had significant failures in safety and safety reporting over its involvement in the Nuclear research history. This type of experiment safety can not be fully assessed by its very nature. And thus should not be performed at such an aging facility over such a long period of time. The nature of this research will stress all safety measures, equipment, structures of the FFTF facility and is not properly analyzed in the body of the documents.

2024-7

2024-13

2024-14

2024-5

Response to Commentor No. 2024

2024-10: While the Cost Report evaluates the cost of permanently deactivating FFTF as described in the NI PEIS, it does not consider the costs of ultimate decontamination and decommissioning of the facilities evaluated for the proposed actions. There are several reasons for this but, foremost among them, is the fact that decontamination and decommissioning technologies are ever evolving. Due to the great uncertainty associated with what the costs would be in 35 years (the end of the mission campaign) given the state of technological development at that time, it was deemed impractical to estimate decontamination and decommissioning costs with any degree of certainty or contingency.

2024-11: FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. The technical issues that need to be addressed to assure safe operation for an extended lifetime are well understood. The U.S. Nuclear Regulatory Commission has extended the operating license for a commercial power plant an additional 20 years over and above its current 40 year licensing period and is anticipating several more extensions in the near future.

2024-12: The estimated costs of the range of reasonable alternatives presented in the Cost Report, are summarized in Volume 2, Appendix P of the Final NI PEIS. However, the Cost Report is not a cost-benefit analysis. While it is reasonable to believe that the benefits of medical isotopes are substantial, the purpose of this NI PEIS is to describe the nuclear infrastructure missions (Section 1.2 of Volume 1), a range of reasonable alternatives for satisfying the mission requirements (Section 2.5 of Volume 1), and the environmental impacts that would result from implementation of the alternatives. According to 40 CFR Section 1502.23 if a cost-benefit analysis exists, it must be reported and summarized in the NI PEIS.

DOE acknowledges that private commercial vendors could produce a select set of isotopes that are economically attractive. It is not DOE's intent to enter into competition with the commercial sector in the production of isotopes. Rather, DOE's intent is to complement commercial sector capabilities to ensure that a reliable supply of isotopes is available in the United States to meet future demand, and to encourage the commercial sector to privatize the production of isotopes that have established applications to a level that would support commercial ventures.

Commentor No. 2024: Andrew Eisman (Cont'd)

NI- PEIS Comment from Andrew Eisman Page 5

9/18/2000

Issue 5

Chapter 2, Section 2.3.1.1.2 of the *Draft Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States*, states, (numbers for modifications supplied by this author to allow reference), "The following is a brief list of the planned modifications if FFTF would be restarted (PNNL 1999).

- 1: Upgrade of plant protection system (scram breakers, power supplies, and signal conditioners)
- 2: Replacement of zero-time-outage motor generator sets with solid-state electronic units
- 3: Upgrades of plant data systems computers
- 4: Upgrade of conductivity metering system on three cooling towers and replacement of electronic sensors and controls
- 5: Installation of two new electrical distribution transformers to replace the polychlorinated biphenyl-filled units that were removed during standby operations
- 6: Establishment of a program to assess and replace elastomer seals during the startup period to take advantage of advancements in seal technology
- 7: Upgrades of the plant simulator (A program to upgrade the existing simulator to reach commercial simulator standards was in progress, but was discontinued when FFTF was placed in standby.)"

These upgrades are not carefully and individually analyzed for their associated impacts to safety. While there planned impacts are positive, huge risks are associated in retrofitting this live facility. Data concerning the online testing of the plant data system computers is not provided. This upgrade will have to be tested in place and thus can lead to catastrophic consequences. Like IFBBF in Idaho Falls, the DOE is relying on third party private contractors that have not been provided with complete information. DOE employees must reply on documentation for final implementation and the complete testing of this package has never and can never be accomplished except on a live reactor- a risk factor not analyzed in this DEIS.

The current state of the elastomer seals is not known. As a result, even maintaining the FFTF facility in its' current standby state is dangerous. A full analysis of impacts of replacements and possible spills of dangerous eradiated materials during the replacement of the elastomer has not been included in this DEIS.

ISSUE 6

In section 2.3.1.1.5 **FFTF Deactivation** it states "This would require placement of FFTF in a radiologically and industrially safe shutdown condition that is suitable for a long-term surveillance and maintenance phase prior to final decontamination and decommissioning. An *Environmental Assessment - Shutdown of the Fast Flux Test Facility, Hanford Site, Richland, Washington*, issued by DOE in 1995, addressed the environmental impacts associated with permanently deactivating FFTF (DOE 1995a)."

2024-15

Response to Commentor No. 2024

2024-13: FFTF is capable of producing the maximum estimated amount of plutonium-238 for NASA (5 kilograms per year), as well as supporting the other nuclear infrastructure mission described in Section 1.2 of Volume 1. The most likely accident that could disable the facility for an extended period would be a design basis primary sodium spill. This accident, evaluated in the NI PEIS, has an estimated probability of occurrence of one in 10,000 years (1×10^{-4}) per year, and is therefore unlikely to impact plutonium-238 production. Smaller sodium spills, while more likely, would not shut down the facility for an extended period.

2024-14: Clean, safe, reliable nuclear power has a role today and in the future for our national energy security. In recognition of this need, nuclear energy research and development programs have been initiated to address potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) and to ensure that current nuclear power plants can continue to deliver adequate and affordable energy supplies. Because it is unlikely that existing facilities could fully and effectively support these nuclear energy research and development initiatives without disturbing their existing missions, DOE is proposing to enhance its nuclear facility infrastructure to also support these activities. Further information on the need for nuclear energy research and development is provided in Section 1.2.3 of Volume 1.

Scientists from around the world participate in DOE research and development programs. All experiments undergo thorough review before acceptance and safety is an integral consideration of all DOE experimental work.

2024-15: As noted in the NI PEIS, these upgrades would have small environmental consequences. They would, individually and collectively, have a beneficial and positive impact on safety and reliability. Since these modifications can be made while the facility is defueled, there would be almost no radiological risk during modification. It is premature to provide data on testing of the plant data systems computers at this time except that they would most certainly be fully tested prior to plant restart. Also, the plant data system computers are not a part of the plant safety systems.

Maintaining the FFTF in its current standby state is not dangerous. Section 4.2.1.2.10 provides the results of the evaluation of potential health

Commentor No. 2024: Andrew Eisman (Cont'd)

NI- PEIS Comment from Andrew Eisman Page 6

9/18/2000

The full benefits of deactivation need to be included in this section. Impacts to reduced nuclear world war, the nuclear arms race and international relations and economic fall out must be analyzed.

This previous environmental assessment needs to be a part of this DEIS. The full life cycle of the FFTF needs to be considered in the DEIS if reactivation is considered. The total cost of restarting and maintenance needs to be included. If after 15 years the proposed changes are being made, what are the regular maintenance over the proposed 30 year operations period? In 15 more years (or less) will we see similar proposed modifications? The complete costs assessment needs to be included for this DEIS to be complete.

Sincerely,

Andrew Eisman
939 SE 17th Ave
Portland OR 97214

2024-16

2024-17

Response to Commentor No. 2024

impacts that are expected from maintaining FFTF in its current standby condition. The environmental analysis showed that radiological and nonradiological risks are negligible. Prior to an FFTF restart, a revised safety analysis report and probabilistic risk assessment would be prepared which would address any changes in plant configuration, operating conditions, and procedures. The revised safety analyses would be subjected to a thorough independent review.

2024-16: Environmental impacts, including social and economic impacts, that would result from deactivation of FFTF are addressed in Section 4.4.1.2 of Volume 1. The nuclear infrastructure missions described in Section 1.2 are unrelated to the national defense, and nuclear weaponry would not be produced under any of the alternatives described in Section 2.5. Activation or deactivation of FFTF would be unrelated to the nuclear arms race. Potential impacts on the nation's nonproliferation policies that would result from activation of FFTF are discussed in Section 2.3.1.1.3 and a separate report prepared by DOE in September 2000 titled "Nuclear Infrastructure Nonproliferation Impact Assessment" (DOE/NE-0119).

2024-17: As specified in 40 CFR 1502.21 of the CEQ regulations for implementing NEPA, DOE has incorporated by reference the Environmental Assessment, Shutdown of FFTF, Hanford Site, Richland, Washington (DOE/EA-0993) to reduce the relative bulk of the NI PEIS, with a summary of the relevant information for the EA provided in Section 4.4.1.2 of Volume 1. While the PEIS evaluates the impact of permanently deactivating FFTF as further detailed in the Environmental Assessment, it does assess the impacts of permanent deactivation and decommissioning including dismantlement and disposal) which would be the subject of subsequent NEPA review.

CEQ (40 CFR 1500 et seq.) and DOE (10 CFR Part 1021) implementation regulations do not require inclusion of cost studies in an environmental impact statement. The basic purpose of the NI PEIS is to describe the alternatives under consideration for implementation (Section 2.5 of Volume 1) and the environmental impacts that would occur if these alternatives were implemented (Chapter 4 of Volume 1). Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. The associated cost report was made available to the public on August 24, 2000. DOE mailed the cost report to approximately 730 interested parties, and the reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in public reading rooms.

Commentor No. 2025: Anonymous

Draft PEIS Comment Form

Ms Brown: Please adjust Alternative 5, "Permanently Deactivate FTF, (With No New Missions.)"

1. At best, nothing in this project remotely justifies even the slightest chance of either adding a curies of radioactive waste to the Hanford environment or subtracting a dollar from the Hanford cleanup budget. 2. The supposed need for isotopes was unconvincing the first time that it was proposed as a rationale for FTF restart. The context of the NERAC report and the DOE's own LANL project belie Energy's current assertion of need. 3. The budget analysis is particularly weak. While there may be legitimate debate about which amounts go where, there is no way that restart could possibly not impact a budget which has no allowance for decommissioning. It is beyond belief that the managing organization which has produced so much more in reports, studies and schemes like the current one and so little in tangible results should accomplish the marketing miracle of increasing demand for isotopes to the degree projected. 4. This project will have a totally negative effect on non-proliferation efforts, effectively "nuking" any pretense of U.S. credibility. Conversely, if plutonium were purchased from Russia, we would at least know the disposition of the quantity delivered. 5. The entire

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): _____

Organization: _____

Home/Organization Address (circle one): _____

City: _____ State: _____ Zip Code: _____

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free telephone: 1-877-562-4593 • Toll-free fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



7/12/00

Response to Commentor No. 2025

- 2025-1:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FTF.
- 2025-2:** DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1 2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FTF when coupled with the other stated missions. While some

Commentor No. 2025: Anonymous (Cont'd)

Ford, Draft PEIS Comments, Page 2

project seems like a make-work pork barrel for the Tri-Cities, DOE, PNL, and the commercial nuclear industry. U.S. citizens of the Pacific Northwest have no intention of suffering further cleanup delays or additional waste for any such purpose. Thank you.

2025-5

Response to Commentor No. 2025

existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

The Isotope Production Facility (IPF) at Los Alamos National Laboratory produces radioisotopes using the Los Alamos Neutron Science Center's LANSCE) half-mile accelerator that delivers medium-energy protons. Among other isotopes, the IPF's three major products include germanium 68, strontium-82, and sodium-22. As a result of changing DOE missions, the production of radioisotopes at target area "A" of the LANSCE has been rendered inoperable. In order to replace the level of production lost due to this change, DOE is completing a new and more efficient IPF that would allow DOE to continue to produce most of these same isotopes in an effort to meet existing demand. As addressed in Section 2.6.1 of the NI PEIS, IPF at LANSCE was considered but dismissed from further evaluation because, although it can be used in tandem with the Brookhaven Linac Isotope Producer (BLIP) located at the Brookhaven National Laboratory to supply near-term isotope requirements, it is unlikely that these facilities could accomplish reliable, increased isotope production at the level needed to support projected needs.

The use of any of the proposed facilities would not impact the schedule, available funding, or progress of the cleanup missions at any of the candidate sites. Chapter 4 of Volume 1 addresses wastes produced for each alternative, as well as cumulative impacts related to waste production. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

2025-3: While the Cost Report evaluates the cost of permanently deactivating FFTF as described in the NI PEIS, it does not consider the costs of ultimate decontamination and decommissioning of the facilities evaluated for the proposed actions. There are several reasons for this. Foremost

Commentor No. 2025: Anonymous (Cont'd)

Response to Commentor No. 2025

among them is the fact that decontamination and decommissioning technologies are evolving. Due to the uncertainty associated with what the costs would be in 35 years (the end of the mission campaign) given the state of technological development at that time, it was deemed impractical to estimate decontamination and decommissioning costs with any degree of certainty or contingency.

2025-4: DOE developed a separate nuclear infrastructure nonproliferation impacts assessment report which was completed and distributed in September, 2000. This report concluded that, "There are currently no U.S. nonproliferation policies, laws, regulations, or international agreements that preclude the use of any facilities in the manner described in the draft NI PEIS". As stated in EIS Volume 1, Section 1.2.2, DOE has had a contract with Russia to purchase plutonium-238 since 1992 and is aware of the existence and production capability of plutonium-238 in Russia. However, the political and economic climate in Russia creates uncertainties that could affect the reliability of plutonium-238 supply from this source. This is the reason for evaluating alternatives to plutonium-238 purchase from Russia in this EIS. This assessment also evaluated the nonproliferation risks of continued purchase of plutonium-238 from Russia. Since this plutonium contains a minimum of 80 percent plutonium-238, the report concluded that, "...is not considered a nuclear proliferation threat by the international safeguards community." Therefore, purchase of this material from Russia does not reduce the Russian weapons useable plutonium inventory because plutonium-238 is not used in nuclear weapons.

2025-5: DOE notes the commentor's opinions on the purpose and need for the proposed action and concerns regarding the existing cleanup mission at Hanford and new waste generation.

DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

Commentor No. 2025: Anonymous (Cont'd)

Response to Commentor No. 2025

Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposal) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 2026: Ris Yavoh/Chas Morbeck

9/11/2000
 (T) Morbeck
 3000 S Garfield St
 Kennewick WA 99337

Gentlemen

The United States needs
 to restart the F.F.T.F. it can
 create necessary isotopes to
 support new cancer treatment
 I understand we are now
 purchasing isotopes from Canada

Ris Yavoh
 Chas Morbeck

2026-1

Response to Commentor No. 2026

2026-1: DOE notes the commentor's support for Alternative 1, Restart FFTF. With respect to medical isotopes, the United States purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, supplies of many research isotopes are not readily available from foreign (or existing domestic) sources, causing a number of medical research programs to be terminated deferred, or seriously delayed. Under the NI PEIS proposed action, DOE would enhance its existing nuclear facility infrastructure to more effectively support production of radioisotopes for medical applications and research.

Commentor No. 2027: W. P. Mead
Public Safety Resources Agency

(A)

W. P. Mead, Director
Public Safety Resources Agency
P. O. Box 724
Portland, OR 97207-0724

September 8, 2000

Ms. Colette E. Brown, NE-50
Office of Nuclear Energy,
Science and Technology
U. S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

RE: Draft Nuclear Infrastructure PEIS.

Dear Ms. Brown:

During my oral comments at the Department's Hearing of August 29, 2000 in Portland, Oregon, the Moderator notified me that I had reached the five minute time limit for public comments. I showed the Moderator my written notes and stated that I was at my final paragraph, to which he nodded his head and stated "Okay," but then ordered the sound technician to cut the power to the microphone when I began my final paragraph by describing how to explain something to an incorrigible teenager.

I want to be sure that my comments are fully recorded in the official record, so I'll repeat what the Department's Moderator, who was at that time acting under your personal supervision, did not want the public to hear during the hearing. Just to ensure that there is no "inadvertent" censorship, I'll increase the size of the font so the Department's scanners can easily digest it before the electronic analysis program discards it.

Also, because your attention was lacking during the hearing (you may recall that several speakers had to ask someone to get your attention when they were talking to you), please be sure to do what the sound technician stated you would do: Listen to the tapes of the entire session at Portland to learn what we were trying to say to you when you were supposed to have been listening to us.

Response to Commentor No. 2027

Commentor No. 2027: W. P. Mead (Cont'd)
Public Safety Resources Agency

"We have a clear message for the Department, and we'll state it as we would to an incorrigible teenager:

WE support you financially:

WE pay your bills, and
WE buy you your toys.

YOU acted inappropriately:

YOU lied to us when we asked you to tell us the truth, and

YOU didn't keep your promises when you said that you would clean up Hanford.

You have betrayed our trust.
 And for that,

YOU ARE GROUNDED!

(And you can't go out and play with the reactor until AFTER you have cleaned up your mess!)

2027-1

Response to Commentor No. 2027

2027-1: DOE notes the commentor's opposition to FFTF restart.

Commentor No. 2027: W. P. Mead (Cont'd)
Public Safety Resources Agency

Specific Comments Regarding the Draft PEIS:

1. Failure to include studies by NGOs in the Draft PEIS if they contradicted a "pro" FTFF-restart position:

It should be noted that during the public hearings that were held in Portland in 1999, again under your personal direction, that you allowed representatives of public health and safety NGOs ten minutes to present their testimony. This was changed to five minutes this year.

Although the reason that was cited for this change was to allow everyone to speak, we believe it was because we didn't support the Department's plan to restart the FTFF at the expense of cleaning up Hanford's environmental, health and safety hazards from the past half century of weapons production activities.

I state this because we were restricted in our attempts to enter information into the record at the public hearings where other persons could interact and expand on our information, and also because the documentation that we presented during the previous rounds of hearings was not included in the Draft PEIS.

Studies by pro-nuclear industry organizations who agreed with the Department's alleged "need" to restart FTFF were included, but reports that countered the industry's pro-restart position were not even mentioned. The public should have been allowed to see our information so it could be further studied by independent analysts in time for this round of the process.

A better option would have been to schedule two nights of public hearings in major cities. The Draft PEIS stated that Portland and Hood River, Oregon each had more than 300 persons attend last year's hearings - more than at any other location, including the Tri-Cities and Seattle, Washington - but you did not allow sufficient time for the public to be heard. Better planning could have provided that opportunity and increase the public's respect for the integrity of the process.

2. Flawed Methodology - Citing supporting documents that were previously acknowledged to be inaccurate:

FTFF's adjunct facilities were listed in the Draft PEIS as if they were virtually ready to be used in a supporting role if the FTFF was restarted. This assumption was based on a 1988 inspection report that, in a 1989 review, was found to be defective; yet the Department's Draft PEIS indicates that its decision would be based on the (flawed) 1988 report. 

2027-2

2027-3

Response to Commentor No. 2027

2027-2: DOE policy encourages effective public participation in its decision making process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

The public hearing format was designed to be fair and unbiased. The public hearing format used was based on stakeholder input and was presented in the Notice of Availability (65 FR 46443 et seq.) for the Draft NI PEIS. This format was intended to encourage public participation, regardless of the motivation for attending the hearing. It provided an opportunity for the participants to meet one another, exchange information, and share concerns with DOE personnel available throughout the course of each hearing to answer questions. The meetings were facilitated by an independent moderator to ensure that all persons wishing to speak had an opportunity to do so. Persons wishing to comment were selected at random from the audiences rather than according to the order in which they registered. This was accomplished by a random number drawing. In addition to the comment recorder stationed at the main hearing, a second recorder was available in an adjacent room to receive comments without the need to await selection at the main proceeding. The hearing format used promoted open and equal representation by all individuals and groups.

2027-3: One of the adjunct facilities for FTFF under Alternative 1, Restart FTFF, is the Fuel and Materials Examination Facility, FMEF, which was built during the late 1970s and early 1980s for the breeder reactor technology development program on the Hanford Site. Although FMEF has never been used, it has been maintained in a condition suitable for a future mission. Use of FMEF would require the construction of a new 76-meter (250-foot) emissions stack (See Section 4.3.3). The earliest that FMEF would be used under any of the alternatives described in this PEIS is FY 2005. This is adequate time for any modifications or upgrades to the facility to be made to ensure that it can be operated in a safe and environmentally sound manner.

Commentor No. 2027: W. P. Mead (Cont'd)
Public Safety Resources Agency

This entire area of the Draft PEIS should be reviewed and any decision about restarting FFTF in any role should be re-analyzed only after a new inspection audit of the adjunct facilities has been completed and reviewed by the public, including a new round of hearings, as was done for the possibility of restarting FFTF when the Department used the flawed 1988 inspection report to support that alternative.

3. Financial Analysis - Inaccurate assumptions and misleading FFTF decommissioning costs in non-FFTF alternatives:

The entire aspect of the Department's timing and presentation of its Financial Analysis is suspect. The Draft PEIS was released without any responsible cost analysis for the Alternatives, however the public was expected to make a responsible decision.

No one of sound mind would agree to a major expenditure without knowing the ultimate cost of the purchase, but apparently the Department now has a new definition of a "non-disclosure agreement" with the public. The public and NGOs should have been able to analyze the relative costs of the Alternatives as a part of the original document.

Releasing the cost analysis as an "after market" add-on (I received it after I had completed my testimony at the hearing in Portland, Oregon) can only lead to increased confusion among the participants. If the financial information was not available at the time the Draft PEIS was to be printed, then the document should have been postponed until the entire record had been assembled in a single package.

FFTF's decommissioning costs should be restricted to only those alternatives that postulate restarting FFTF (Alternative 1) or decommissioning FFTF (Alternative 5). FFTF's decommissioning costs should not be included in the financial impact statements of the other proposed alternatives.

These are entirely separate issues and should be treated as such. Instead, the Department under-estimated the actual cost of FFTF's restart in Alternative 1, while completely ignoring any costs for decommissioning FFTF after it completed its role.

This provided a false impression that Alternative 1 would be financially attractive. This variation of the "bait-and-switch" scheme was compounded by including FFTF's decommissioning costs in the other Alternatives. One may logically question why any of those Alternatives, which should be analyzed independently, were blessed with FFTF's decommissioning costs, when Alternative 1 completely ignored that input.

2027-3
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2027-4: NEPA does not require the cost of alternatives to be included in an EIS, although cost will be a factor in the decision-making process. A separate Cost Report was prepared to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. The Cost Report was mailed to interested parties on August 24, 2000 and made available on the NE website (<http://www.nuclear.gov>) and in the public reading rooms. For information purposes, about 730 people were mailed the Cost Report. DOE has provided a summary of the Cost Report in Appendix P in this Final NI PEIS.

To provide interested parties with additional time to comment on the Draft NI PEIS, the deadline for transmittal of comments was extended from September 11, 2000, to September 18, 2000 (65 FR 46444). As stated in the Notice of Availability (65 FR 46443 et seq.), DOE considered comments submitted after the close of the comment period to the extent practicable.

2027-5: Decommissioning FFTF, including associated costs and cleanup, is not within the scope of the NI PEIS. Before decommission activities were undertaken, DOE would prepare the appropriate environmental documentation to address the associated environmental impacts. Cost assessments would also be prepared.

DOE remains committed to cleaning up the Hanford Site independent of ultimate decision on FFTF. The amounts of wastes associated with decommissioning FFTF would be small. The schedule for cleaning up these other wastes would not be affected if FFTF were restarted.

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The logical questions arise: Is the Department's analysis so incompetent that it forgot that Alternative 1 will eventually require FFTF to be decommissioned, or are we to believe that they wrote the analysis with the assumption that the only way slant the analysis was to add FFTF's decommissioning costs to the base price of the other Alternatives in order to adversely influence the selection process against those alternatives, and in favor of restarting FFTF, per Alternative 1.

The cost analysis for the construction and operation of new accelerators to produce isotopes if FFTF is not selected for that mission should stand on their own merits. FFTF's decommissioning costs should not be included in those alternatives, but should instead be limited to Alternatives 1 and 5.

FFTF's decommissioning costs were not fully addressed in the cost analysis for restarting FFTF (Alternative 1). FFTF will require decommissioning costs regardless of when it completes its role within the nuclear infrastructure.

At best, the sooner that we decommission FFTF, the less it will cost. If Alternative 1 is selected, we can be assured that the decommissioning costs will increase exponentially by the time that its postulated mission is completed after another 35 years of service.

In 1998 I examined several "decommissioned" reactor sites that were much smaller and had produced much less contamination than FFTF has to date. In each of those cases, the utility that owned and operated the reactor had experienced much-higher costs than had been projected for decommissioning the reactor, with several subsequent expenditures for environmental remediation years after the facilities had closed. Those expenditures then had to be paid for from the utilities operating budgets for other projects.

In FFTF's case, based on the Department's historic emphasis on "production" missions, and its inability to even comply with its current binding cleanup and environmental remediation agreements, we would be highly skeptical of any assurances the Department gives in this matter. I am sure that others will include this discussion in their comments.

4. Failure to adequately advise the public on the environmental benefits of using accelerators instead of reactors to produce isotopes:

DOE's push to use a liquid-sodium-cooled reactor in an urban area is unconscionable. FFTF's predecessors have shown that such reactors can experience nuclear excursions even under the most rigid monitoring conditions and with safety standards in place. 

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2027-6

Response to Commentor No. 2027

2027-6: FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small. Prior to an FFTF restart, a revised safety analysis report and a probabilistic risk assessment would be prepared which would address any changes in plant configuration, operating conditions, and procedures. The revised safety analyses would be subjected to a thorough independent review process.

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In my testimony of February 12, 1998, at Hood River, Oregon, I cited a history of nuclear accidents in FFTF's predecessor reactors. The cited accidents were nuclear in origin, and in several cases destroyed the reactor's core and resulted in the permanent closure of those reactors.

I also cited scientific studies that stated that beyond the issue of a nuclear excursion within the reactor's core, that an even greater possibility existed for an explosion of a much greater magnitude if the liquid sodium came in contact with air or water: EBR-2's design was postulated for a maximum release equivalent to 300 pounds of TNT for the nuclear excursion; but the same design postulated that the chemical reaction of a sodium-air explosion could reach an explosive force equal to 10,000 pounds of TNT!

FFTF was built in the 1970s and has many of the design flaws of its predecessors. The litany of sodium-cooled reactors that have been catastrophically destroyed in the United States is legend: EBR-1 had an accidental core meltdown; EBR-2 was shut down in mid-cycle because it became unstable and the remainder of its tests could not be safely conducted.

In addition to EBR-1 and EBR-2, the SRE liquid-sodium-cooled reactor and the Fermi-1 reactor both experienced catastrophic core destruction that caused both facilities to be permanently shut down.

Fermi-1 was less than half the size of FFTF, yet its accident threatened the public to such an extent that for nearly an entire month the Atomic Energy Commission seriously considered evacuating 1.5 million persons who lived near it. FFTF is much larger than Fermi-1 and much closer to a major metropolitan area that could not be evacuated in time to protect a significant portion of that public.

Sodium-cooled reactors are inherently unstable and are much more prone to accidents than LWRs of the Three Mile Island and Trojan variety. The liquid sodium is highly corrosive and these reactors experience a much greater neutron flux, operate at very high temperatures, and experience embrittlement even beyond what is commonly found in commercial LWRs of similar age.

Experience has shown that this type of reactor is an accident just waiting to happen. FFTF is a fast-neutron **experimental** breeder reactor that should be retired now instead of trying to retrofit it to run another 35 years of production missions that it was not designed for. FFTF cannot safely produce the quantities of nuclear products that the Draft PEIS postulates during the course of its dangerously-extended lifetime. 

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Under Alternative 1, this threat to our safety would continue for another 35 years, after which the Department still has not included any specific plans or funding for decommissioning FFTF. This constitutes an irresponsible abuse of public trust, and is especially blatant in view that the Department has never honored its many promises to clean up the Hanford Reservation.

Alternative 3 would be a much better option to achieve similar production goals with a greatly reduced amount of waste while at the same time providing additional safety to the public.

5. Additional Production Capacity:

The Department has not satisfactorily demonstrated an actual need for additional isotopes for medical, industrial or use in space missions. NASA has recently changed its position on the need for additional Pu-238. This came after a review of the basis for the Department's announcement that NASA even needed to increase its supply of Pu-238. In fact, NASA didn't even know it was listed as a "needy agency" until after that information had been published in the Congressional Record.

Likewise, the Department's figures for the "need" for future medical isotopes are highly suspect. We have already proven that much of the perceived "need" can be obtained from domestic and foreign commercial vendors who can meet current and the projected future needs.

If a real need can be demonstrated for additional production capacity, then the Department should strongly consider building accelerators instead of relying on reactors.

Conclusion:

1. Decommission FFTF:

PSRA recommends that the Department select Alternative 5 with respect to FFTF's future role in the Nuclear Infrastructure. FFTF has exceeded its safety margin and we should decommission it now; before we experience a catastrophic accident with its incumbent harm to the public and the environment, and increased costs to mitigate the accident's damages.

The public cannot afford to rely on the Department's assurances with respect to health and safety issues. The Department has a thoroughly-documented history of placing a higher priority for "production" missions at the expense of operational safety. 

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2027-7: DOE notes the commentor's support for Alternative 3, Construct New Accelerator(s) which includes permanent deactivation of FFTF, instead of relying on reactors.

2027-8: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual rate of growth of medical isotope use is consistent with the Expert Panel findings. Section 1.2.1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other missions. While some existing

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This is an institutional mindset, as underscored by the recently-disclosed incidents of repeated violations of safety procedures, and the subsequent attempts to cover-up those violations at the Hanford Reservation.

The Department and its predecessor agencies have *for decades* tried to convince the public that Hanford is a safe place to work, that Hanford is a valuable asset to our region, and that its employees were one of the nation's healthiest workforces.

During the past sixteen years PSRA, other NGOs and non-DOE public agencies have challenged the Department's assumptions, but have been repeatedly told that we should rely on the Department's own analysis of its history, and that *our* extrapolation of those results was flawed. When pressed for answers to specific questions, the Department often responded that the specific information we needed was classified, but that if we had been able to review that information, that we would have reached the same conclusions as the Department.

We now know that the Department has concealed an entire body of information regarding the health and safety of its workforce. PSRA finds it ironic that many of the Department's employees, who for decades were saying that Hanford was a healthy and safe place to work, are now filing claims subsequent to the Department's admission that working in their production areas have adversely impacted the health of their workforce: The very people who were publicly saying that public health professionals were wrong, are now lining up for financial compensation now that the government has offered to pay for damages.

To date, this "retroactive cognition" has only impacted a few thousand persons (not counting the financial impact on the taxpayers who are expected to pay for the damages now that the Department has decided to admit that for several decades it could not accurately quantify its own data), but that could rapidly change if FFTF were restarted.

A decision to restart FFTF would be another example of the Department making a series of other erroneous assumptions, but with a much greater potential for widespread danger to the general public, instead of being limited to a relatively small segment of the regional workforce.

We cannot justify passively agreeing with the position that "The Department knows best..." The Department's production operations have been so mis-managed that if they were forced to run under the regulatory authority of the NRC, most DOE facilities would have been closed and others probably might not even have been allowed to be built or operated after their first inspection. 

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reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

DOE has taken the Expert Panel and NERAC report recommendations under consideration in developing the range of alternatives evaluated in the NI PEIS. These reports were made available to the public at the NI PEIS public information centers and on the Internet at www.nuclear.gov.

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Under the No Action Alternative, DOE would continue to purchase plutonium-238 to meet the space mission needs for the 35-year evaluation period considered in the NI PEIS. However, DOE recognizes that any purchase beyond what is currently available to the United States through the existing contract would likely require negotiation of a new contract and may require additional NEPA review.

The May 22, 2000, correspondence from NASA to DOE identifies that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, SRTG development efforts were stopped in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires one-third less plutonium-238 as its fuel source. However, the Stirling technology is

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The Department as an agency is in a chronic state of denial when it comes to the dangers of its operations. At Hanford, its history is one of a "cowboy mentality" about production methods when what is really needed is a more measured, analytical approach when dealing with the scientific principles that govern technical achievements: Working with nuclear processes that have a narrow safety margin of error require more of the type of approach taken by neurosurgeons, instead of playing the part of a rodeo clown.

For years the people of the Northwestern United States have heard Hanford's managers tell us how well they were doing in their efforts to clean up Hanford's environmental wastelands, yet we know that the Environmental Protection Agency has identified more than 1,000 potential "Superfund" chemical and/or radiologic sites within Hanford's boundaries, and that each of those sites will cost approximately \$100,000.00 just to characterize. Beyond that, the final remediation cost may reach \$100,000,000,000.00 and take another hundred years to complete, even though some areas of the Hanford Reservation will be closed for eternity.

We can't afford to grant the Department another chance to fail. In the event of a serious accident at FFTF or any of its adjunct facilities, a significant population of the region could be at risk. Data already exists that extrapolates an ever-increasing probability of such an accident happening at the FFTF if the Department restarts it for a 35-year production run.

If the Department is wrong in their safety assumptions, as we believe to be the case, it will be too late for the surrounding population: FFTF is too close to Richland and the surrounding Tri-Cities population centers to evacuate, given that the Department routinely needs several hours just to determine and understand that an accident really has occurred, that there were emergency procedures to be followed and notifications that it should have made.

Once the Department realizes that it has a response role, it then activates its resources to isolate workers from the public and assume a positive "spin-control" of the incident.

[Facetious Note in response to Ms. Brown's acknowledged facetious comment to Gerald Pollet at the Portland, Oregon Hearing: "Yes, that's true. But, on a positive note, those workers will never need to buy another flashlight or batteries during their lifetime."]

We don't need spin control: We need the Department to show more responsibility for its actions. 

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developmental and NASA has requested in a September 22, 2000, letter to DOE that large RTGs be maintained as backup. Section 1.2.2 of Volume 1 was revised to clarify plutonium-238 mission needs.

The major mission of FFTF would not be the production of plutonium-238. Rather, all three missions are of equal importance; no one mission is given priority in the NI PEIS.

2027-9: DOE notes the commentor's support for Alternative 5.

2027-10: DOE notes the commentor's viewpoint. The FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

DOE disagrees with the commentor's assertion of quoted statement made by Colette Brown to Gerald Pollet at the Portland hearing. The Portland hearing transcripts as well as the Portland scoping meeting transcripts were searched and there is no record of such a statement.

2027-11: The commentor's position regarding the restart of FFTF is noted. This NI PEIS provides estimates of the incremental potential human health impacts associated with a range of reasonable alternatives (Alternative 1 includes the restart of FFTF) evaluated for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology provides results based upon our current knowledge of the health impact of low doses of ionizing radiation and hazardous chemicals. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of each of the analyzed alternatives, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with each of the alternatives and with restarting FFTF would be small.

2027-12: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing

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Accidents such as the 1976 Am-241 column explosion at the 242-Z Building that dosed Harold MacClusky; the case of the Z-9 Waste Crib that approached criticality similar to the Soviet Union's criticality explosion of the late-1950s; and the dismaying series of errors of the 1990s all show that the Department has not been able to safely manage projects where known control procedures were in place, but were not followed.

If the Department is wrong in its assessment of FFTF's safety, it will do no good for it to admit that mistake after hundreds or thousands of persons have been exposed, and more land has been contaminated.

We have no faith in the accuracy of the Department's projections because they were created by the Department's analysts who, by the very nature of their positions, have a conflict of interest in that they want FFTF to resume a production mission.

We have seen several recent examples of the fallacy of forcing a potentially-dangerous technical/scientific project to conform to an arbitrary political time-line: NASA's Challenger explosion and its two recent Mars missions are merely the latest well-known examples. The Department has put the FFTF restart on a similar fast-track, but this time the effects of the potential accident would be directly targeted on the Northwest's population.

The appropriate time for "damage control" is right now: The Department should permanently decommission FFTF and end the very real jeopardy to the region's health and safety. Admitting that the Department's analysis was wrong after an accident will do absolutely no good for victims; the appropriate time for action is now, and Alternative 5 is the only responsible course of action that the Department can justifiable pursue.

Instead of bragging about how well the Department will do in a project 35 years from now, we would rather that it demonstrate its ability to follow safety procedures that currently exist, and demonstrate that it has the technical ability and institutional commitment to comply with the remediation schedules that are already in place, and to which it has already agreed.

2. Review the actual "need" for new production capacity:

Accelerators offer several safety and environmental advantages over reactors. If additional isotope production capacity is truly needed, then PSRA recommends that the Department pursue Alternative 3 to the exclusion of restarting FFTF or building new research reactor(s).

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2027-7

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Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

2027-13: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual rate of growth of medical isotope use is consistent with the Expert Panel findings. Section 1.2.1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the

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At the present time, PSRA cannot verify that an actual "need" for additional production capacity truly exists. We have several other domestic and foreign sources for the identified isotopes that can supply the cited quantities at a lower cost than the Department could achieve by either restarting FFTF or even by building two new accelerators per Alternative 3.

As with our comments regarding FFTF, we question the methodology of how the Department reached its conclusions that additional capacity was needed for the production of those isotopes. The studies appear to be flawed - or at the minimum, compromised - because they were produced by many of the organizations that have a vested financial interest in "creating" such a need.

Due to the Department's failure to include responsible studies that contradict its pre-determined position that additional production capacity is needed, the stated conclusion was a given. In reality, however, the Department's refusal to include data by recognized independent NGOs - including public health agencies - casts serious doubt on the validity of its assumptions about future needs in this area.

In this example, the Department should understand that just because it failed to include opposing data in its Draft PEIS does not mean that that body of knowledge will remain hidden. PSRA recommends that the Department revisit this question by reviewing the data that was submitted to it by NGOs that were not under contract to DOE, and then re-evaluate its analysis after including the full body of evidence.

3. Flawed methodology and administrative procedures have invalidated this version of the Draft PEIS:

The Public Hearing on the Draft PEIS was held on Tuesday, August 29, 2000; about ten months after the Department's last hearing in our area. We expected our comments to be included in the Draft, but the more than 700 unique comments that the Department received were dismissed in only four sentences.

The public did not receive the same treatment as was granted to the pro-FFTF restart community, which was allowed to include comments that had previously been proven to be false with respect to medical isotopes. Instead, the Department gave greater weight to information that was known to be false because that data was given in favor of restarting FFTF. ~~to~~

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suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

DOE has taken the Expert Panel and NERAC report recommendations under consideration in developing the range of alternatives evaluated in the NI PEIS. These reports were made available to the public at the NI PEIS public information centers and on the Internet at www.nuclear.gov.

2027-14: DOE notes the commentor's views and concerns regarding response to public scoping comments and the preparation of the NI PEIS. It is DOE policy to encourage public input on matters of regional, national and international importance as part of its commitment to facilitate a public participation process that is open and unbiased. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

While all comments received during the scoping periods for both the Plutonium-238 Production EIS and the NI PEIS are part of the

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The Department had nearly an entire year to produce this Draft PEIS and could have delayed even more if they needed more time to produce a completed document that included the information that the public needed in order to reach an intelligent decision.

Instead, they produced an incompetent collection of selected data to support their intent to restart FFTF, and guaranteed that the public could not responsibly analyze it because the Department failed to include two important components of the Draft: The cost analysis for the different Alternatives, and the analysis of the Nonproliferation Impact Assessment.

The *Cost Report for Alternatives* was transmitted with a cover letter dated August 24, 2000, but was not mailed to PSRA until August 29, 2000; the date of the hearing in Portland, Oregon.

The *Nuclear Infrastructure Nonproliferation Impact Assessment* was transmitted with a cover letter dated August 30, 2000, but was not mailed to PSRA until September 8, 2000. This meant that the Department did not release that information until after the date of the hearing in Portland, Oregon, and then with-held mailing the Assessment for another nine days.

Given that the Department apparently can't even manage a timeline that it established internally, and then can't even mail its own documents within a week of their release, we do not believe that it has satisfactorily demonstrated its ability to safely operate the FFTF reactor (which is much more technically complex than the DOE's postage meter machine).

We find it interesting to note that the Department has set an arbitrary time limit of when it will stop accepting response comments from the public, but that it failed to provide the data needed by the public to prepare those comments in a timely manner. A much better solution would have been to delay the distribution of the Draft until all data, including the Cost Report and the Impact Assessment and pertinent comments from non-FFTF restart contributors, had been compiled and then submit it as a single document with several included appendices.

The logical progression here would be to expect that the Department will next discard all public comments because they did not consider the Cost Report and/or Impact Assessment: A challenge by the Department on those grounds would be virtually unassailable because of the Department's own actions of delaying the needed information instead of including it in the report as a single package 

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Administrative Record for the NI PEIS, Section 1.4 of Volume 1 and Appendix N are intended to provide a summary of the issues and associated trends identified during the scoping process rather than a tabulation of comments by specific issue. It should be noted, however, that NEPA and CEQ regulations do not require an agency to include and respond to each scoping comment as is required for public comments on a Draft EIS. In preparing the NI PEIS, DOE carefully considered scoping comments received from the public. Any perceived discrepancy in the grouping of comments raising any one particular issue or set of issues is attributable to the manner in which they were originally categorized and counted. For example, a number of statements, letters, or resolutions signed by multiple persons, such as city council resolutions mentioned by the commentor, were received by DOE (both for and against FFTF restart) in response to the request for scoping comments. Each such comment document was considered and counted as a single comment in the NI PEIS comment tracking system. The Office of Nuclear Energy, Science and Technology works closely with the Office of the Secretary to keep him informed of the progress on the NI PEIS, including stakeholder input.

This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS. Further, DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives. DOE made every effort to obtain, analyze, and disclose all required information to make a decision on expanding nuclear infrastructure.

CEQ (40 CFR 1500 et seq.) and DOE (10 CFR Part 1021) implementation regulations do not require inclusion of cost and nonproliferation studies in an environmental impact statement. The basic purpose of the NI PEIS is to describe the alternatives under consideration for implementation (Section 2.5 of Volume 1) and the environmental impacts that would occur if these alternatives were implemented (Chapter 4 of Volume 1). Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. The

Commentor No. 2027: W. P. Mead (Cont'd)
Public Safety Resources Agency

In short, PSRA believes that the current version of the Draft PEIS is fatally flawed in both its accuracy and methodology, and we request that the process be reviewed and - if necessary - that a new round of public hearing be held to consider the new data.



W. P. Mead
Director, PSRA
Portland, Oregon

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associated cost report and nonproliferation report were made available to the public on August 24, 2000 and September 8, 2000, respectively. DOE mailed these documents to approximately 730 interested parties, and these reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in public reading rooms.

The public comment period for the NI PEIS was not arbitrarily set as stated by the commentor. The Council on Environmental Quality's (CEQ) "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act" (40 CFR 1506.10(c)) require that a minimum of 45 days be allowed for public comment on the Draft NI PEIS. As stated in the Notice of Availability (65 FR 46443 et seq.), the public comment period began on July 28, 2000 and continued to September 18, 2000. In preparing the Final PEIS, DOE has assessed and considered both oral and written comments received on the Draft PEIS during the public comment period and has responded to these comments in the Final PEIS. Volume 3 of the NI PEIS contains public comments received on the NI PEIS and DOE responses to those comments. Moreover, late comments were considered to the extent practicable.

Commentor No. 2027: W. P. Mead (Cont'd)
Public Safety Resources Agency

(B)

W. P. Mead, Director
 Public Safety Resources Agency
 P. O. Box 724
 Portland, OR 97207-0724

August 29, 2000

USDOE Draft PEIS Hearing
 (Verbal Comments Specific To FFTF-related Concerns.)

I'll submit our specific comments by mail as I normally do, but for the purposes of this hearing, I really have to congratulate the Department of Energy on the quality of their work in crafting a document to justify the continued existence of the FFTF Reactor, a reactor that has been in search of a mission for the past decade.

The quantity of maps, tables, diagrams and appendices in the Draft PEIS are all skewed in favor of supporting the Department's pre-determined decision to restart the FFTF regardless of that reactor's actual need within the Nuclear Infrastructure.

In fact, this Draft PEIS included so many exhibits that I fully expected to see the "26 8x10 color glossy photographs with circles, arrows, diagrams, and a paragraph on the back" that Arlo Guthrie told us about in Alice's Restaurant.

However, one thing that I failed to see was any competent discussion or citation of the thousands of specific comments that were made by citizens like us at these hearings, or even by tax-exempt professional public health and safety organizations in their written comments to the Department of Energy.

What I did see were citations of studies by nuclear industry organizations that favored FFTF's restart because they had a financial incentive to divert funding from Hanford's cleanup operations, to return to another 35 years of nuclear waste production and its' associated risks to our populations.

The package of documents I reviewed totaled 1,214 pages, weighed 6 pounds, and cost \$10.00 to ship to me via USPS Priority Mail. Hundreds of other persons, libraries, businesses and public service organizations received these, but no one was able to review any of the thousands of comments that had been made by individuals or organizations who opposed the FFTF's restart.

The Department cited "favorable" comments made by pro-nuclear groups in exhaustive detail, but dismissed our concerns even though the Department's own Draft PEIS identified Portland and Hood River as having the two highest levels of attendance of the

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 (Cont'd)

Response to Commentor No. 2027

2027-15: While all comments received during the scoping periods for both the Plutonium-238 Production EIS and the NI PEIS are part of the Administrative Record for the NI PEIS, Section 1.4 of Volume 1 and Appendix N are intended to provide a summary of the issues and associated trends identified during the scoping process rather than a tabulation of comments by specific issue. It should be noted, however, that NEPA and CEQ regulations do not require an agency to include and respond to each scoping comment as is required for public comments on a Draft EIS. In preparing the NI PEIS, DOE carefully considered scoping comments received from the public. Any perceived discrepancy in the grouping of comments raising any one particular issue or set of issues is attributable to the manner in which they were originally categorized and counted. For example, a number of statements, letters, or resolutions signed by multiple persons, such as city council resolutions mentioned by the commentor, were received by DOE (both for and against FFTF restart) in response to the request for scoping comments. Each such comment document was considered and counted as a single comment in the NI PEIS comment tracking system. The Office of Nuclear Energy, Science and Technology works closely with the Office of the Secretary to keep him informed of the progress on the NI PEIS, including stakeholder input.

The public hearing format was designed to be fair and unbiased. The public hearing format used was based on stakeholder input and was presented in the Notice of Availability (65 FR 46443 et seq.) for the Draft NI PEIS. This format was intended to encourage public participation, regardless of the motivation for attending the hearing. It provided an opportunity for the participants to meet one another, exchange information, and share concerns with DOE personnel available throughout the course of each hearing to answer questions. The meetings were

Commentor No. 2027: W. P. Mead (Cont'd)
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ten Scoping Meetings that were held in the United States in 1998 and 1999 [Vol-2; Table N-1]. The Department acknowledged receiving "more than 700 unique comments" but dismissed them in four sentences of the Draft PEIS.

At other DOE public hearings I've often heard speakers say that the citizens of Portland must understand that nuclear production issues are really a matter of national security, and that we must take the long view of what's good for the country, instead of simply concentrating on what's good for our region. I noticed that many of those speakers were "Three Hour Immigrants" who had been bussed into Portland from the Tri-Cities to pack our hearing and then return to their jobs at Hanford: I saw them get off the bus, they wore their union hats and jackets while they testified, and I watched them get back onto the bus to return to Richland.

Why not take another, untarnished, view of true National Security instead of buying into the company line? True "National Security" is the ability to provide a safe and healthy environment in which to live. We have a horrendous health and safety problem at Hanford. Let's clean that up and then bring the rest of the Department's sites and the rest of the United States up to the standard of living that we have a right to expect in the Northwest.

We all know that the Columbia River flows through Hanford. That's the water that we drink. We use it to irrigate our crops, prepare our food, and wash our clothes and dishes. It's a National Treasure that we can't afford to contaminate, yet we have in the name of "National Security."

The people of Valemount, British Columbia at the northern reach of the Columbia near Jasper National Park could not imagine what we've done to their river. Nor could the people of Canal Flats, 180 miles to the south where the river actually begins after it makes it's U-turn around the Selkirk Mountains to its headwaters in a beautiful area of the Canadian Rockies.

What they could believe, though, is that once again an industry with a vested financial interest has bought the support of a government at the expense of the region's residents.

In the 1880s the people of Montana and Southern British Columbia dug a canal that was less than a mile long to join the Columbia and the Kootenai Rivers. The Canadian Pacific Railroad, a private corporation that had a government-issued transportation monopoly at that time, had the Canadian Government close the canal after only two boats had made the transit.

This is not really much different from what's happening today with Hanford: The nuclear industry wants to protect its jobs at

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facilitated by an independent moderator to ensure that all persons wishing to speak had an opportunity to do so. Persons wishing to comment were selected at random from the audiences rather than according to the order in which they registered. This was accomplished by a random number drawing. In addition to the comment recorder stationed at the main hearing, a second recorder was available in an adjacent room to receive comments without the need to await selection at the main proceeding. The hearing format used promoted open and equal representation by all individuals and groups.

2027-16: DOE notes the commentor's opinions and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. FFTF restart would not impact the schedule or available funding for existing cleanup activities.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Commentor No. 2027: W. P. Mead (Cont'd)
Public Safety Resources Agency

the taxpayer's expense and the Department of Energy is a willing partner in destroying the slight chance we have of cleaning up their mess.

An example will underscore just how incestuous this relationship is: FFTF is a federally-owned reactor on a federal enclave, but in an internet search on "fftf" you will find the following statement:

"Fast Flux Test Facility (FFTF) - Welcome. This is the official website of the Fast Flux Test Facility (FFTF), the U.S. Department of Energy's 400-megawatt test reactor."

Again, this is a DOE-owned reactor on a federal reservation, but the official URL is "http://www.fftf.org" -- not ".gov."

".Org for "Organization," not ".gov" for "Government" as is standard practice. By this time next year both FFTF and DOE will have a common URL: ".Com" for "Commercial" and the people of the NorthWest will qualify for ".WBH" for "We've Been Had."

FFTF's site has links to five private nuclear medicine sites, and ten links to sites such as the "Nuclear Energy Institute" and "NucNet," but it has no links to any of the public interest organizations here or even to the State of Oregon's Office of Energy.

The Department of Energy is very quick to state that no funding will be diverted from cleanup actions at Hanford, regardless of the decision to restart the FFTF reactor or any of their other facilities.

This is absolutely false.

The Department has diverted more than a hundred million dollars of cleanup funding just to keep the FFTF reactor in Standby status while they fabricate a "need" to restart it.

The truth at Hanford is that the Department of Energy and its contractors have never accomplished a single Environmental Health and Safety remediation project within their announced budget and time frame, not even when the Department's internal "peer review" process underscored the importance of achieving those goals.

The Department's predecessor agencies began creating waste at Hanford in the early 1940s. Forty-five years later I heard a DOE Manager testify that he was very proud of their record of solidifying tank wastes, and he cited an example of the previous year's accomplishments. What he failed to mention, however, was that the entire year's project actually solidified less than a 

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(Cont'd)

Response to Commentor No. 2027

Commentor No. 2027: W. P. Mead (Cont'd)
Public Safety Resources Agency

single day's production of liquid high-level radioactive wastes from Hanford's operations at the time of his testimony.

The Department should address the real issue of National Security as it relates to Hanford's production operations: That is, it must provide for the security of future generations here on earth instead of inventing a reason to pollute space. NASA didn't even know that the Department had decided it needed more Plutonium-238 for space missions until it was published in the Federal Register on September 15, 1999.

When Ms. Colette Brown, the Department's person who is managing this PEIS process, was questioned about this on October 19, 1999, she never answered the question she had been asked about whether NASA had requested additional Plutonium-238 beyond what was currently available for the three cited missions.

What is really needed is a national commitment to clean up the wastes that we've already created at Hanford, which has been identified as having approximately 1,000 separate areas of radiological and chemical contamination that qualify for the EPA's Superfund cleanup status.

We have a 55-year history of waste production at Hanford and we have not been able to contain, manage or isolate that waste even when using "State-of-the-Art" technology. If we can't clean up the present mess, how can we possibly justify creating even more waste when we will need to contain, manage and isolate that legacy from our descendants for the next 10,000 years?

In 1985, while testifying at another DOE Hearing, I presented a timeline showing the accepted 10-half-lives decay chain of Hanford's radiologic contamination to put this argument into an understandable perspective. At the rate of 1 inch per 100 years, that timeline - which was produced on a roll of paper towels - was 125 feet long and, when un-rolled, stretched down an entire aisle of the Bonneville Power Administration's Auditorium.

Make no mistake about it, the Department's Draft PEIS was written with one objective: to justify the restart of Hanford's FFTF Reactor as the core component of a new generation of nuclear production operations. Much of the materials that would be produced or irradiated at Hanford would require shipments of several thousand miles each way from their initial storage areas to this reactor - which really is not a good candidate for those types of operations - and then back to the east coast for processing before they could be shipped to the end user somewhere else in the United States.

Regardless of how you cook the books, restarting the FFTF Reactor cannot be justified on the basis of economic, social, medical, 

2027-16
(Cont'd)

2027-17

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2027-20

Response to Commentor No. 2027

2027-17: Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Under the No Action Alternative, DOE would continue to purchase plutonium-238 to meet the space mission needs for the 35-year evaluation period considered in the NI PEIS. However, DOE recognizes that any purchase beyond what is currently available to the United States through the existing contract would likely require negotiation of a new contract and may require additional NEPA review.

The May 22, 2000, correspondence from NASA to DOE identifies that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, SRTG development efforts were stopped in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires one-third less plutonium-238 as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000, letter to DOE that large RTGs be maintained as backup. Section 1.2.2 of Volume 1 was revised to clarify plutonium-238 mission needs.

The major mission of FFTF would not be the production of plutonium-238. Rather, all three missions are of equal importance; no one mission is given priority in the NI PEIS.

NASA was informed about the preparation of the NI PEIS and received the Draft NI PEIS for review.

Commentor No. 2027: W. P. Mead (Cont'd)
Public Safety Resources Agency

environmental, transportation, health, safety or national security arguments. It's the wrong type of reactor to use in many of the postulated roles. The only reason FFTF is being considered is because it is already at Hanford and the nuclear industry wants to create jobs at that site.

I'm all in favor of putting those folks back to work, but it's time for the DOE to accept its responsibility for Hanford's waste.

We have a clear message for the Department:

WE support you financially:

WE pay your bills and WE buy you your toys.

YOU broke those toys and acted inappropriately:

YOU lied when we asked you to tell us the truth, and YOU didn't keep your promises when you said that you would clean up Hanford.

You have betrayed our trust and for that,

YOU ARE GROUNDED!

And you can't go out and play with the reactor until AFTER you have cleaned up your mess!

W. P. Mead
 DIRECTOR, PSRA
 PORTLAND, OR.

Response to Commentor No. 2027

2027-18: See response 2027-16.

2027-19: The NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR 1500 through 1508 and 10 CFR 1021, respectively). In the NI PEIS, DOE has analyzed each environmental resource area in a consistent, unbiased manner across all the alternatives to allow for a fair comparison among the various alternatives.

2027-20: While there are differences in the total shipping distances and risks among the alternatives, risks from transportation are small for all of the alternatives. Figures and tables in Section 2.7.1.6 of Volume 1 summarize transportation risks and provide comparisons of transportation risks among alternatives and among options within alternatives. Transportation risk is only one factor in DOE's decision. Accordingly, DOE has identified its preferred alternative in Section 2.8 of Volume 1 and included a discussion of DOE's reasons for selecting it.

Commentor No. 2028: J.F. and Dorothy Scheppke

NI PEIS Toll_Free Telephone

9/21/00

J.F. and Dorothy Scheppke
909 147th Place
Bellevue, Washington 98007

Yes, I would like to tell you about the FFTF, here in Washington state. My wife and I are both against this policy of the re_start. Our names are J.F. and Dorothy Scheppke, 909 147th Place NE, Bellevue, Washington 98007. Thank you.

|| 2028-1

Response to Commentor No. 2028

2028-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 2029: Tom Clements
Nuclear Control Institute

From: Tom Clements[SMTP:CLEMENTS@NCI.ORG]
 Sent: Thursday, September 21, 2000 1:09:33 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Subject: PEIS submission
 Auto forwarded by a Rule

To Whom it Concerns:

Although past the official closing time for comments, I request that you accept the following for the record of the PEIS on isotope production/FFTF restart. I mentioned this issue in my comments submitted on September 18, 2000 but also would like that the news release on use of the Annular Core Research Reactor be included in the record and that the contents of the news release be addressed in the final PEIS.

Tom Clements
 Nuclear Control Institute

September 27, 1996
 It's official: Sandia will produce moly_99 at ACRR

First radiopharmaceutical samples to be generated next year
 By John German, Lab News Staff
http://www.sandia.gov/LabNews/LN09_27_96/acrr.html

Sometime next year, a US hospital likely will use the first batch of medical radioisotopes produced at Sandia to treat or diagnose a patient with cancer.

DOE issued its Record of Decision Sept. 11 to make Sandia the sole US producer of molybdenum-99, one of nuclear medicine's most widely used radioisotopes. The Labs' Annular Core Research Reactor (ACRR) in Area 5, where the moly-99 is to be manufactured, may be called upon to produce other radiopharmaceuticals as well, including iodine-125, iodine-131, and xenon-133.

2029-1

Response to Commentor No. 2029

2029-1: DOE notes the commentor's views. As discussed in Section 1.7 of the NI PEIS, the "Final Environmental Impact Statement, Medical Isotopes Production Project: Molybdenum-99 and Related Isotopes" analyzed the proposed establishment of a domestic capability to produce molybdenum-99 and related medical isotopes such as iodine-131, xenon-133, and iodine-125. At the time this review was conducted, the U.S. supply of molybdenum-99 depended on the production capacity of one aging reactor in Canada, so DOE proposed this action to ensure a reliable domestic source for this vital isotope. The range of reasonable alternatives evaluated in this EIS included facilities at SNL, LANL, ORNL, and INEEL. In the subsequent Record of Decision, DOE selected the ACRR and the Hot Cell Facility at SNL for the production of molybdenum-99 and the related isotopes, with target fabrication to be conducted at LANL. However, since that time, the diversity and reliability of world supply of molybdenum-99 have increased. DOE has determined that, because the vulnerability in supplies of molybdenum-99 has sufficiently diminished, the selected SNL facilities should be further developed for molybdenum-99 production using private funds. Negotiations toward that end are ongoing. Until an agreement is reached, the reactor and hot cell facilities are available for emergency molybdenum-99 production should the need arise. The reactor is also being used for the production of other isotopes, for example iodine-125, and has been made available on a services basis to serve defense missions. As such, the ACRR is currently configured to support DOE Office of Defense Programs pulse testing missions. This configuration is compatible with reactor operations for the production of isotopes.

Commentor No. 2029: Tom Clements (Cont'd)
Nuclear Control Institute

PRODUCTION SITE _ Jeff Wemple of Isotope Project and Compliance Initiatives Dept. 9361 peers toward the "hot cell" of the ACRR where targets are placed for irradiation. To make molybdenum_99, sealed target tubes coated on the inside with uranium_235 are placed in the reactor's hot cell and irradiated for several days. (Photography by Randy Montoya) </italic>

The decision culminates a two_year selection process that began in September 1994 when DOE announced it intended to consider the ACRR as a potential site for medical radioisotope production. At that time, DOE began studying the ACRR and three alternative facilities __ at Oak Ridge National Laboratory, Idaho National Engineering Laboratory, and Los Alamos National Laboratory __ as possible production sites, with the ACRR being its "preferred site."

"I am pleased that this important work will be done at Sandia," said US Sen. Pete Domenici (R_N.M.). "Moly_99 is essential to modern medicine, and the United States was facing a crisis by relying on foreign sources that were becoming increasingly unreliable."

DOE completed its NEPA (National Environmental Policy Act) assessment, including a full Environmental Impact Statement (EIS) of the ACRR, this May to ensure that planned production operations at Sandia would comply with all applicable environmental regulations. The announcement naming the ACRR as the selected facility followed a required post_NEPA_assessment public comment period.

The Record of Decision also names Los Alamos National Laboratory to fabricate the special targets necessary for moly_99 production.

Domestic supply critical

In the US, at least 40,000 diagnostic and therapeutic medical procedures each day, and nearly 100 million laboratory tests each year, require the use of medical radioisotopes such as moly_99.

Response to Commentor No. 2029

Commentor No. 2029: Tom Clements (Cont'd)
Nuclear Control Institute

The radioisotope has not been produced in the US since 1989, partly because of the complex regulatory environment and costs associated with reactor operations.

Currently, the entire US supply of moly_99 comes from a reactor in Canada operated by Canada's Atomic Energy Commission Limited (AECL), which produces about 90 percent of the world's medically important radioisotopes. The 1950s_era reactor may be nearing the end of its productive life, however, and no backup reactor is yet being built. (There are tentative plans to construct a new Canadian reactor for this purpose.)

Because medical radioisotopes decay rapidly (moly_99 has a half_life of 67 hours), their supply must continually be replenished. (See "Radioactive isotopes for medicine" below.) US radiopharmaceutical companies contend that a two_week interruption in production would bring most US nuclear medicine to a standstill. In 1990, Congress requested that DOE develop a reliable domestic source of moly_99.

Sandia's ACRR was selected for several reasons, says Dick Coats (9360), medical radioisotopes program manager, including the Labs' 30 years of experience designing and operating nuclear reactors and its ability to operate the reactor continuously. (See "ACPR to ACRR __ a brief history" below.)

ACRR conversion underway

To make moly_99, the targets __ sealed stainless steel tubes coated on the inside with uranium_235 __ will be placed in the reactor, where each will be irradiated for several days. As many as 37 targets can be placed in the reactor at one time. A few targets will be added and removed each day.

After a cooling period, each target will be loaded into a cask and transported to Sandia's Hot Cell Facility. The target will be opened inside a containment area, gases bled off, and an acid solution

Response to Commentor No. 2029

Commentor No. 2029: Tom Clements (Cont'd)
Nuclear Control Institute

added to dissolve uranium and other fission products. For each target, as much as 800 curies of moly_99 will be precipitated from solution.

After purification, the moly_99 will be shipped by commercial aircraft to medical suppliers. Small quantities of unwanted fission byproducts will be solidified in concrete to prevent leaching. The concrete will be placed in drums for disposal at the Nevada Test Site.

Modifications to the ACRR for radioisotope production will include removal of a tube in the center of the reactor now used for dry irradiation space and addition of a grid for irradiating targets. The first moly_99 samples produced at Sandia are scheduled to be delivered early next year to the Food and Drug Administration (FDA) for testing. The Labs hopes to begin shipping quantities of FDA-approved moly_99 to pharmaceutical companies by late next year.

Radioisotopes produced in the ACRR will be sold by DOE to suppliers at prices comparable to market prices. Initially, revenues received by DOE will only partially offset the cost of production. Later, however, any profits gleaned from improved efficiency or market growth will go directly to the US Treasury. Production eventually could be transferred to private industry.

Radioactive isotopes for medicine

Medical radioisotopes are unstable chemical elements that decay rapidly to relatively stable forms by emitting radiation. Their relatively short lifetimes make them useful for treating and diagnosing patients while minimizing their radiation doses.

The primary medical radioisotope that will be produced at Sandia is molybdenum99. Moly_99 is the precursor, or "parent," of technetium_99m, one of nuclear medicine's most widely used radioisotopes.

Response to Commentor No. 2029

Commentor No. 2029: Tom Clements (Cont'd)
Nuclear Control Institute

Hospitals typically receive quantities of moly_99, which decays in a matter of days to become technetium (moly_99 has a half_life of 67 hours).

Because technetium emits a unique and easily detectable form of radiation, hospitals use specially designed dyes and other technetium_containing substances (injected or ingested into a patient's bloodstream or tissues) to create images of internal organs or other areas of the body. Technetium_99's six_hour half_life means it disappears rapidly from a patient's body.

Radioisotopes also are commonly used for detection and minimally invasive treatment of cancer and other diseases.

ACPR to ACRR __ a brief history

During the remainder of 1996 and into next year, Sandia's Annular Core Research Reactor will be converted to fully support the first large_scale production of molybdenum99 in the US. The program is the latest in a long series of high_profile projects for the reactor.

The ACRR was first constructed at Sandia in 1969 as the Annular Core Pulse Reactor, so named because of its intended role in weapons testing. Different weapons components __ such as arming, fuzing, and firing devices __ were treated with pulses of gamma radiation or neutrons to determine their ability to survive an atmospheric nuclear blast. Every weapon design in the US nuclear stockpile has been certified by the ACRR.

In the late 1970s the program's focus changed, and in 1979 the ACPR became the ACRR after some major modifications associated with changing the reactor fuel to a unique high_performance material and design. The reactor was then used to establish safety standards for nuclear reactors through the Nuclear Regulatory Commission reactor safety research program, as well as to continue to provide Defense Programs support with its enhanced performance capacity.

Response to Commentor No. 2029

Commentor No. 2029: Tom Clements (Cont'd)
Nuclear Control Institute

The 1980s and early '90s saw another change in focus, this time to testing nuclear rocket fuels and reactor-driven laser systems. The conversion to moly-99 production will be the reactor's first foray into radiopharmaceuticals.

If you have questions or need further information, contact Rod Geer by e-mail at: wrgeer@sandia.gov

Response to Commentor No. 2029

Commentor No. 2030: Carol Hanson

From: Carol hanson
[SMTP:CAROL_HANSON@PARKROSE.K12.OR.US]
Sent: Thursday, September 21, 2000 7:17:06 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: I oppose the restart of the FFTF Nuclear Reactor at Hanford!!!!
Auto forwarded by a Rule

I oppose the restart of the FFTF Nuclear Reactor at Hanford!!!!

2030-1***Response to Commentor No. 2030***

2030-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 2031: Donald E. Wood

From: p53bhw@gocougs.wsu.edu%internet
[SMTP:P53BHW@GOCOUGS.WSU.EDU]
Sent: Friday, September 22, 2000 12:06:51 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF Restart
Auto forwarded by a Rule

Dear Ms. Brown:

Please approve the restart of the FFTF. The potential for saving many lives with medical isotopes fully justifies any costs involved.

Donald E. Wood, Ph.D.
114 Spengler St.
Richland. WA 99352

2031-1

Response to Commentor No. 2031

2031-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 2032: Marjorie Westman

NI PEIS Toll_Free Telephone

9/18/00

Marjorie Westman
123 McKinley
Burleith, WA 98233
360_757_1245

Hello. My name is Marjorie Westman. I live at 123 McKinley, in Burleith, Washington, that's 98233. I'm calling the Department of Energy to hope and pray that you will shut down the Fast Flux Facility. This is an abomination that we should not be permitting. It is simply the most unethical thing. We were so blase in the beginning that we assumed that we could dispose of nuclear waste without any problem and look where it is now. The irony of beginning something which by all reports is really not necessary is an act of serious irresponsibility. I do hope that this is something that you will not permit to happen. If you need my number, my phone number is 360_757_1245. Thank you very much.

2032-1

2032-2

2032-3

Response to Commentor No. 2032

- 2032-1:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2032-2:** DOE notes the commentor's concern regarding waste generation and disposition. The restart of FFTF or any of the other proposed alternative facilities would not impact the schedule or available funding for existing cleanup activities at Hanford, INEEL, or ORR. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.
- 2032-3:** Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

Commentor No. 2033: Robert Hobatch

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

76



Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

- 1) THE RADIO ISOTOPES CAN BE MANUFACTURED AT OTHER FACILITIES SAFER & CHEAPER
- 2) NASA HAS STATED IT DOESN'T NEED A NEED FOR P238.
- 3) WE DON'T NEED MORE NUCLEAR REACTORS

Name ROBERT HOBATCH
Address 7746 SE 17TH
City, state PORTLAND, OR Zip 97202

2033-1

2033-2

2033-1

Response to Commentor No. 2033

2033-1: DOE notes the commentor's opposition to Alternative 1, Restart FTF.

2033-2: Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists.

A May 22, 2000, correspondence from NASA to DOE identified that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Commentor No. 2035: Mildred McElhaney

September 17-2000

*Colette E. Brown
71E 50
US Dept. of Energy
Hermantown, MD 20874*

*I wish to comment regarding the
Hanford Nuclear Site in my state.*

*We need to clean up the wastes &
not put any more people in jeopardy.
We should not start any new nuclear
activity. Lets honor the Tri-Party
Agreement & get on with the
clean-up.*

Sincerely

*Mildred K. McElhaney
5806 - 242nd S.W.
Mountlake Terrace WA 98043
425-673-0680*

2035-1

Response to Commentor No. 2035

2035-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Commentor No. 2036: Marion Olson

Marion Olson
 23904 84th Ave.W.
 Edmonds, Wa 98026

U.S. Dept of Energy

Hanford is supposed to be cleaned
 up, not go into production
 I wish to permanently deactivate FFTF
 with no new missions!

Sincerely,
 Marion Olson

Sept. 18, 2000

2036-1

2036-2

Response to Commentor No. 2036

- 2036-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.
- 2036-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2037: Matthew Levinger

Response to Commentor No. 2037

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

I urge you not to restart the FFTF at Hanford, because it is unnecessary and because it poses serious environmental danger.

2037-1
2037-2
2037-3

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Matthew Levinger
 Organization: Lewis & Clark College
 Home/Organization Address (circle one): Dept. of History, Lewis & Clark
0615 SW Palatine Hill Rd.
 City: Portland State: OR Zip Code: 97219
 Telephone (optional): 503-768-7449
 E-mail (optional): _____

COMMENT PERIOD EXTENDED

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

- 2037-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 2037-2:** Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.
- 2037-3:** The concerns expressed in the comment with respect to the potential impacts associated with FFTF restart are noted. The environmental impacts from operation of the Hanford facilities during normal operations and from postulated accidents are presented in Section 4.3 of the draft NI PEIS. The assessments were made using well established and accepted analytical methods, as described in Appendixes G through L. The analytical methodology is conservative by nature; the actual impacts to the environment would be expected to be less than those calculated. All impacts have been shown to be small. No fatalities among workers or the general public would be expected over the full 35-year operational period. The impacts to the biosphere (air, water, and land) are also seen to be small.

Chapter 2—Written Comments and DOE Responses

Commentor No. 2038: Paul Rittmann

Draft PEIS Comment Form

I think the FFTF should be used to make isotopes for diagnostic and therapeutic use at medical facilities

Paul Rittmann

2038-1

Response to Commentor No. 2038

2038-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.



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- attending public meetings and giving your comments directly to DOE officials
returning this comment form to the registration desk at the meeting or to the address below
calling toll-free and leaving your comments: 1-877-562-4593
faxing your comments toll-free to: 1-877-562-4592
commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Paul Rittmann

Organization:

Home Organization Address (circle one): 5001 W Skagit Ave

City: Kennewick State: WA Zip Code: 99336

Telephone (optional):

E-mail (optional): Rittmanns@AOL.com

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Collette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
toll-free telephone: 1-877-562-4593 • toll-free fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



Draft PEIS Comment Form

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



I strongly support the restart of FFTF for medical isotope production. To do otherwise is unconscionable and will bring many Americans to pain, suffering and early deaths from cancer.

2039-1

2039-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): R L KATHREN

Organization: SELF

Home/Organization Address (circle one): 137 SPRING

City: RICHLAND State: WA Zip Code: 99352

Telephone (optional): 509-375-3316

E-mail (optional): KATHREN@TULIO.COM

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Collette E. Brown, NE-50 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874 Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592 E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

Commentor No. 2040: Kara Mathiason

Draft PEIS Comment Form

Shut down the reactor! Its a major environmental hazard, ridiculously expensive, it must be dismantled. The neutron rich accelerator is more cost effective. The accelerator is a much simpler safer plan. It makes plutonium 238, medical isotopes, can be used for neutron scattering research, as well as other neutron research projects.

2040-1

2040-2

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Kara Mathiason

Organization: none

Home Organization Address (circle one): 901 Melody Ln

City: Enumclaw State: WA Zip Code: 98022

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Collette E. Brown, NE-60
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Response to Commentor No. 2040

2040-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, as well as Alternative 3, Construct New Accelerator(s). It should be noted that permanent deactivation of FFTF is a part of Alternative 3. DOE also notes the commentor's opinion relative to costs and environmental impacts of restarting FFTF.

As identified in the Cost Report, the listed cost for each alternative is, by itself, not sufficient information to provide a mission decision. Each of the irradiation facility alternatives under consideration can meet various portions of DOE's identified need for expanded isotope production and nuclear research and development. The capability of each irradiation facility to support the proposed expanded mission areas would determine the extent that DOE would be able to meet its stated objectives. The high energy accelerator (Alternative 3) would generate neutrons by spallation, solely for the production of plutonium-238. Alternative 3 would also require the construction of a low-energy accelerator (cyclotron) to produce moderate quantities of medical isotopes through proton-target interactions. Nuclear reactors, such as the FFTF (Alternative 1) could produce a wider range of medical isotopes, as well as plutonium-238, through neutron interactions with appropriate targets. Each facility has its own technical advantages and disadvantages. The relative capabilities of each alternative, the degree to which each alternative satisfies policy and programmatic objectives, as well as the relative cost of alternatives will be factors in the Record of Decision.

2040-2: See response to comment 2040-1.



Commentor No. 2041: Scott Finrock

Response to Commentor No. 2041

Draft PEIS Comment Form

*I support restart of the FFTF
for production of medical isotopes.*

2041-1

2041-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Scott Finrock

Organization: _____

Home Organization Address (circle one): _____

2169 Clearview
City: Richland State: WA Zip Code: 99352

Telephone (optional): _____

E-mail (optional): Scott.Finrock@ambnet.com

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20814
Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Commentor No. 2042: Marcel Bollinger

Draft PEIS Comment Form

I believe the FFTF is a viable reactor for medical isotope production and support its use for that purpose.

2042-1

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
returning this comment form to the registration desk at the meeting or to the address below
calling toll-free and leaving your comments: 1-877-562-4593
faxing your comments toll-free to: 1-877-562-4592
commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Marcel Bollinger

Organization:

Home/Organization Address (circle one): 2630 171st Ave SE

City: Bellevue State: WA Zip Code: 98008

Telephone (optional):

E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



7/12/00

Response to Commentor No. 2042

2042-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 2043: Norm Knuter

Response to Commentor No. 2043

Draft PEIS Comment Form

I SUPPORT THE RESTART OF FFTF FOR THE PRODUCTION OF MEDICAL ISOTOPES AND FOR OTHER MISSIONS IN THE NATIONAL INTEREST.

2043-1

2043-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
returning this comment form to the registration desk at the meeting or to the address below
calling toll-free and leaving your comments: 1-877-562-4593
faxing your comments toll-free to: 1-877-562-4592
commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): NORM KNUTER

Organization:

Home/Organization Address (circle one): 3802 S. GREEN ST.

City: KENNEWICK State: WA Zip Code: 99337

Telephone (optional):

E-mail (optional): nknuter@3-cities.com

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-30
U.S. Department of Energy • 15901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Commentor No. 2044: Joan Crooks Washington Environmental Council



September 15, 2000

Colette E. Brown
US Department of Energy
M/S NE-50
19901 Germantown Road
Germantown, MD 20874-1290

RE: DOE Plan to Restart FFTF

Dear Ms. Brown,

The Washington Environmental Council (WEC) is a statewide coalition of 90 member groups and thousands of individuals working to protect, restore, and enhance the environment of Washington State. For 33 years we have worked on a wide range of environmental issues, including preventing pollution and protecting public health.

The U.S. Department of Energy is considering a plan to restart the FFTF Nuclear Reactor at Hanford to produce research medical isotopes and plutonium-238.

The Washington Environmental Council strongly opposes this plan for the following reasons:

Restart of the reactor would:

- Put Hanford back into plutonium production, creating more liquid waste for leaking, high-level nuclear waste tanks;
- Likely delay Hanford clean-up further threatening the Columbia River; and
- Increase the danger of accidents and further nuclear contamination in the Pacific Northwest.

The Environmental Impact Statement released by the DOE does not include important information, such as the following:

- Future demands for medical isotopes can be met using other facilities; and
- Future needs for plutonium to power NASA space missions can be met using existing supplies, supplemented by foreign sources if necessary.

OLYMPIA

(360) 357-6548

SEATTLE

615 Second Avenue, Suite 380, Seattle, WA 98104-2245

SPOKANE

(509) 747-3643

wec@wecprotects.org (206) 622-8103 FAX (206) 622-8113 www.wecprotects.org

Alpine Lakes Protection Society
American Association of University Women
Association of Bainbridge Communities
C.A.R.E.
Cascade Bicycle Club
Center for Environmental Law and Policy
Chelan River Council
Daughters of Harbor Creek
Givers for Clean Air
Clark County Natural Resources Council
Clatskanie Fly Fishers
Columbia-BiRegional Education Project
Consumers Union for Food Safety
Down Weich
Dufur Hills Nat'l Area Assoc.
Dulles Database
Environmental Law Caucus
Gangas School of Law
Everett Garden Club
Evergreen Islands
Federation of Fly Fishers
Seahead Committee
Floating Homes Association
Friends of Chestnut
Friends of Discovery Park
Friends of Grays Harbor
Friends of the Aquifer
Friends of the Columbia River
Friends of the Linnon Forest
Friends of the Methow
Friends of the San Juan
Friends of the West Naches Wetlands
Grays Harbor Audubon Society
Hood Canal Environmental Council
Hsqahq Alps Trails Club
Knap Range Conservation Group
Knap Audubon Society
Lower Columbia Basin Audubon
Marine Environmental Consortium
Methow Valley Citizens Council
MOUNTAINVIEW
Nogahly Delta Association
North Cascades Audubon Society
North Cascades Conservation Council

North Central Washington Audubon Society
Northwest Energy Coalition
Northwest Fly Angler
Oak Harbor Garden Club
Okanogan Highlands Alliance
Olympic Environmental Council
Olympic Park Associates
Olympic Peninsula Audubon Society
Organization to Preserve Agricultural Lands
Pacific Biodiversity Institute
Pacwest Outwater Environmental Institute
Pond Works Environmental Team
Point Roberts Resettlement Commission
PPO - Salmon
Protect the Peninsula's Future
Planning
Puget Soundkeeper Alliance
Republicans for Environmental Protection
Rivers Council of Washington
Save A Valuable Environment
Save Lake Sammamish
Save Our Summers
Save the Woods on Saragosa
Seattle Audubon Society
Seattle Journal for Quality Living
Skagit Audubon Society
Spokane Audubon Society
South Sound Fly Fishers
Sustainable Foundation - Washington Chapter
Tahama Audubon Society
The Bicycle Alliance of Washington
The Lands Council
Transposition Choices Coalition
Yanowier Audubon Society
Washington Fly Fishing Club
Washington Native Plant Society
Washington Ski Touring Club
Washington Trailers Association
Waste Action Project
Washnet Defense Fund
WEAF
Wenatchee Valley Fly Fishers
Wilderness Society
Yakima Valley Audubon Society

2044-1

2044-2

2044-3

2044-4

2044-5

Response to Commentor No. 2044

2044-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2044-2: The use of proposed alternative facilities associated with processing neptunium-237 targets would have no impact on schedules or available funding for high-level radioactive waste programs at either Hanford or the INEEL sites. Higher activity waste would be treated as a solid form via a stand-alone vitrification system, separate from any tank waste treatment system. The existing Hanford high-level radioactive waste facilities would also not be used, and as analyzed in the PEIS, no existing or planned high-level radioactive waste facilities would be used to treat the wastes resulting from processing the irradiated targets.

2044-3: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

2044-4: FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

2044-5: Candidate facilities, including FFTF and other irradiation facilities, for radioisotope production are described in Section 2.3 of Volume 1.

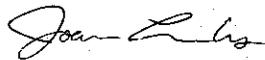
Commentor No. 2044: Joan Crooks (Cont'd)
Washington Environmental Council

Finally, the cost analysis, non-proliferation study and waste management study, all of which are extremely important to measuring the impact of FFTF restart, are separated from the environmental impact study.

|| 2044-6 || 2044-7

We thank you for this opportunity to provide public comment relating to this important issue.

Sincerely,



Joan Crooks
Executive Director

Response to Commentor No. 2044

Candidate irradiation facilities and fabrication/processing facilities dismissed are discussed in Sections 2.6.1 and 2.6.2, respectively. As discussed in Section 1.2.1 of Volume 1, the United States currently purchases approximately 90 percent of its medical isotopes from foreign producers. Consistent with its mandates under the Atomic Energy Act and recommendations of the Expert Panel, DOE would expand its existing nuclear facility infrastructure to, among other things, more effectively support production of isotopes for medical applications and research. Supplies of many research isotopes and radioisotopes that are under development for clinical applications are not readily available from existing domestic or foreign sources, causing some medical research and development programs to be terminated, deferred, or delayed.

As discussed in Sections 1.2.2 and 2.5.1, based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Under the No Action Alternative, DOE would continue to purchase plutonium-238 to meet the space mission needs for the 35-year evaluation period considered in the NI PEIS. However, any purchase of plutonium-238 from Russia beyond what is currently available to the United States through the existing contract would likely require negotiation of a new contract and may require additional NEPA review.

2044-6: As discussed in Chapter 4 of Volume 1, environmental impacts of reasonable alternatives to fulfill the requirements of the DOE missions were disclosed and evaluated in the NI PEIS. DOE made every effort to obtain, analyze, and disclose all required information to make a decision on expanding nuclear infrastructure. The costs and nuclear nonproliferation impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such ancillary documents need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed these documents to more than 730 interested parties on August 24 and September 8, 2000, respectively. Both reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>)

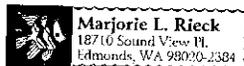
Commentor No. 2044: Joan Crooks (Cont'd)
Washington Environmental Council

Response to Commentor No. 2044

and in the public reading rooms. DOE has also provided summaries of the Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment in Appendixes P and Q, respectively, in the Final NI PEIS.

2044-7: The draft Waste Minimization and Management Plan for the Fast Flux Test Facility (May 2000) was referenced in the NI PEIS and made available prior to the public hearings.

Commentor No. 2045: Marjorie Rieck



9-17-00

Dear Colette Brown,

The only option for the FFTF at Hanford is 5: "permanently deactivate the Fast Flux Test Facility with no new missions".

|| 2045-1

Why add more deadly pollution to the most highly contaminated nuclear site in the western world?

|| 2045-2

Keeping the FFTF on hot standby for four years has cost over \$40 million per year.

|| 2045-1

We need medical isotopes? Your're not serious. The Washington State Medical Association, the WA Academy of Family Physicians and Physicians for Social Responsibility/National have all passed resolutions opposing the restart of the FFTF. Thank you for your attention.

|| 2045-3

|| 2045-4

Yours truly,

Marjorie Rieck

Response to Commentor No. 2045

2045-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.

2045-2: The concerns expressed in this comment with respect to potential environmental and health impacts associated with FFTF restart are noted. The management of all wastes associated with restart and operation of the FFTF is addressed in Section 4.3.1.1.13 of the NI PEIS. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. The management of these wastes would be well within management capacities and would not be expected to adversely affect the environment. Impacts on people and ecological resources would be small.

Hanford is committed to cleaning up its existing wastes in a safe and environmentally acceptable manner. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are of high priority to DOE. The restart of FFTF would not divert or reprogram budgeted funds designated for this effort.

2045-3: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

Commentor No. 2045: Marjorie Rieck (Cont'd)

Response to Commentor No. 2045

The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

2045-4: See response to comment 2045-1.

**Commentor No. 2046: William J. Kinsella
Lewis and Clark College**

William J. Kinsella, PhD
Assistant Professor of Communication
Lewis and Clark College
Portland, OR 97219

18 September 2000

Secretary Bill Richardson
United States Department of Energy
Forrestal Building
1000 Independence Avenue, S.W.
Washington, DC 20585

Dear Secretary Richardson:

I am mailing my comments on the *Draft Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility* (Draft NI PEIS) directly to you, with a copy to Ms. Colette Brown in your Office of Nuclear Energy. I am requesting that these comments be read by a qualified member of your own office staff, as well as by the staff of the Office of Nuclear Energy.

The comments below are in addition to those I read into the record at the public meeting held by the Department of Energy in Portland, Oregon, on 29 August 2000.

After reviewing the draft PEIS, I am in support of a permanent deactivation of FFTF. I also wish to register a strong objection to Alternative 1 in the PEIS, which calls for a restart of FFTF. I am not, at this time, opposed to Alternatives 2, 3, or 4, *if and only if* they are adopted together with a permanent deactivation of FFTF and do not add radioactive or hazardous contamination to the Hanford site (including FMEF).

I am also concerned about a number of process and content issues related to the draft PEIS. The document relies upon a number of *ad hoc* assumptions, and I am requesting that these be examined in more detail in any further stages of the EIS process and in the final decision.

First, it is problematic that the document was prepared entirely by the same program office that is proposing, and will benefit most directly from, an expansion of the nuclear infrastructure. The document presumes, rather than determines, that an expansion of the nuclear infrastructure along the lines proposed is necessary and mandated. In this regard, the PEIS is not a disinterested scientific study. No checks and balances, in the form of outside review or analysis by independent experts, were present in the preparation of the document. While previous studies including those of NERAC were cited in the PEIS, the citations were selected to support the claims of NE and contrary findings in these sources were ignored.

Response to Commentor No. 2046

2046-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF. The commentor's qualified support is noted for Alternative 2, Use Only Existing Operational Facilities, Alternative 3, Construct new Accelerator(s), and Alternative 4, Construct New Research Reactor. Alternative options that include FMEF are not supported due to the generation of additional waste at Hanford. It should be noted that permanent deactivation of FFTF is a part Alternatives 2, 3, and 4.

2046-2: DOE notes the commentors' concerns. This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives.

The NEPA process addresses concerns related to EIS objectivity and accuracy by requiring the Draft EIS be made available for public comment, and that every comment be addressed, and its resolution in the PEIS explained in the comment response section of the Final PEIS. This process provides the opportunity for agencies of the Federal and state government as well as individuals and organizations with special expertise to provide an input to the PEIS and influence the decisions to be made. DOE has received over 4,000 comments on the Draft. DOE has responded to these comments and will take them into account, along with other factors, in formulating the Record of Decision. Additionally, the facilitated discussions which were held during the public comment period between advocates for FFTF deactivation and FFTF restart, will be considered by the Secretary of Energy in making his decision.

2046-1

2046-2

2046-3: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC,

Commentor No. 2046: William J. Kinsella (Cont'd)
Lewis and Clark College

Secretary Bill Richardson

Page 2

For example, the PEIS assumes that future demands for medical isotopes cannot be adequately met using existing, operational domestic facilities and/or foreign sources. In fact, in a letter to Senator Ted Kennedy dated 22 December 1995, Terry Lash, then Director of the Office of Nuclear Energy, stated that "FFTF...is not necessary to DOE's production mission....ATR and HFIR have significant additional capacity to produce isotopes well into the next century if future market needs develop." As recently as April 2000, NERAC recommended that DOE utilize other domestic facilities in place of FFTF for medical isotope production. Foreign sources are also available, but the PEIS appears to have rejected this option without adequate study.

2046-3

Similarly, the PEIS assumes that future needs for Pu-238 cannot be met using existing inventories, supplemented by foreign sources if necessary. In fact, the PEIS makes unwarranted worst-case assumptions about the amount of Pu-238 that might be needed. These assumptions are not supported by an analysis from NASA or from independent experts. If additional uses for Pu-238, beyond those of NASA, are being considered by DOE, then these have environmental impact implications and should be included in the final PEIS.

2046-4

Second, the separation of the cost and nonproliferation studies from the PEIS process, and the lack of availability of the corresponding documents throughout most of the public comment period, has undermined both the public comment process and the credibility and legitimacy of the EIS process. Cost information is directly pertinent to the risk/benefit analysis that you have asked the public to consider and to comment on. Annual budgets for staffing, training, safety audits, and other essentials will affect public safety and environmental impact throughout the proposed 35 years of nuclear operations. These connections need to be included in the analysis, with the participation of independent experts and the public.

2046-5

Non-proliferation considerations, also, cannot be separated from the EIS process. In fact, nuclear proliferation is a public safety and environmental impact issue. Undermining the existing non-proliferation regime, through the use of MOX and HEU fuels at FFTF, increases risks to the public and to the environment. These risks need to be identified, quantified and included in the analysis, with the participation of independent experts and the public. The appearance of the nonproliferation study well after the completion of the PEIS (and near the very end of the public comment period) gives the impression that the NN study was written to fit the needs of NE. Whether this is true or not, this perception has undermined public confidence in the process. Furthermore, vague references to exploring other fueling options, made in the NN study, may be used to justify a restart of FFTF before those options are properly evaluated.

Third, the draft PEIS assumes that existing safety analyses adequately represent the risks of a catastrophic accident involving FFTF. The reactor, its control system, and its safety systems are now more than twenty years old, and the PEIS considers operating them for another 35 years. At the end of that time FFTF would be 55 years old – older than the lifetime of any reactor to date. Its design is far from "inherently safe" – at least two other liquid sodium reactors have suffered partial meltdowns (EBR-1 and Fermi-1) and others have been removed from service as a result of

2046-6

Response to Commentor No. 2046

established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

There currently is little room for growth of medical isotope production at either ATR or HFIR. At ATR the neptunium-237 targets for plutonium-238 production will compete for space in the reactor. There are potential negative impacts to the private company that leases reactor space for the production of radioisotopes due to being assigned less

Commentor No. 2046: William J. Kinsella (Cont'd)
Lewis and Clark College

Secretary Bill Richardson

Page 3

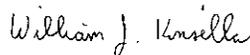
safety risks (Monju) or technical failure (Superphenix). FFTF failure modes may well exist that have not been anticipated or adequately examined. Additional concerns exist regarding the integrity of fuel that has been stored for long time periods, or that is acquired from other suppliers, and that may lack adequate quality control documentation.

Finally, perhaps the most egregious of the assumptions in the PEIS is that the wastes that would be produced by FFTF are acceptable in the context of Hanford. Hanford, its environmental remediation workers, and the Pacific Northwest community bear a truly staggering burden of wastes - the largest burden of any site in the Western world. Restarting FFTF would contaminate buildings and areas that are not yet contaminated, and would directly interfere with the existing cleanup plan for the 300 area. Introducing any new wastes to the site is unacceptable, and would undermine the Department of Energy's own stated mission to clean up Hanford and regain public trust.

Trust, in fact, is at the heart of the matter as we continue with this decision process. FFTF was ordered shutdown by a previous Secretary of Energy in 1993, and despite the creative and costly efforts of those who identify most closely with it, no compelling need for the facility has been shown. It's time to honor the voices of the public and of a wide range of independent technical experts, by shutting FFTF down and moving on toward more productive goals.

Thank you for your attention to these comments, and I look forward to your response.

Sincerely,



William J. Kinsella

✓ copy: Ms. Colette Brown, Office of Nuclear Energy, Science and Technology

Response to Commentor No. 2046

desirable irradiation space. At HFIR, the ability to expand medical isotope targets into additional reactor locations is limited by the potential impacts that the targets have on the primary experiments in the reactor. Medical isotope targets and neptunium-237 targets are not in competition for the same locations at HFIR.

Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions (basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term (less than 5 years).

2046-4: Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Under the No Action Alternative, DOE would continue to purchase plutonium-238 to meet the space mission needs for the 35-year evaluation period considered in the NI PEIS. However, DOE recognizes that any purchase beyond what is currently available to the United States through the existing contract would likely require negotiation of a new contract and may require additional NEPA review.

DOE could purchase plutonium-238 from Russia; however, for supply

Commentor No. 2046: William J. Kinsella (Cont'd)
Lewis and Clark College

Response to Commentor No. 2046

reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

NASA will be the end user of any plutonium-238 produced or purchased as a result of the NI PEIS Record of Decision.

- 2046-5:** DOE notes the commentor's views and concerns. The costs and nuclear nonproliferation impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such ancillary documents need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed these documents to more than 730 interested parties on August 24 and September 8, 2000, respectively. Both reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided summaries of the Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment in Appendixes P and Q, respectively, in the Final NI PEIS.
- 2046-6:** FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

The technical issues that need to be addressed to assure safe operation for an extended lifetime are well understood. The U.S. Nuclear Regulatory Commission has extended the operating license for a commercial power plant an additional 20 years over and above its current 40 year licensing period and is anticipating several more extensions in the near future.

Commentor No. 2046: William J. Kinsella (Cont'd)
Lewis and Clark College

Response to Commentor No. 2046

2046-7: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposal) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

All new or existing DOE facilities proposed for missions in the PEIS represent the most suitable alternative sites for carrying out the activities

Commentor No. 2046: William J. Kinsella (Cont'd)
Lewis and Clark College

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described in the document. Use of the 300 area facilities at Hanford for these activities would not violate any existing laws or agreements, and would be consistent with historic and ongoing missions at those facilities. These facilities would meet all DOE, EPA, and Washington State requirements before any new activities were initiated.

The 300 Area Revitalization Plan (DOE 1999) provides for continued multi-program R&D operations in the 300 Area, including operation of various laboratories, office facilities, and services. It also provides for consolidation (but not complete elimination) of radiological operations, with support for Hanford Site facility transition and environmental restoration efforts. The plan does not require closure of the 325 and 306-E buildings as long as they are needed for active research projects. Operation of these facilities would not violate any existing agreements between DOE and stakeholders or other legal obligations, nor would it affect ongoing or planned environmental restoration and facility transition activities.

The 306-E facility is not contaminated and is being proposed as a location to conduct activities that do not involve radioactive materials. While the 325 Building has an inventory of radionuclides associated with ongoing activities at the facility, the building is not contaminated in worker accessible areas.

2046-8: See response to comment 2046-1.

Commentor No. 2047: Phyllis E. Fiege

5319 215th S.E.
Woodinville WA 98072
September 18, 2000

Colette E. Brown, NE-50
U.S. Dept. of Energy
19901 Germantown Rd.
Germantown, MD 20874

Dear Ms. Brown,

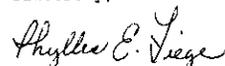
I do not understand why we have not shut down the Fast Flux Test Facility and still keep it on standby. I testified at a hearing in Seattle several years ago supporting the permanent shutdown of the FFTF. At that time most of the people testified against restarting this facility. I heard physicians from the University of Washington Cancer Research state there was no shortage of medical isotopes. I heard the President of the Washington State Medical Association testify against the restart of this facility because of the danger to the health of the workers and the people of this state and region.

The only people testifying in favor of restarting the FFTF were workers from the Hanford-TriCities area. They see startup as an opportunity for jobs. If starting the reactor is a means to provide jobs and to stimulate the economy, it becomes a very expensive program. It gives no benefits to the public as a whole (such as schools, city halls, parks, etc.) and is a danger to the health and safety of the workers and to the citizens while increasing the dangerous toxic pollution of the environment.

The need for jobs and economic stability is real and of concern. We could use the \$40,000,000.00, that we spend each year to keep the FFTF on standby, to increase the number of research and other jobs to clean up Hanford. That would be a better use of our tax dollars.

Please shut down the FFTF--permanently.

Sincerely,


Phyllis E. Fiege

Response to Commentor No. 2047

- 2047-1:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2047-2:** DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information.

2047-1

2047-2

2047-3

2047-4

2047-5

2047-6

2047-1

The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements.

Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions (basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a

Commentor No. 2047: Phyllis E. Fiege (Cont'd)

Response to Commentor No. 2047

need for expanded isotope production capacity in the short-term (less than 5 years). Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

2047-3: This NI PEIS provides estimates of the incremental potential human health impacts associated with a range of reasonable alternatives. Alternative 1 includes the restart of FFTF, evaluated for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology provides results based upon our current knowledge of the health impact of low doses of ionizing radiation and hazardous chemicals. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of each of the analyzed alternatives, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with each of the alternatives and with restarting FFTF would be small.

Worker safety (radiological protection) is a key element of DOE's Radiological Health and Safety Policy (DOE P 441.1, April 26 1996). This policy states in part that DOE facilities must "conduct radiological operations in a manner that controls the spread of radioactive materials and reduces exposure to the workforce and the general public and that utilizes a process that seeks exposure levels as low as reasonably achievable." Each DOE site, including Hanford, is required to implement a radiological control program with the intent to meet this policy goal. Based on the assessment of worker health impacts for the range of reasonable alternatives and options that make use of Hanford facilities, use of these facilities would not be expected to increase the number of cancer fatalities among facility workers. For example in Alternative 1 option 3, all of the activities (target irradiation and processing) occur at Hanford facilities. As shown in Section 4.3.3.1.9, the expected consequences are less than one additional fatal cancer among the workforce; that is, no additional fatal cancers are expected.

2047-4: DOE is not considering restarting FFTF for the purpose of creating jobs and stimulating the economy. However, it is possible that restarting FFTF would have a positive socioeconomic impact on the Hanford area. As work expands within a region, the money spent on

Commentor No. 2047: Phyllis E. Fiege (Cont'd)

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accomplishing this work flows into the local economy. It is spent on additional jobs, goods, and services within the region. The increased taxes realized by local governments, from income taxes, sales taxes, etc., are expected to cover the cost of any socioeconomic impact on schools and public services. The socioeconomic impacts associated with Alternative 1, Restarting FFTF, are presented in Section 4.3 of the NI PEIS.

2047-5: This NI PEIS provides estimates of the incremental potential human health impacts associated with a range of reasonable alternatives. Alternative 1 includes the restart of FFTF, evaluated for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology provides results based upon our current knowledge of the health impact of low doses of ionizing radiation and hazardous chemicals. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of each of analyzed alternatives, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with each of the alternatives and with restarting FFTF would be small.

Worker safety (radiological protection) is a key element of DOE's Radiological Health and Safety Policy (DOE P 441.1, April 26 1996). This policy states in part that DOE facilities must "conduct radiological operations in a manner that controls the spread of radioactive materials and reduces exposure to the workforce and the general public and that utilizes a process that seeks exposure levels as low as reasonably achievable." Each DOE site, including Hanford, is required to implement a radiological control program with the intent to meet this policy goal. Based on the assessment of worker health impacts for the range of reasonable alternatives and options that make use of Hanford facilities, use of these facilities would not be expected to increase the number of cancer fatalities among facility workers. For example in Alternative 1 option 3, all of the activities (target irradiation and processing) occur at Hanford facilities. As shown in Section 4.3.3.1.9, the expected consequences are less than one additional fatal cancer among the workforce; that is, no additional fatal cancers are expected.

The NI PEIS identifies (in Chapter 3 of Volume 1) endangered species that live on or near all of the candidate sites, as well as aquatic and

Commentor No. 2047: Phyllis E. Fiege (Cont'd)

Response to Commentor No. 2047

wetlands areas that may be impacted by operations at candidate locations. According to an International Atomic Energy Agency (IAEA) publication (IAEA Technical Report Series No. 332, Effects of Ionizing Radiation on Plants and Animals at Levels Implied by Current Radiation Protection Standards), a dose rate of 100 millirem per year to the most exposed human will lead to dose rates to plants and animals of less than 0.1 rad per day. The IAEA concluded that a dose rate of 0.1 rad per day or less for animals and 1 rad per day or less for plants would not affect these populations. The largest individual dose for any of the nuclear infrastructures alternatives under normal operations would be less than 0.1 millirem, which is three orders of magnitude less than the IAEA threshold for adverse effects. Therefore, any of the range of reasonable nuclear infrastructure alternatives analyzed would not be expected to result in adverse impacts on plants and animals living in potentially affected areas around the candidate sites.

As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed.

2047-6: The commentor's position concerning funding priorities for research and cleanup at the Hanford Site is noted. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the

Commentor No. 2047: Phyllis E. Fiege (Cont'd)

Response to Commentor No. 2047

U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

FFTF restart would not impact the schedule or available funding for ongoing cleanup activities. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Commentor No. 2048: Randy Schwarz

Draft PEIS Comment Form

I Support The restart of FFTF to get the most out of the taxpayers investment in this state of the art facility.

2048-1

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Randy Schwarz

Organization:

Home/Organization Address (circle one): P.O. Box 1308

City: Richland State: WA Zip Code: 99352

Telephone (optional): (509) 946-6182

E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 18, 2000

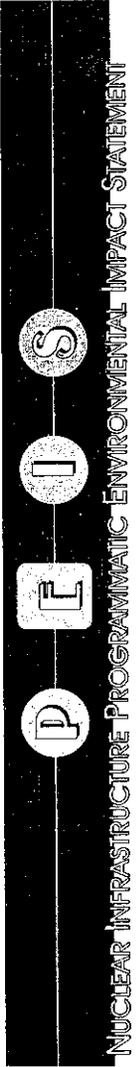
For more information contact: Colella E. Brown, NE-50 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Response to Commentor No. 2048

2048-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.



Commentor No. 2049: Steve Hopkins
Snake River Alliance

From: Steve Hopkins _ Snake River Alliance
[SMTP:SRA@SNAKERIVERALLIANCE.ORG]
Sent: Friday, September 22, 2000 2:55:13 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: NI PEIS comments
Auto forwarded by a Rule

Ms. Colette Brown
DOE, Office of Space and Defense Power Systems

Re: public comment period on the Draft Programmatic
Environmental Impact Statement for accomplishing expanded
civilian nuclear energy research and development and isotope
production mission in the United States, including the role of the
Fast Flux Test Facility

Dear Ms. Brown,

The Pluto_Kuiper Express is the major NASA mission your
department is using to justify the near term need for Pu_238. The
following article at the very least indicates this mission will not
happen on schedule and may not occur at all until 2020. This
mission was to require 16.3 pounds and represents 70% of the
"plutonium requirement" outlined in the PEIS. This is a major blow to
DOE's plan to produce Pu_238. Other canceled missions may follow
due to cost constraints. There are only three outlined in the PEIS
and this one is by far the biggest. Please incorporate the article
posted below into the Snake River Alliance comments on the
above_mentioned draft PEIS.

Sincerely,

Steve Hopkins
Snake River Alliance
Tel: 208_344_9161, Fax: 208_344_9305
sra@snakeriveralliance.org
<http://www.snakeriveralliance.org>

Response to Commentor No. 2049

2049-1

2049-1: Section 1.2.2 of Volume 1 has been revised to reflect September 2000 updated mission planning guidance from NASA indicating that implementation of the Pluto/Kuiper Express mission as currently conceived was being deferred. However, the guidance also identified the need to maintain additional backup radioisotope power systems to support the Europa Orbiter mission. As such, while this latest NASA guidance modifies the specific radioisotope power systems and missions for which DOE needs to plan, it does not fundamentally change NASA's overall potential plutonium-238 requirements, or the expectation that the available U.S. inventory of this material would effectively be depleted by approximately 2005.

***Commentor No. 2049: Steve Hopkins (Cont'd)
Snake River Alliance***

Friday September 22 2:08 PM ET
NASA Stops Work on Mission to Mysterious Pluto
By Deborah Zabarenko

WASHINGTON (Reuters) _ Poor Pluto. NASA (news _ web sites) has stopped work on a robotic mission to this distant, mysterious planet, the only one in the solar system not yet explored by earthly spacecraft.

If work does not resume by the end of this year, planetary astronomers said on Friday they fear the mission will lose its place on NASA's space launch schedule in 2004.

That could delay the craft's expected arrival at Pluto and its moon Charon by seven years, and by that time, the distant little planet's tenuous atmosphere could have started to freeze as Pluto moves into a winter lasting more than 100 years.

The National Aeronautics and Space Administration stressed that the so-called Pluto_Kuiper Express mission being put together by the Jet Propulsion Laboratory in Pasadena, California, was being "rethought and replanned," not scrapped.

"The mission will be deferred until they can replan it for what's affordable," NASA spokesman Don Savage said in a telephone interview.

Originally budgeted at \$350 million a year ago, the mission as currently envisioned would now cost more than \$500 million to complete, Savage said, "and that's just not affordable."

NASA's chief of space science, Ed Weiler, "would like to see some way for them to do the mission by 2020 when the atmosphere will still be there, not frozen out yet," Savage said. Pluto, the most distant planet from the Sun, was only discovered in 1930 and takes 248 years to make one solar orbit, so scientists have never observed its winter and do not know exactly what to expect, said

Response to Commentor No. 2049

Commentor No. 2049: Steve Hopkins (Cont'd)
Snake River Alliance

Ellis Miner, a spokesman for the American Astronomical Society.

Get There Before Atmosphere Freezes

The society's planetary scientists expressed "major concerns" over stopping work on the Pluto mission, and Miner said that any substantial delay might mean astronomers would not be able to observe the planet's atmosphere.

Pluto came closest to the Sun in 1989 and has been moving away ever since. Even at its closest, it is still vastly distant: 30 times Earth's distance from the Sun, or about 2.8 billion miles.

"As Pluto moves out (away from the Sun), the amount of sunlight that it gets is decreasing rapidly," Miner said by telephone. "At some point the temperature will be cold enough that the atmosphere will basically snow out onto the surface and all that will be left is a very tenuous trace atmosphere and it may be difficult to detect."

A planet's atmosphere is often the key to finding out how it formed, and with an eccentric planet like Pluto, this could be important. Astronomers have inspected the atmospheres of every other planet except Pluto.

Pluto has always been a bit of an oddball among planets.

It is small and craggy where the other planets in the outer solar system are big and gassy; it is less than half the size of any other planet; its orbit tilts up from the solar system plane and is the only one to cross the orbit of another planet — Neptune; and its moon, Charon, is larger in proportion to it than any other planet's moon.

There was a move afoot last year to reclassify it as a minor planet, instead of a major one, but it kept its major planet standing.

Response to Commentor No. 2049

***Commentor No. 2050: Stanley Hobson, INEEL
Citizens Advisory Board***

> > From: Wendy Lowe[SMTP:WLOWE@JASON.COM]
 > Sent: Thursday, September 21, 2000 7:11:47 PM
 > To: INFRASTRUCTURE_PEIS, NUCLEAR
 > Subject: INEEL CAB Comments
 > Auto forwarded by a Rule
 > Wendy Green Lowe, > Jason Associates Corporation
 > 477 Shoup Avenue, Suite 201, > Idaho Falls, ID 83401
 > Phone: (208) 522_1662, > Fax: (208) 522_2076
 > E_mail: wlowe@jason.com

Citizens Advisory Board
 Idaho National Engineering and Environmental Laboratory
 00_CAB_068, September 25, 2000

Colette E. Brown, Document Manager
 Office of Space and Defense Power Systems (NE_50)
 Office of Nuclear Energy, Science, and Technology
 U.S. Department of Energy
 19901 Germantown Road, Germantown, MD 20874

Dear Ms. Brown:

Note: The Site_Specific Advisory Board (SSAB) for the Idaho National Engineering and Environmental Laboratory (INEEL), also known as the INEEL Citizens Advisory Board (CAB), is a local advisory committee chartered under the Department of Energy's (DOE) Environmental Management (EM) SSAB Federal Advisory Committee Act Charter.

The Department of Energy (DOE) recently issued the Draft Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility (NI PEIS). A public comment period on the document ended on September 18, 2000. The INEEL CAB requested an extension in the public comment period to allow for development of a consensus recommendation in accordance with

Response to Commentor No. 2050

Commentor No. 2050: Stanley Hobson (Cont'd)
Citizens Advisory Board

the CAB's meeting schedule and approved procedures. We have been told that the comment period would not be extended, although we still have received no formal response to our request. Telephone calls from you and from Mr. Dan Funk to me (in my capacity as Chair of the INEEL CAB) offered assurances that the INEEL CAB's comments would be considered to the extent practicable. Because we believe the decision_making process supported by the NI PEIS is of importance, we elected to proceed with development of this recommendation.

It accordance with our charter as an EM SSAB, the attached five_page recommendation, #76, was reached through consensus processes at the INEEL CAB's September 19_20, 2000 meeting. All members in attendance at the meeting understand and agree with the recommendation. It details our concerns and comments regarding the Draft NI PEIS.

In summary, the INEEL CAB believes the NI PEIS should be completely re_written to address the current deficiencies and reissued as a revised draft PEIS for another round of public review and comment. DOE should add missing information, develop a solid approach to evaluating and comparing the alternatives, and enhance its analysis to support comparison among the myriad alternatives. The second draft should 1) substantiate the purpose and need for action, 2) clearly state the Department's objectives, 3) describe multiple, comparable alternatives that would meet those objectives, 4) describe all impacts that would result from the comparable alternatives, and 5) evaluate the alternatives using consistent criteria. The public should be afforded an opportunity to review a revised draft PEIS that is not severely flawed in order to participate in a meaningful manner in DOE's decision_making process, as intended under NEPA.

We await your response to the attached recommendation.
Sincerely,

Response to Commentor No. 2050

***Commentor No. 2050: Stanley Hobson (Cont'd)
Citizens Advisory Board***

Stanley Hobson, Chair, INEEL CAB

cc: Beverly Cook, DOE_ID
 Carolyn Huntoon, DOE_HQ
 Martha Crosland, DOE_HQ
 FRED BUTTERFIELD, DOE_HQ
 Governor Dirk Kempthorne
 Larry Craig, U.S. Senate
 Mike Crapo, U.S. Senate
 Mike Simpson, U.S. House of Representatives
 HELEN CHENOWITH_HAGE, U.S. HOUSE OF
 REPRESENTATIVES
 Robert Geddes, President Pro_Tem, Idaho Senate
 Laird Noh, Chair, Idaho Senate Resources and Environment
 Committee
 Bruce Newcomb, Speaker, Idaho House of Representatives
 Golden C. Linford, Chair, Idaho House Resources and
 Conservation Committee
 Jack Barraclough, Chair, Idaho House Environmental Affairs
 Committee
 Gerald Bowman, DOE_ID
 Kathleen Trever, State of Idaho INEEL Oversight
 Wayne Pierre, U.S. Environmental Protection Agency
 Region X

Citizens Advisory Board
 Idaho National Engineering and Environmental Laboratory

Draft Programmatic Environmental Impact Statement
 for Accomplishing Expanded Civilian Nuclear Energy Research
 and Development and Isotope Production Missions in the United
 States, Including the Role of the Fast Flux Test Facility

The Department of Energy (DOE) recently issued the Draft
 Programmatic Environmental Impact Statement for Accomplishing
 Expanded Civilian Nuclear Energy Research and Development and
 Isotope Production Missions in the United States, Including the Role

Response to Commentor No. 2050

**Commentor No. 2050: Stanley Hobson (Cont'd)
Citizens Advisory Board**

of the Fast Flux Test Facility (NI PEIS). A public comment period on the document ended on September 18, 2000. The Idaho National Engineering and Environmental Laboratory Citizens Advisory Board (INEEL CAB) requested an extension in the public comment period to allow for development of a consensus recommendation in support of DOE's decision_making for this significant decision. We are told that the comment period would not be extended although we still have received no formal response to our request. Because we believe this decision is of importance, we elected to proceed with development of this recommendation.

ADEQUACY UNDER THE NATIONAL ENVIRONMENTAL POLICY ACT

The National Environmental Policy Act (NEPA) requires federal agencies contemplating actions that may result in significant environmental impacts to prepare environmental documentation. Environmental documentation written to comply with NEPA should document the purpose and need for federal action, present an array of reasonable alternatives including a "No Action Alternative," and present all environmental impacts that would result from each reasonable alternative. In addition, the federal agency must conduct public participation activities in support of development of its environmental documentation. The INEEL CAB recommends that DOE make every effort to meet the goals of NEPA and prepare an Environmental Impact Statement that can withstand judicial review. To date, the INEEL CAB has submitted comments twice to support preparation of this document. Our consensus Recommendation #51, dated November 18, 1998 submitted comments during scoping for the "Proposed Production of Plutonium_238 for Use in Advanced Radioisotope Power Systems for Future Space Missions Environmental Impact Statement" which was subsequently merged with this PEIS. We also reached consensus on Recommendation #65, which submitted comments during scoping for the NI PEIS. We could not find evidence that some of our earlier comments had been incorporated into the Draft NI PEIS. NEPA requires scoping as a process by which the public participates in the framing of the

2050-1

2050-2

Response to Commentor No. 2050

- 2050-1:** DOE notes the INEEL CAB's recommendation.
- 2050-2:** CEQ regulations for implementing NEPA require that public comment be solicited to assist in defining the scope of a PEIS (40 CFR 1501.7). Section 1.4 of Volume 1, as supplemented by an expanded discussion provided in Appendix N, summarizes the prevailing issues and concerns raised during the scoping process to include identification of relevant issues raised at individual scoping meetings. Statements, letters, and resolutions were received by DOE during the scoping period. Each such comment document was considered and entered into the NI PEIS Administrative Record. In fact, based on the scoping comments received the scope of the NI PEIS was expanded in a number of areas as outlined in Section 1.4 and Appendix N.

In preparing the Final PEIS, DOE has assessed and considered both oral and written comments received on the Draft PEIS during the public comment period and has responded to these comments in the Final PEIS. Volume 3 of the NI PEIS contains public comments received on the NI PEIS and DOE responses to those comments. Moreover, late comments were considered to the extent practicable.

- 2050-3:** DOE's Office of Nuclear Energy, Science and Technology considered the needs of other DOE program offices when it surveyed the surplus capacity of DOE's existing and planned facilities potentially available to support the NI PEIS proposed action. The needs of the other DOE program offices were a primary consideration, as these facilities were considered as potential alternatives for implementation of the proposed action. One of the primary considerations for including a candidate facility as a reasonable alternative was that implementation of the NI PEIS proposed action not impact the capability of the facility from fully meeting the requirements of preexisting DOE mission objectives. The focus of the design for new facilities in the NI PEIS was to support the NI PEIS proposed action. Surplus capacity at these new facilities could be made available to other DOE program offices and/or the private sector on a noninterference cost-reimbursable basis.

Chapter 4 of the NI PEIS addresses cumulative impacts at INEEL and other sites. These impacts include those associated with the proposed action, current, and planned activities at INEEL. The statement concerning "needs beyond DOE's Office of Nuclear Energy, Science,

***Commentor No. 2050: Stanley Hobson (Cont'd)
Citizens Advisory Board***

environmental documentation. If DOE makes no effort to respond to comments during scoping, how can the agency demonstrate that its public participation program is adequate? The INEEL CAB recommends that DOE make every effort to respond to all public comments, ensuring that the public's efforts are not wasted. The document states that it does not address any needs beyond DOE's Office of Nuclear Energy, Science, and Technology. It makes no sense to exclude other Department needs. Further, it was explained to the INEEL CAB that this PEIS is an "incremental EIS" that addresses only additional impacts attributable specifically to the actions described. NEPA requires consideration and public disclosure of the cumulative effects of all related actions during decision making. The INEEL CAB recommends DOE make every effort to consider all impacts of related decisions to ensure full compliance with NEPA and avoid vulnerability to challenges of segmented decision_making.

PURPOSE AND NEED FOR FEDERAL ACTION

There appear to be four separate objectives that form the basis of DOE's assertion that federal action is needed:

1. To expand the civilian nuclear research capacity and infrastructure.
2. To ensure a supply of medical isotopes to support medical needs,
3. To ensure a supply of isotopes to support various research and development (R&D) initiatives, and
4. To ensure an adequate supply of Plutonium_238 to support NASA's needs.

However, the INEEL CAB concludes that the document does not adequately substantiate the purpose and need for taking action within each of those four objectives. Explanations of current and existing capability and capacity leave the reader with the impression that some or all of the objectives could be achieved through continued operation of existing facilities. For example, it appears that: 1) R&D isotope production could be met through continued operation of the Advanced Test Reactor (ATR), High Flux Isotope Reactor (HFIR), and commercial light water reactors, 2) continued

**2050-2
(Cont'd)**

2050-3

2050-4

Response to Commentor No. 2050

and Technology" is referring to the need for the proposed action and not the cumulative impacts. In Chapter 4, the incremental impacts of the proposed action are evaluated. The results of this analysis are factored into the assessment of cumulative impacts.

- 2050-4:** The purpose and need are described in Section 1.2 of Volume 1. It is DOE's intent to provide domestic capability for production of medical and industrial isotopes, production of plutonium-238 for space missions, and nuclear energy research and development for civilian applications. Section 1.5 of Volume 1 was revised to include the recommendations of the Expert Panel and NERAC subcommittee. NERAC is an independent Federal advisory committee appointed by the Secretary of Energy to advise DOE on the civilian nuclear program.
- 2050-5:** Section 2.7.1.2.3 of Volume 1 of the Draft NI PEIS presents a comparison of mission effectiveness among alternatives. This section has been revised in the Final NI PEIS (see Section 2.7.3, Comparison of Mission Effectiveness Among Alternatives) to provide the reader a better understanding of the medical isotopes that can be produced using accelerator technology (Alternative 3) and reactor technology alternatives (Alternatives 1 and 4).
- 2050-6:** The description of the No Action Alternative is presented in Section 2.5.1 of Volume 1, while impacts associated with this alternative are presented in Section 4.2. Under Option 1, neptunium-237, currently stored in solution form at SRS, would be dispositioned according to current SRS stabilization plans. The environmental impacts of this action are addressed in the "Final Environmental Impact Statement, Interim Management of Nuclear Materials" (DOE/EIS-0220, October 1995). Under Options 2 through 4 the neptunium-237 would be transported from SRS to one of three candidate DOE sites (ORNL, INEEL, or Hanford) for up to 35 years for storage.
- 2050-7:** The alternatives are detailed in Chapter 2 of Volume 1. In particular, Section 2.5.1 describes the No Action Alternative and Section 2.5.3 describes Alternative 2, Use Only Existing Operational Facilities. As described in Section 1.3, alternatives evaluated in the NI PEIS, DOE could choose to combine components of several alternatives in selecting the most appropriate strategy.

Commentor No. 2050: Stanley Hobson (Cont'd)
Citizens Advisory Board

purchases of medical isotopes from Canadian sources could fulfill requirements for medical isotopes, and 3) the U.S. could continue to purchase Plutonium_238 from the Russians. In addition, this analysis is critical to assess the No Action Alternative. In order to remedy the current inadequate substantiation of the purpose and need for federal action, the INEEL CAB recommends that the NI EIS:

- * Provide a clear justification for expansion of civilian nuclear research capacity and infrastructure_based on an assessment of deficiencies in current capacity and infrastructure_and demonstrate how that need has been verified.
 - * Include a full explanation of all current and viable sources of each desired material (medical isotopes, R&D isotopes, and Plutonium_238) and the capacity of each of those sources.
 - * Include clear estimates of the projected demand for and projected shortfall of each desired material over a specified timeframe. Clearly stated assumptions should form the basis for all projections.
 - * Demonstrate how each estimate of projected demands, shortfalls, and timeframes has been independently verified.
- A solid explanation of the purpose and need for action is necessary for adequate public review of environmental documentation. Further, sound estimates of need are required to: 1) establish design and operational requirements for facilities, 2) estimate the impacts that would result from construction and operation of facilities, and 3) assess whether existing facilities can be used or new facilities will be required.

ALTERNATIVES CONSIDERED

The document presents a mind_boggling array of alternatives. Unfortunately, it is unclear how these alternatives address DOE's four apparent objectives under its purpose and need for action. It appears that some of the alternatives only address a portion of the four objectives. We understand that the No Action Alternative inadequately addresses the four objectives, but question why other alternatives were considered if they do not meet all four of the objectives. The INEEL CAB recommends that DOE more clearly

**2050-4
(Cont'd)**

2050-5

Response to Commentor No. 2050

2050-8: The specific alternatives and options evaluated in the NI PEIS were not selected for the purpose of "bounding" the impacts. Rather they reflect reasonable potential actions that DOE has selected to meet the irradiation service needs identified in Section 1.2 of Volume 1. While DOE recognizes the possibility that a combination of alternatives/options may be ultimately selected for implementation in the Record of Decision, it did chose the five specific alternatives for this reason.

Although, the alternatives and impacts assessed were not selected for bounding purposes, the impact assessments are based on conservative modeling assumptions (see Appendixes G through J). As described in Section I.1.1, the accident analysis considered a spectrum of accidents including external events (e.g., airplane crashes, nearby explosions, fires), internal events (e.g., equipment failures, human error), natural phenomenon (e.g., floods, tornadoes, earthquakes), and sabotage and terrorist activities. The accidents were screened to determine which accidents would result in the highest consequences (i.e., dose) and the highest risks (i.e., frequency x consequence). In performing these analyses, several conservative and bounding assumptions were made (e.g., worse-case core loading in the irradiated facilities, worse-case target inventories) leading to very conservative consequences.

2050-9: Without identification of the specific "missing details" the commentors question can not be answered. With regard to the specific example, as discussed throughout Appendix E, the coolant for the new research reactor would be water.

2050-10: The DOE Manual 435.1. Radioactive Waste Management defines high level radioactive waste as the highly radioactive waste material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid material derived from such liquid waste that contains fission products in sufficient concentrations; and other highly radioactive material that is determined, consistent with existing law, to require permanent isolation. DOE has prepared an implementation guide to DOE M 435.1 to assist in implementing the requirements contained in that manual. For this particular requirement, the definition of high-level radioactive waste, the guide is intended to facilitate the classification of indefinite waste as to whether or not they are high-level radioactive waste. It is recognized that the definition of high-level radioactive waste is not precise and is

***Commentor No. 2050: Stanley Hobson (Cont'd)
Citizens Advisory Board***

demonstrate how each alternative considered in the NI PEIS would address the four apparent objectives. Alternatively, DOE should explain which of the four apparent objectives would be achieved through implementation of each of the alternatives, and which would not.

We understand that Neptunium_237 would have no use under the No Action Alternative because no domestic Plutonium_238 production capability would be established. The description of that alternative fails to explain how and where the Neptunium would be treated and disposed, however, and no impacts are described that would be attributable to its management. The INEEL CAB recommends that DOE explicitly discuss how Neptunium_237 would be dispositioned under the description of the No Action Alternative and that the NI PEIS include all impacts associated with its disposition.

In addition, it is not clear why the alternatives described were considered and other apparently viable alternatives were not. For example, it seems that one reasonable alternative would be to use HFIR and ATR to produce medical and R&D isotopes and continue current reliance on Russian sources for Plutonium_238. Another possibility would be to use HFIR and ATR to produce Plutonium_238 and R&D isotopes and to rely on Canadian sources for medical isotopes. ATR and HFIR are fully operational; why not use them for production of isotopes? The INEEL CAB recommends that DOE provide clear explanations for why the alternatives analyzed in the NI PEIS were considered and others were not.

Further, the Draft NI PEIS does not offer an adequate explanation of why the alternatives used for the purposes of estimating bounding impacts were chosen (over other alternatives). Neither does it explain how DOE is certain that those alternatives are most appropriate for bounding the possible impacts that would result from the final selected actions. For example, the options under Alternative 2 do not appear to bound an option that would use ATR, HFIR, and a commercial light water reactor for irradiation of targets.

**2050-5
(Cont'd)**

2050-6

2050-7

2050-8

Response to Commentor No. 2050

essentially a source-based definition that also alludes to concentrations of a given waste stream. Page II-8 of this guide notes that for the purpose of managing high-level waste under DOE M 435.1-1 [sic], spent nuclear fuel includes spent driver elements and/or irradiated target elements that contain transuranium elements. This statement was included in the guide because the concentrations of long-lived isotopes are likely to be somewhat high during reprocessing and it also meets the source-based definition. As a result of reviewing this guide and to address the comments raised, DOE is considering whether the waste from processing of irradiated neptunium-237 targets should be classified as high-level radioactive waste and not transuranic waste. As a result, the Waste Management sections (i.e., Sections 4.3.1.1.13; 4.3.2.1.13; 4.3.3.1.13; and 4.4.3.1.13) of this NI PEIS have been revised to reflect this different classification from what was assumed in the draft NI PEIS. As discussed in these revised sections, irrespective of how the waste is classified (i.e., transuranic or high-level radioactive waste), the composition and characteristics are the same and the waste management (i.e., treatment and onsite storage) for this NI PEIS would be the same. In addition, even if the waste is managed as high-level radioactive waste it would have no impact on the existing high-level radioactive waste management infrastructure (e.g., high-level waste storage tanks), since the high activity waste from processing of the targets would be initially stored and vitrified within the processing facility (i.e., FMEF, REDC, or FDPF).

This NI PEIS addressed wastes produced for each alternative, as well as cumulative impacts related to waste production. In particular, information on waste generation by waste types and how this waste would be managed can be found in the Waste Management Sections of Chapter 4 for each of the alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS would be managed (i.e., treated, stored, and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. Spent nuclear fuel is discussed for those alternatives where it would be generated as a result of the proposed activities.

2050-11: Each alternative and option is described separately in Volume 1, Section 2.5, Description of Alternatives, and summarized in Table 2-3. DOE

Commentor No. 2050: Stanley Hobson (Cont'd)
Citizens Advisory Board

It was not possible for us to reconstruct the bounding impacts as described using the information presented in the Draft NI PEIS. NEPA documentation should be written in a manner that can be understood by the public. The INEEL CAB recommends that DOE provide clear explanations for how the alternatives used for the bounding impact analysis in the NI PEIS were selected and how those bounding impacts were calculated.

2050-8
(Cont'd)

Finally, some details regarding the various alternatives appear to be missing from the descriptions of those alternatives. For example, what coolant would be used in a new reactor? The waste stream does not include High_Level Waste (HLW), which is inconsistent with our understanding of the processes that will be involved. If HLW will not be produced, there should be an explanation as to how it will be avoided. The document should also describe how spent nuclear fuel would be handled under each alternative. The options available for disposal of the waste streams are determined by the waste classification, and citizens are keenly concerned about DOE's ability to dispose of any waste generated. The description of each alternative should include an explanation of the quantity of each waste that would be generated along with an explanation of how each will be handled and dispositioned. The INEEL CAB recommends that DOE offer fuller explanations of the alternatives considered in the NI PEIS to ensure that readers can fully understand how each would be implemented and how it would impact the environment.

2050-9

2050-10

2050-11

PREFERRED ALTERNATIVE

In addition to failing to clearly explain the four basic objectives and how each alternative would address each of those objectives, the Draft NI PEIS offers no relative ranking of the four objectives. The members of the INEEL CAB could not discern whether expansion of R&D capacity was more or less important than the production objectives. In addition, it is not clear which of the production missions is most critical. Because of the appearance that some of the alternatives fail to achieve some of the objectives, we are forced

2050-12

Response to Commentor No. 2050

expects that this explanation is adequate to give the reader an understanding of how each alternative would be implemented and how each would impact the environment. It should be further noted that Chapter 4, Environmental Consequences, each alternative and option are also addressed separately in order to facilitate the reader's understanding of environmental impacts.

2050-12: All of the missions described in Section 1.2 of Volume 1 are considered to be of equal importance. Each of the alternatives described in Section 2.5 would contribute to fulfilling some of the stated missions. However, none of the alternatives can completely meet all of the projected nuclear infrastructure needs. Section 2.7.3 contains a discussion of the mission effectiveness for the alternatives. It is possible that a combination of alternatives could be selected in the Record of Decision, e.g., a low power accelerator in combination with the existing reactors to optimize research isotope production, or in combination with FFTF to optimize research and isotope production.

2050-13: The commentor is correct in noting that the No Action Alternative and Alternative 5, Permanently Deactivate FFTF, do not meet the full purpose and need as stated in the NI PEIS. The No Action Alternative does not need to meet mission goals since it is required under NEPA. Alternative 5 was added to the analysis as a result of scoping comments provided by the public. Permanent deactivation of FFTF is a part of all alternatives except the No Action Alternative and Alternative 1, Restart FFTF; thus, any Record of Decision involving Alternatives 2, 3, 4, or 5 could involve the permanent deactivation of FFTF.

2050-14: The United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. However Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 in Volume 1 was revised to incorporate this information.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's

***Commentor No. 2050: Stanley Hobson (Cont'd)
Citizens Advisory Board***

to surmise that DOE does not expect to achieve all four. A clear explanation of the relative importance of the four objectives would greatly enhance the readers' ability to understand how DOE will select its preferred alternative. The absence of such discussion prevents meaningful comment on the part of the public regarding the selection of a preferred alternative. The INEEL CAB recommends that DOE offer a clear explanation of the relative importance of the four objectives in the NI PEIS to support public comment on the preferred alternative. Alternatively, DOE should dismiss all alternatives that fail to meet all four objectives.

For example, Alternative 5, involving permanent deactivation of Fast Flux Test Facility (FFTF), would not allow achievement of the four objectives. As such, it does not appear to be an alternative of equal intent to the others presented. The No Action Alternative similarly would not support achievement of the four objectives; but inclusion of a No Action Alternative is required under NEPA. The INEEL CAB recommends that NEPA environmental documentation for permanent deactivation of the FFTF should follow issuance of the Record of Decision for the NI PEIS if in fact restart of FFTF is not selected as the preferred alternative.

The alternatives discussed in the Draft NI PEIS identify both continued reliance on Canadian sources of medical isotopes and continued reliance on Russian sources of Plutonium_238. Because both options are included in this NEPA document, we assume that DOE considers them "reasonable" alternatives under NEPA. The text implies that DOE is unwilling to rely on Canadian sources of medical isotopes, but we do not understand why continued reliance on Russian sources of Plutonium_238 was not similarly dismissed. The INEEL CAB recommends that DOE clearly explain in the NI PEIS why continued reliance on Russian sources of Plutonium_238 is acceptable, yet similar reliance on Canadian sources of medical isotopes is not.

Another issue that should be considered in the selection of a preferred alternative relates to consistency with current

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(Cont'd)**

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2050-15

Response to Commentor No. 2050

preference is to establish a domestic plutonium-238 production capabilities.

2050-15: The use of mixed oxide or highly enriched uranium to fuel the FFTF has been rigorously evaluated in the Nuclear Infrastructure Nonproliferation Impact Assessment. This report confirms that the manner in which these fuels would be used, as described in the PEIS, is consistent with nonproliferation policy. In the event that a decision is made to restart FFTF, the first six years of operation would use existing onsite mixed oxide (MOX) fuel. DOE expects that an additional 15-year supply of mixed oxide fuel in Europe, owned by Germany, could be available for FFTF. MOX fuel does not use highly enriched uranium. Further, use of the Hanford MOX fuel would dispose of a significant U.S. stockpile of highly attractive fresh plutonium fuel by conversion to spent fuel through irradiation in FFTF. This represents a safe, low-cost, high benefit opportunity to reduce U.S. civilian plutonium without chemical or bulk processing. Use of the German MOX represents a similar advantage with respect to the German stockpile of separated civilian plutonium. During the period of MOX fuel use, in support of U.S. nonproliferation policy directives, DOE's Office of Nonproliferation and National Security would undertake a study under the Reduced Enrichment Research and Test Reactor (RERTR) program to consider the technical feasibility of using low enriched uranium to fuel the FFTF. Under this nonproliferation protocol, if use of low enriched uranium fuel is found infeasible in FFTF for meeting assigned missions, policy would allow DOE to subsequently procure highly enriched uranium fuel for use in FFTF. Again, this approach is consistent with U.S. nonproliferation policy. DOE did consider the impacts on nonproliferation policy in the selection of its preferred alternative in this Final NI PEIS.

2050-16: While there are differences in the total shipping distances and risks among the alternatives, risks from transportation are small for all of the alternatives. Figures and tables in Section 2.7.1.6 of Volume 1 summarize transportation risks and provide comparisons of transportation risks among alternatives and among options within alternatives. Transportation risk and associated costs were factored into DOE's selection of the preferred alternative.

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nonproliferation policy. It appears that FFTF is a good option based on capability, productivity, and possibly cost. However, we are concerned that the use of highly enriched uranium as a source may violate non_proliferation policy and agreements with international governments. The INEEL CAB recommends that DOE provide a clear explanation in the NI PEIS of how highly enriched uranium could be used without violation of nonproliferation policy. We further recommend that DOE consider impacts on non_proliferation policy in the selection of its preferred alternative.

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(Cont'd)

Another issue that should be considered during the selection of the preferred alternative relates to transportation impacts. The INEEL CAB recommends that DOE make every effort to select a preferred alternative that will minimize transportation, if at all possible. For example, if FFTF is selected, all four missions should be performed at Hanford in order to minimize transportation. Similarly, if DOE chooses to select an existing commercial light water reactor, then HFIR should be chosen to support other objectives, thereby minimizing transportation.

2050-16

COST CONSIDERATIONS

The INEEL CAB also reviewed the Cost Analysis Report that was written to support the decision_makers consideration of the Draft NI PEIS. It was released too late to be of much use to the public during the public comment period on the Draft NI PEIS. It was well written and understandable, despite some apparent holes. It provided cost estimates for the various alternatives considered in the Draft NI PEIS. We understood from the Draft NI PEIS that all of the alternatives except Alternative 5 would leave FFTF in standby. However, the cost estimates for all of the alternatives except Alternative 1, the No Action Alternative include \$281 million for deactivation of the FFTF. In comparison, restart of the FFTF would require only \$341 million. We conclude that this apparent oversight makes FFTF restart look more favorable as it is only \$60 million more than deactivation of the facility. The INEEL CAB recommends that DOE frame the alternatives considered in the NI PEIS in a manner that would maintain FFTF in standby mode for all alternatives except Alternative

2050-17

Response to Commentor No. 2050

2050-17: DOE notes the INEEL CAB's opinion that the Cost Report was well written and understandable. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such an ancillary document need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed this document to about 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P in the Final NI PEIS.

As considered in Volume 1 of the NI PEIS, FFTF would be permanently deactivated should a decision be made to select any alternative other than Alternative 1, Restart FFTF, or the No Action. Under no circumstances would it be maintained in standby except under the No Action Alternative. Under an Alternative 1 decision, since FFTF deactivation would not be implemented, deactivation costs would not be incurred. Therefore, for this NEPA review and record of decision process, the Cost Report correctly assigns FFTF deactivation costs to all alternatives except the No Action Alternative and Alternative 1.

As discussed in Section 2.5.1 of Volume 1, a decision not to establish a domestic plutonium-238 production capability in the future would require DOE to reconsider its stabilization strategy for the neptunium-237 currently stored in solution at Savannah River Site (No Action Alternative Option 1). This may ultimately lead to final disposition of the material. In the near term, stabilization of the neptunium-237 would be conducted in accordance with the Supplemental Record of Decision for the Final Environmental Impact Statement, Interim Management of Nuclear Materials (62 FR 61099). This Record of Decision would be amended or new NEPA analysis performed, if necessary. Therefore, the ultimate disposition of the neptunium-237 is beyond the scope of the NI PEIS and, as a result, the Cost Report includes only the costs of neptunium-237 storage for 35 years under No Action Alternative Options 2-4.

2050-18: The NI PEIS is adequate. This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and

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5 to allow consistent comparisons.

We appreciated Figure S_1 on page S_4 of the Cost Analysis Report. It allowed the reader to make meaningful comparisons among the alternatives. The INEEL CAB recommends that DOE add similar tables to the Draft NI PEIS to support public review.

If Neptunium_237 would not be used under the No Action Alternative, the costs associated with its disposition should be included in the cost estimates. The INEEL CAB recommends that the cost estimate for the No Action Alternative be revised to include all costs associated with disposition (including both treatment and disposal) of the Neptunium_237.

CONCLUSION

For all of the reasons stated above, the INEEL CAB finds the Draft NI PEIS to be inadequate. We conclude that DOE's analysis to date fails to provide sufficient analysis to support rational decision_making. The analysis is not presented in a clear, understandable manner. The document is simply too flawed for meaningful public review.

We understand there is a great rush to issue a Record of Decision before the current administration leaves office. While there may be some political, cost, or even technical advantages to this approach and schedule, this decision is too important to proceed without consideration of all relevant facts and alternatives. The goal of NEPA must not be thwarted.

The INEEL CAB recommends that the NI PEIS be completely re_written to address the current deficiencies and reissued as a revised draft PEIS for another round of public review and comment. DOE should add missing information, develop a solid approach to evaluating and comparing the alternatives, and enhance its analysis to support comparison among the myriad alternatives. The second draft should 1) substantiate the purpose and need for action, 2)

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(Cont'd)**

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2050-19

Response to Commentor No. 2050

the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS. Further, DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives. This was accomplished through review and evaluation of site-specific information on the environmental conditions prevailing at ORR, INEEL, and Hanford to include a comprehensive analysis of the associated environmental and health risks of each alternative. DOE made every effort to obtain, analyze and disclose all required information to make a decision on expanding nuclear infrastructure.

2050-19: See response to Comment 2050-18.

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clearly state the Department's objectives, 3) describe multiple, comparable alternatives that would meet those objectives, 4) describe all impacts that would result from the comparable alternatives, and 5) evaluate the alternatives using consistent criteria. The public should be afforded an opportunity to review a revised draft NI PEIS that is not severely flawed in order to participate in a meaningful manner in DOE's decision_making process, as intended under NEPA.

2050-19
(Cont'd)

Response to Commentor No. 2050

Commentor No. 2051: Sue Slack

From: Sue Slack
[SMTP:SUE_SLACK@PARKROSE.K12.OR.US]
Sent: Friday, September 22, 2000 6:28:10 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: Hanford
Auto forwarded by a Rule

I oppose the restart of the FFTF Nuclear Reactor at Hanford!!!!

|| 2051-1

Response to Commentor No. 2051

2051-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 2052: Andrew Butz

From: Andrew Butz[SMTP:ANBUNZ@HOTMAIL.COM]
Sent: Saturday, September 23, 2000 8:57:18 PM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Cc: butzeby@aol.com%internet;
deanamadon@serverlogic.com%internet
Subject: Comment: NO restart of FFTF Nuclear Reactor
Auto forwarded by a Rule
Colette Brown, Office of Defense Power Systems (NE_50)
U.S. Dept. of Energy

Dear Ms. Brown:

As a resident of the Columbia River basin, concerned with the vast store of high level nuclear waste now at Hanford, I implore you to halt any plans for restart of the Fast Flux Test Facility. Among the arguments against restarting FFTF:

*The financial cost and potential risk to the public have not been fully disclosed.

*Clean_up was declared by the Federal Government to the highest priority mission at Hanford.

*NASA has stated they have no need to purchase Plutonium_238.

*Washington State Medical Association says there is no need for FFTF as an added source of medical isotopes.

*Shipping weapons_grade plutonium through the region (to fuel FFTF) is an inherently risky (and unnecessary) proposition.

This is only a sampling of the numerous arguments against FFTF. Please cancel any restart plans now. Thanks for your consideration.

Sincerely,
Andrew Butz
411 NE 22nd Ave., #15, Portland, OR 97232

Response to Commentor No. 2052

- 2052-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., DOE's Richland Operations Office, U.S. Environmental Protection Agency, and the State of Washington Department of Ecology). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram funds designated for Hanford cleanup, regardless of the alternative(s) selected.
- 2052-2:** See response to Comment 2052-1.
- 2052-3:** The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such an ancillary document need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed this document to about 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P in the Final NI PEIS.
- 2052-4:** Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power

Commentor No. 2052: Andrew Butz (Cont'd)

Response to Commentor No. 2052

systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005.

A May 22, 2000, correspondence from NASA to DOE identified that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium 238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

- 2052-5:** DOE notes the commentor's views. DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

Commentor No. 2052: Andrew Butz (Cont'd)

Response to Commentor No. 2052

The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

2052-6: The commentor appears to express the concern that DOE would expose people in the Columbia River Basin to risks associated with the transport of weapons-grade plutonium. None of the proposed alternatives involved the shipment of any weapons-grade plutonium to any port in the United States. Alternative 1 does postulate that DOE might decide at some point to import mixed oxide fuel from Europe to fuel FFTF. At this time, however, DOE has not proposed to import this fuel through any specific port. If DOE ultimately decides to import fuel from Europe, it would perform a separate NEPA analysis to select a port. This review would address all relevant potential impacts of overseas and inland water transportation, shipboard fires, package handling, land transportation, as well as safeguards and security associated with the import of SNR-300 mixed oxide fuel through a variety of specific candidate ports on the east and west coasts. It would consider all public comments, including local resolutions, concerning the desirability of bringing mixed oxide fuel into the proposed alternative ports.

In the event that DOE decides to enhance its nuclear infrastructure, it would not expose any population to high, unacceptable risks under any alternative. Any transportation activities that would be conducted by DOE would comply with U.S. Nuclear Regulatory Commission and U.S. Department of Transportation regulations. Associated transatlantic shipment would comply with International Atomic Energy Agency requirements. In Section J.6.2, DOE reviewed the potential maximum impacts from the marine transportation of mixed oxide fuel from Europe to a representative military port, Charleston, South Carolina, and overland transportation to Hanford. Also in that section, a bounding analysis demonstrates that the maximum potential radiological risks to

Commentor No. 2052: Andrew Butz (Cont'd)

Response to Commentor No. 2052

the surrounding public from mixed oxide fuel shipments would be extremely small (e.g., less than 1 chance in a trillion for a latent cancer fatality per shipment from severe accidents at docks and in channels and less than 1 chance in 50 billion for a latent cancer fatality per shipment from overland highway accidents).

- 2052-7:** Chapter 4 of Volume 1 and Appendixes H through J discuss the risk to the public from normal operation and from accidents that would be expected to result from implementation of the nuclear infrastructure alternatives. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Commentor No. 2053: Sandra J. Ruff

From: Sandy Ruff
[SMTP:SRUFF@WORLDACCESSNET.COM]
Sent: Monday, September 25, 2000 10:08:51 AM
To: INFRASTRUCTURE_PEIS, NUCLEAR
Subject: FFTF reactor use
Auto forwarded by a Rule

I support the restart of FFTF for the production of medical isotopes. This is a most important project that will benefit many people.

Sandra J. Ruff
24308 NE 167 Avenue
Battle Ground, WA 98604

2053-1

Response to Commentor No. 2053

2053-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 2054: Beth Call

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Beth Call

From: Beth Call <trollshouse@bmi.net>
To: Nuclear.Infrastructure-PEIS@hq.doe.gov. <mailto:Nuclear.Infrastructure-PEIS@hq.doe.gov>
Sent: Saturday, September 16, 2000 3:57 PM
Subject: DONT RESTART FFTF

ATT: Colette E. Brown

How can you ethically consider restarting FFTF? In the 1995 Hanford Clean-Up Agreement the Dept. of Energy agreed to deactivate and decommission FFTF. The reasons for doing so are even more compelling today:

1. Plutonium238 would be the major product of FFTF, creating still more nuclear waste for the leaking, High-Level Nuclear Waste Tanks. NASA has written to the Dept.Of Energy stating they don't need more Plutonium 238 so why create it?
2. The secondary product, medical isotopes, still in an experimental stage in cancer treatment, are also unneeded according to the Washington Medical Association. An adequate supply is already available through reactors in Canada and elsewhere.
3. Delaying the Hanford Clean-Up and violating the Clean-Up agreement, further threatens the Columbia River, all life in the Columbia River, and all lands drained by the Columbia River. The epidemic cancer, birth defects etc. which would result create far more risk of cancer than any isotopes made in FFTF could ever cure.
4. Shipments of plutonium needed as fuel in FFTF would have to arrive either via Puget Sound or cross country by truck or railroad. The results of any accident in shipping would be catastrophic to any region involved, for thousands of years and countless generations.
5. The DOE will not release the Environmental Impact Statement until the time for public comment is over!
6. More nuclear waste, high or low level, is not acceptable at Hanford until present <wastes are in a permanently stable form. Adding new wastes would interfere with the primary mission of Hanford to clean it up.
7. Hanford employees, who showed up at the Richland hearing Aug. 31, 2000 in such great numbers, need not worry about job security. The Hanford clean-up required will employ large numbers of people for a very long time, probably at least for the following century. If scientists ever are successful in developing a process to render nuclear wastes permanently stable, there will surely be a great demand for them to enact this process on the nuclear waste of the whole world. Engineers should focus on reeducation in clean-up technology.

Please do not take on your shoulders the responsibility for the potentially catastrophic restart of FFTF.

Please enter my comments in the public record. I would appreciate a response.

Beth Call
 trollshouse@bmi.net
 102 Otis
 Walla Walla, WA 99362

9/16/00

Response to Commentor No. 2054

2054-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF. A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Prior public meetings were held on this formal milestone change. FFTF restart would not impact ongoing cleanup missions at Hanford.

2054-2: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. High-level radioactive waste would not be generated from merely operating FFTF. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. No waste would be placed in Hanford's high-level waste tanks.

The use of proposed alternative facilities associated with processing of neptunium-237 targets would have no impact on schedules or available funding for high-level radioactive waste programs at Hanford. The higher activity waste would be treated as a solid form via a stand-alone vitrification system, separate from any tank waste treatment system. Therefore, the existing Hanford high-level radioactive waste facilities would not be used, and as analyzed in the PEIS, no existing or planned high-level radioactive waste facilities would be used to treat the wastes resulting from processing the irradiated targets.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

2054-3: A May 22, 2000, correspondence from NASA to DOE identified that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean

Commentor No. 2054: Beth Call (Cont'd)

Response to Commentor No. 2054

that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

2054-4: DOE acknowledges that other manufacturers can produce certain isotopes that are economically attractive. In fact, the United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes primarily molybdenum-99, and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements.

Although other manufacturers produce medical radioisotopes, DOE remains the key provider for a large number of radioisotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially experimental, these isotopes are not generally purchased in large-enough quantities to make their production financially attractive to private industry. However, supplies of many research isotopes are not readily available from existing domestic or foreign sources, causing a number of medical research programs to be terminated, deferred, or seriously delayed. Under the NI PEIS proposed action and consistent with its mandates under the Atomic Energy Act, DOE would enhance its existing nuclear facility infrastructure to, among other things, more effectively support production of radioisotopes for medical applications and research. DOE's intent is to complement commercial sector capabilities to ensure that a reliable supply of isotopes is available in the U.S. to meet future

Commentor No. 2054: Beth Call (Cont'd)

Response to Commentor No. 2054

demand, and to encourage the commercial sector to privatize the production of isotopes that have established applications to a level that would support commercial ventures.

Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions basic energy sciences or defense. DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term (less than 5 years).

2054-5: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., DOE's Richland Operations Office, U.S. Environmental Protection Agency, and the State of Washington Department of Ecology). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Commentor No. 2054: Beth Call (Cont'd)

Response to Commentor No. 2054

2054-6: Medical isotope production has been identified as one of the purposes and needs (Section 1.2.1 of Volume 1) for which DOE action is necessary. The NI PEIS addresses the environmental impacts that would result from the production of medical isotopes. Although the 12 million medical procedures a year that use radioisotopes would be expected to result in significant health benefits, the evaluation of impacts resulting from medical procedures is outside the scope of the NI PEIS.

This PEIS has provided an estimate of the potential human health impacts associated with a range of reasonable alternatives as described in Section 2.5 of Volume 1. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, which includes restart of FFTF, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

As stated in Appendix H of the EIS, other human health impacts (non-fatal cancers and genetic mutations) occur with a lower frequency for the same level of exposure. Since latent cancer fatalities would not be expected among the public, it follows that the expected result for other radiological health impacts would also be small.

2054-7: Alternative 1 does postulate that DOE might decide at some point to import mixed oxide fuel from Europe to fuel FFTF. At this time, however, DOE has not proposed to import this fuel through any specific port. If DOE ultimately decides to import fuel from Europe, it would perform a separate NEPA analysis to select a port. This review would address all relevant potential impacts of overseas and inland water transportation, shipboard fires, package handling, land transportation, as well as safeguards and security associated with the import of SNR-300 mixed oxide fuel through a variety of specific candidate ports on the east and west coasts. It would consider all public comments, including local resolutions, concerning the desirability of bringing mixed oxide fuel into the proposed alternative ports.

Commentor No. 2054: Beth Call (Cont'd)

Response to Commentor No. 2054

In the event that DOE decides to enhance its nuclear infrastructure, it would not expose any population to high, unacceptable risks under any alternative. Any transportation activities that would be conducted by DOE would comply with U.S. Nuclear Regulatory Commission and U.S. Department of Transportation regulations. Associated transatlantic shipment would comply with International Atomic Energy Agency requirements. In Section J.6.2, DOE reviewed the potential maximum impacts from the marine transportation of mixed oxide fuel from Europe to a representative military port, Charleston, South Carolina, and overland transportation to Hanford. Also in that section, a bounding analysis demonstrates that the maximum potential radiological risks to the surrounding public from mixed oxide fuel shipments would be extremely small (e.g., less than 1 chance in a trillion for a latent cancer fatality per shipment from severe accidents at docks and in channels and less than 1 chance in 50 billion for a latent cancer fatality per shipment from overland highway accidents).

2054-8: DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and to providing ample opportunity for public comment on those actions. The original comment period on the Draft NI PEIS was set at 45 days according to the Council on Environmental Quality's (CEQ) "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act" (40 CFR 1506.10(c)). As stated in the Notice of Availability (65 FR 46443 et seq.), the public comment period extended from July 28, 2000 to September 18, 2000. In preparing the Final PEIS, DOE has assessed and considered both oral and written comments received on the Draft PEIS during the public comment period and has responded to these comments in the Final PEIS. Volume 3 of the NI PEIS contains public comments received on the NI PEIS and DOE responses to those comments. Moreover, late comments were considered to the extent practicable.

2054-9: DOE notes the commentor's opinion. Restoration of the Hanford Site and waste management activities are recognized as the primary missions at Hanford. The Department sponsors numerous research efforts to immobilize and destroy hazardous and radioactive wastes. One of the possible missions for the FFTF facility is researching transmutation of radioactive waste.

FINAL Programmatic Environmental Impact Statement
for Accomplishing Expanded Civilian Nuclear Energy
Research and Development and Isotope Production Missions in the
United States, Including the Role of the Fast Flux Test Facility

Volume 3 Book 3—Comment Response Document



Cover photograph and illustration identification, beginning at top center and going clockwise:

- Radioisotope tagged monoclonal antibodies, “smart bullets,” target malignant cells for diagnosis and treatment of diseases
- The Fast Flux Test Facility at the Hanford Site near Richland, Washington
- Illustration of a satellite that could use radioisotope power systems
- The High Flux Isotope Reactor at the Oak Ridge National Laboratory near Oak Ridge, Tennessee
- The Advanced Test Reactor at the Idaho National Engineering and Environmental Laboratory near Idaho Falls, Idaho
- Tip of a remote-handling arm, used for work in developing industrial and medical isotopes

AVAILABILITY OF THE FINAL NI PEIS

General questions regarding this PEIS or for a copy of this PEIS, please contact:

Colette E. Brown, Document Manager
Office of Space and Defense Power Systems (NE-50)
Office of Nuclear Energy, Science and Technology
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874
Attention: NI PEIS
Telephone: (877) 562-4593
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

This PEIS is accessible on the Office of Nuclear Energy, Science and Technology web site at www.nuclear.gov.



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Reader's Guide

Volume 3, the *Comment Response Document*, is organized into three chapters:

- Chapter 1 - Overview of the Public Comment Process and the Comment Response Document
- Chapter 2 - Written Comments and DOE Responses
- Chapter 3 - Oral Comments Presented at the Public Hearings and DOE Responses

These chapters are divided among the three books of Volume 3 as follows:

- Book 1 - Chapter 1 and Chapter 2 (pages 2-1 through 2-931)
- Book 2 - Chapter 2 (pages 2-932 through 2-1914)
- Book 3 - Chapter 2 (pages 2-1915 through 2-2344) and Chapter 3

Chapter 1, “Overview of the Public Comment Process and the Comment Response Document,” summarizes key issues raised during the comment period on the Draft NI PEIS. It also identifies major changes made to this NI PEIS after publication of the Draft in response to these comments and incorporates new information that was unavailable at the time of the issuance of the Draft NI PEIS.

Chapter 2, “Written Comments and DOE Responses,” provides a side-by-side display of the written comments received (full-text reproductions) and DOE’s responses. Individual comments are numbered in the margins of the comment document, and DOE responses to each numbered comment are provided on the right side of each page.

The comment document numbers in Chapter 2 are in ascending order but are not sequential. Each comment document was assigned a sequential log number as it was received. When the same comment document was submitted by many individuals, it was designated as a campaign. The campaigns were grouped together for the purpose of responding to comments, and do not appear in numerical order.

Chapter 3, “Oral Comments Presented at the Public Hearings and DOE Responses,” provides a side-by-side display of the oral comments presented at the public hearings and DOE’s responses. The speakers’ names appear alphabetically by hearing location. Commentors who submitted their oral presentations in writing will find their submittals and DOE’s responses in Chapter 2.

To Find a Specific Comment Document and DOE Response

Refer to the “List of Commentors” immediately following the Volume 3 Table of Contents. This list is organized alphabetically and contains the corresponding page number(s) to find the comment document. The public officials, organizations, and interest groups appear first, then individuals are listed. City and state government bodies are listed under “City of” or “State of.” Members of Congress are listed alphabetically under “Members of Congress.”

DOE has made a good faith effort to interpret the spelling of names that were either written on comments or were recorded on the telephone comment line.

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Trumble-Bert, Victoria	2-2258	Vosk, Michael	2-2063
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Warne, Harry A.	2-2079	White, Betty E.	2-2055
Warner, Michael G.	2-2063	White, Bill	2-2063
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Watkins, Debbie	2-2063	Whitlock, Elon	2-1373
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Wedberg, Becky	2-2063	Wickman, Jim	2-2063
Wedberg, Bob	2-2063	Wickstrand, L. G.	2-2055
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Williams, Sheryl	2-2055	Wright, Joseph	2-2055
Williams, Todd	2-1373	Wright, Thomas	2-1548
Williamson, Joy	2-2063	Wrsew@aol.com/Kitt	2-1163
Williamson, Kirk	3-109	Wrsew@aol.com/Theresa	2-1162
Willis, Harold W. and Ann E.	2-85	Wuerl, Steve	2-2055
Wills, Heidi	2-366	Wuerl, Steve & Carol	2-2063
Wilmes, Keith	2-1373	Wuhl, Barbara	2-1373
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Wilmoth, R. K.	2-2055	Wyatt, Noella	2-156
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Wilson, Charles	2-2063	Wyer, Helen E.	2-2063
Wilson, Christopher	2-954	Wyers, Lucile	2-1191, 2-2153
Wilson, Guy	2-2055	Wyeth, Earl J.	2-2055
Wilson, Karen L.	2-2014, 2-2016	Wynn, Cynthia	2-2063
Wilson, Kathleen	2-2055	Wynn, Jeanette R.	2-2063
Wilson, Mary J.	2-2063	Yancey, Brett L.	2-2055
Wilson, R. Shawn	2-2055	Yandoud, Fran	2-2055
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Windisch, Chuck	2-2063	Yebl, Terry E.	2-2055
Wininger, Robert	2-2055	yeefoo@aol.com	2-825
Winter, Tanja	2-45, 2-695	Yeh, Helen	2-2055
Wioth, Gene	2-2063	Yocum, Sally	2-1715
Wirsing, Penny and Rick	2-647	York, Sharon	2-1373
Witherell, Carol	2-1091	Young, Arlene	2-1040
Withers, Mary	2-2063	Young, Barzilla E.	2-1373
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Witt, Susan	2-2188	Young, Tim	2-2014, 3-113
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Wokal, Richard	2-2055	Zahn, Walter	2-2055
Wold, Gary	2-2055	Zald, Anne E.	2-2274
Wolever, Nell	2-2307	Zaman, Shakir	2-551, 2-2055
Wolf, Dan	2-2063	Zangar, Catherine	2-200, 2-2038, 3-114
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Wood, Janece	2-2063	Zavala, Jesse B.	2-2055
Wood, Julie	2-2063	Zbaranshas, K.	2-2063
Wood, Kirk	2-2055	Zeigler, Terrie	2-2063
Wood, Stephanie	2-2063	Zemar, Michael	2-2319
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Woodrich, Thomas O.	2-2055	Nuclear Information Service	2-950
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Ziring, S. M.	2-1179	Zubka, Kenneth J.	2-2055
Zofrankosy, Dell	2-2063	Zuch, O. W.	2-2055
Zolton, Marc	2-1619	Zucker, Frank	2-429, 3-344
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Chapter 1

Overview of the Public Comment Process and the Comment Response Document

Chapter 1

Overview of the Public Comment Process and the Comment Response Document

In July 2000, the U.S. Department of Energy (DOE) published the *Draft Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility (Nuclear Infrastructure Programmatic Environmental Impact Statement [NI PEIS])*. In accordance with the Council on Environmental Quality (CEQ) and DOE National Environmental Policy Act (NEPA) regulations, a Federal Register notice (65 FR 46443) announced the availability of the Draft NI PEIS and invited interested parties to provide comments. The Draft NI PEIS or Summary was distributed to approximately 6,000 individuals.

1.1 THE PUBLIC COMMENT PROCESS

NEPA regulations mandate a minimum 45-day comment period after the U.S. Environmental Protection Agency's (EPA) Notice of Availability of a draft EIS to provide an opportunity for the public to comment on the EIS analysis and results. The 45-day comment period on the Draft NI PEIS began on July 28, 2000, and to provide interested parties with additional time to comment, the deadline for transmittal of comments was changed from September 11, 2000 (as stated in the transmittal letter of the Draft NI PEIS and the Summary), to September 18, 2000. While the official comment period ended on September 18, 2000, DOE addressed late comments to the extent practicable and considered all comments received through October 31, 2000, in preparing the final NI PEIS. Comments that were received through September 25, 2000, along with corresponding responses, have been included in Chapter 2 of this volume. Direct responses are not included to comments that were received after September 25, 2000. However, all of these comments were considered and are characterized by other comments received during the comment period (for which a response has been provided).

1.2 PUBLIC HEARING FORMAT

During the 52-day comment period, DOE held seven hearings to discuss the proposed action and to receive oral and written comments on the Draft NI PEIS. The hearings were held near the locations that would be affected by the proposed alternatives, as well as some additional locations in Oregon and Washington in response to stakeholder requests. In addition, a hearing was held in the Washington, D.C. area. The hearing schedule and estimated attendance at each hearing are presented in **Table 1-1**. These attendance estimates are based on the number of registration forms completed and returned to DOE at each hearing, as well as a rough "head count" of the audience, and may not include all those present.

Table 1-1 Hearing Schedule and Attendance

Hearing Location	Date	Estimated Attendance
Oak Ridge, Tennessee	August 22, 2000	15
Idaho Falls, Idaho	August 25, 2000	20
Hood River, Oregon	August 28, 2000	265
Portland, Oregon	August 29, 2000	320
Seattle, Washington	August 30, 2000	250
Richland, Washington	August 31, 2000	330
Arlington, Virginia	September 6, 2000	15
Total		1,215

An independent facilitator was present at each hearing to direct and clarify discussions and comments. A comment recorder also was present at each hearing to record the proceedings. At the hearings in Oregon and Washington, a second comment recorder was available in a separate room to receive comments from attendees who were not able to attend the entire session, or who wanted to give their comments and leave. Transcripts of the hearings are available in DOE public reading rooms and libraries listed in Chapter 7 of Volume 1.

DOE representatives were available to meet with the public for informal discussions prior to and after the hearings. In an effort to encourage interaction between members of the public and DOE representatives, DOE used an interactive format for the hearings. The format included a presentation, question and answer session, and a comment session. Each hearing opened with a welcome from the facilitator, followed by a presentation on the proposed action by a DOE representative. Next, the facilitator opened the question and answer session to give the audience a chance to ask questions about the material presented. This was followed by the comment session, during which attendees were randomly selected to provide their comments. Attendees received a numbered ticket from the staff at the registration table and the facilitator picked the tickets from a container to determine the order of speakers. To ensure that all attendees were given an opportunity to provide comments, each speaker was limited to 5 minutes. Those commentators who needed additional time were invited to speak again after everyone had an initial opportunity to provide their comments. Modifications to the format were made at each of the public hearings to fulfill any special requests of attendees.

1.3 COMMENTS ON THE DRAFT NI PEIS

The public was encouraged to submit comments on the Draft NI PEIS to DOE via U.S. mail, e-mail, telephone, fax, and at the public hearings. DOE received approximately 3,400 submittals containing over 6,200 comments addressing a wide range of issues. A number of written comments submitted during the hearings were also presented orally; those comments were counted once. All comments submitted to DOE during the comment period were given equal consideration in preparation of the Final NI PEIS. Comments determined to be beyond the scope of the NI PEIS were forwarded to the appropriate DOE office for consideration. **Table 1–2** lists the number of comments received by method of submission.

Table 1–2 Comment Submission Method

Method	Number of Submittals
U.S. mail	2,493
E-mail	332
Telephone	107
Fax	92
Comments submitted at hearings	439
Total	3,463

Upon receipt, all written submittals were date-stamped and assigned a sequential log number used in tracking during the comment response process. Oral comments presented at the hearings were similarly identified and assigned a sequential log number. All comments were then processed through the comment analysis and response system for inclusion in this document. Each comment was assigned to a specific category to facilitate response and provide an overview of the type of comments that DOE received. Documents identical in content are presented only once (e.g., a written comment that was presented orally at a hearing). Campaigns (e.g., identical comments submitted by numerous individuals) likewise are presented and responded to only once. However, campaign documents with additional comments are responded to separately. The comment categories are shown in **Table 1–3**.

Table 1–3 Comment Categories

Accelerator Design	Miscellaneous Cost Issues
Air Quality	NEPA Process (extension of comment period, public participation, availability of information, completeness of overall analysis, additional hearings, etc.)
Alternative 1 - Restart FFTF	No Action Alternative
Alternative 2 - Use Only Existing Operational Facilities	Noise
Alternative 3 - Construct New Accelerator(s)	Nonproliferation
Alternative 4 - Construct New Research Reactor	Nuclear Energy Research and Development
Alternative 5 - Permanently Deactivate FFTF (with no new missions)	Oak Ridge Reservation Site Issues
Applicable Laws, Regulations, and Other Requirements	Policy
Cost of Alternatives	Preferred Alternative
Cultural and Paleontological Resources	Processing Facilities
Cumulative Impacts and General Environmental Impacts	Production of Medical and Industrial Isotopes
Ecological Resources	Production of Plutonium-238
Environmental Justice	Public and Occupational Health and Safety - Facility Accidents
Existing Human Health Risks	Public and Occupational Health and Safety - Normal Operations
FFTF Investment	Purpose, Need, and Timing of Missions
General Alternative Issues (alternatives considered but dismissed, new alternatives, etc.)	Reactor Design
General Irradiation Needs	Relationship to Other DOE Programs
General Antinuclear	Scoping
Generic Support Facility Design	Socioeconomics
Geology and Soils	Transportation (incident-free and accidents)
Hanford Site Issues	Visual Resources
Idaho National Engineering and Environmental Laboratory Site Issues	Waste Management (includes spent fuel issues)
Irradiation Facilities	Water Resources
Land Resources	

Chapter 2 contains the comments (submitted in writing and by telephone) and the DOE responses presented in a side-by-side format, with each delineated comment receiving a separate response. Not all responses appear directly next to their corresponding comment due to the varying lengths of each response. However, all comments and responses are numbered with a comment identification number to facilitate matching a comment with its response. Where commentors presented support for, or opposition to, a specific alternative, this was noted. Where commentors provided additional statements supporting their positions, DOE responded in detail to those that needed clarification or were in error.

Chapter 3 contains the comments that were submitted during oral presentations at the public hearings held in August and September 2000. The chapter is organized alphabetically by speaker's name according to the hearing location. The format and response procedures used in Chapter 2 were followed in Chapter 3.

Commentors who submitted their oral presentations in writing will find their submittals and responses in Chapter 2. The full transcripts from each hearing are available at DOE reading rooms and libraries listed in Chapter 7 of Volume 1.

An alphabetical List of Commentors with corresponding page numbers has been provided immediately following the Volume 3 Table of Contents to assist the reader in finding specific comment documents and

DOE responses. Public officials, organizations, and interest groups appear first, then individuals are listed. City and state government bodies are listed under “City of” or “State of.” Members of Congress are listed alphabetically under “Members of Congress.”

1.4 ENVIRONMENTAL PROTECTION AGENCY RATING OF THE NI PEIS

EPA reviewed and rated the Draft NI PEIS as Environmental Concerns - Insufficient Information (EC-2). To a large extent, a lack of information in the Draft NI PEIS was the basis for their environmental concerns. EPA was also concerned that the cost and nonproliferation reports were not made available to the public until well into the comment period on the Draft NI PEIS. A copy of the EPA rating is included among the written comments in Chapter 2 of this volume.

1.5 ISSUES RAISED DURING THE PUBLIC COMMENT PERIOD ON THE DRAFT NI PEIS

During the public comment period on the Draft NI PEIS, DOE received approximately 3,400 submittals containing over 6,200 comments addressing a wide range of issues. DOE considered comments received after the close of the public comment period to the extent practicable (see Section 1.5.6).

The following discusses the major issues raised, and DOE’s responses to these issues. Changes made in response to comments received on the Draft NI PEIS are described in Section 1.6.

Major issues raised addressed purpose and need for the proposed action; impact of FFTF on Hanford cleanup; waste management and spent nuclear fuel; cost of the various alternatives; nuclear nonproliferation policy; public involvement; and environmental impacts. Aside from comments on the proposed action and its environmental impacts, many commentors expressed support for or opposition to FFTF restart, the major point of public controversy associated with the NI PEIS.

1.5.1 Purpose and Need for the Proposed Action

Many commentors expressed the opinion that DOE failed to demonstrate a compelling argument for the projected need for medical isotopes, and that such medical isotopes could be produced or purchased elsewhere, particularly in Canada. In contrast, a large number of commentors expressed support for expanded isotope production by sharing personal stories of how medical isotopes had either saved a relative or friend, or could have saved them had isotopes been available. As presented in Section 1.2.1 of Volume 1, DOE sought independent analysis of trends in the use of medical isotopes, and established two advisory bodies, the Expert Panel and the Nuclear Energy Research Advisory Committee (NERAC). DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. While Canada currently provides a large amount of the medical radioisotopes used in the United States, it only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS.

A number of commentors also questioned the suitability of using FFTF for producing research isotopes in light of findings presented in the NERAC Subcommittee for Isotope Research and Production Planning Report. While it would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if FFTF were operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. In recognition of these

constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF for isotope production when coupled with these other missions.

Commentors also questioned the need for the United States to reestablish domestic production of plutonium-238. In particular, commentors pointed to the availability of plutonium-238 that could be purchased from Russia, and recent guidance from NASA stating that DOE no longer needed to support certain radioisotope power systems. As discussed in Section 1.2.2 of Volume 1, DOE could purchase plutonium-238 from Russia. However, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Current NASA guidance to DOE is also discussed in Section 1.2.2. The May 22, 2000, correspondence from NASA identifies that it no longer has a planned requirement for Small Radioisotope Thermoelectric Generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, SRTG development efforts were stopped in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling radioisotope power systems technology generator. This new radioisotope power system, referred to in the subject correspondence, requires one-third less plutonium as its fuel source. Because the Stirling radioisotope power systems technology is developmental, NASA has requested in a September 22, 2000, letter to DOE that the plutonium-238 needed for a large radioisotope thermoelectric generator be maintained as a backup.

1.5.2 Impact of FFTF Restart on Hanford Cleanup

A number of commentors expressed concern that DOE's primary mission at Hanford needs to be cleanup, including compliance with the Tri-Party Agreement. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford environmental restoration activities are conducted in accordance with the Tri-Party (i.e., DOE's Richland Operations Office, EPA, and the State of Washington Department of Ecology) Agreement. This agreement specifies milestones and schedules for restoration of all parts of Hanford. FFTF milestones in the Tri-Party Agreement were placed in abeyance (suspension) by agreement of the three parties until a decision is made on the future of FFTF. Public meetings were held on this formal milestone change. DOE is fully committed to honoring this agreement.

A number of commentors also expressed concern that funding for Hanford cleanup would be diverted for FFTF restart and hamper the progress of cleanup activities. The U.S. Congress funds Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM). Congress also funds FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded through NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2 of Volume 2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

1.5.3 Waste Management and Spent Nuclear Fuel

A number of commentors expressed concern over the generation and disposition of waste resulting from the proposed action. In particular, commentors pointed to past DOE waste management practices and questioned whether wastes resulting from proposed NI PEIS activities would be properly managed. The NI PEIS addresses wastes produced for each alternative, as well as cumulative impacts related to waste production. Waste minimization programs at each of the alternative sites are also addressed. These programs would be implemented for the alternative selected in the Record of Decision. The waste generated from any of the alternatives considered in the NI PEIS would be managed (i.e., treated, stored, and disposed of) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

A number of commentors expressed specific concern over the generation and disposition of waste resulting from FFTF restart and operation, and how this would impact Hanford's existing waste management infrastructure. Management of wastes that would be generated under implementation of Alternative 1 (Restart FFTF) is discussed in Section 4.3 of Volume 1 (e.g., Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that the Hanford waste management infrastructure is analyzed in this NI PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, *Radioactive Waste Management*, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical, or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Sections 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in the Fuels and Materials Examination Facility (FMEF) and how this waste would be managed at the site.

A number of commentors also raised concern that processing of irradiated targets for production of plutonium-238 would generate high-level radioactive waste. DOE Manual 435.1, *Radioactive Waste Management*, defines high-level radioactive waste as "the highly radioactive waste material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid material derived from such liquid waste that contains fission products in sufficient concentrations; and other highly radioactive material that is determined, consistent with existing law, to require permanent isolation." DOE has prepared an implementation guide to M 435.1 to assist in implementing the requirements contained in that manual. For this particular "requirement," the definition of high-level radioactive waste, the guide is intended to facilitate the classification of indefinite waste as to whether or not they are high-level radioactive waste. It is recognized that the definition of high-level radioactive waste is not precise and is essentially a source-based definition that also alludes to concentrations of a given waste stream. Page II-8 of the guide notes that "For the purpose of managing high-level waste under DOE M 435.1-1 [sic], spent nuclear fuel includes spent driver elements and/or irradiated target elements that contain transuranium elements." This statement was included in the guide because the concentrations of long-lived isotopes are likely to be somewhat high during reprocessing and it also meets the source-based definition. As a result of reviewing this guide and to address the comments raised, DOE is considering whether the waste from processing of irradiated neptunium-237 targets should be classified as high-level radioactive waste and not transuranic waste. As a result, the Waste Management sections (i.e., Sections 4.3.1.1.13, 4.3.2.1.13, 4.3.3.1.13, and 4.4.3.1.13) of this NI PEIS have been revised to reflect this different classification from what was assumed in the Draft NI PEIS. As discussed in these revised sections, irrespective of how the waste is classified (i.e., transuranic or high-level radioactive waste), the composition and characteristics are the same, and the waste management (i.e., treatment and onsite storage) for this NI PEIS would be the same. In addition, even if the waste were managed as high-level radioactive waste, it would have no impact on the existing high-level radioactive waste management infrastructure (e.g., high-level waste storage tanks) because the high-activity waste from processing the targets would be initially stored and vitrified within the processing facility (i.e., FMEF, the Radiochemical Engineering Development Center [REDC], or the Fluorinel Dissolution Process Facility [FDPF]).

Commentors also expressed concern over the potential impacts of spent nuclear fuel generation from FFTF restart and operation, particularly regarding human health risk. This NI PEIS estimates that about 16 metric tons of heavy metal spent nuclear fuel would be generated over 35 years of operation of FFTF. Hanford is currently managing about 2,000 metric tons of heavy metal spent nuclear fuel. As indicated in Table 4-173, the radiation risk to a maximally exposed individual from normal operational activities during management of the current stored nuclear fuel over 35 years is 1.4×10^{-8} latent cancer fatality. The risk to the maximally exposed individual that would be associated with the new nuclear infrastructure operations to restart FFTF and operate FMEF or the Radiochemical Processing Laboratory is 9.5×10^{-8} latent cancer fatality. Furthermore,

only a small fraction of this risk would be attributable to management of the additional spent nuclear fuel at FFTF. The annual dose to the maximally exposed individual from all current and reasonably foreseeable activities is less than 0.2 millirem. This dose is well within the DOE dose limits given in DOE Order 5400.5, *Radiation Protection of the Public and the Environment*. As discussed in that order, the dose limit from airborne emissions is 10 millirem per year, as required by EPA regulations under the Clean Air Act; the dose limit from drinking water is 4 millirem per year, consistent with the EPA drinking water criteria under the Safe Drinking Water Act; and the dose limit from all pathways combined is 100 millirem per year. The risk to the population from all activities at Hanford would be 0.21 latent cancer fatality over 35 years. DOE has committed to remove the spent nuclear fuel at Hanford for ultimate disposition in a geologic repository.

1.5.4 Cost of the Various Alternatives

Commentors expressed opinions about the costs related to the stated missions. Commentors stated that a cost-benefit analysis was necessary to show the value of production of medical isotopes balanced against facility costs, in particular, the restart of FFTF, and noted that perhaps facilities would be able to pay for themselves. There were concerns that FFTF restart would take funds away from the cleanup of Hanford. Commentors noted that the decommissioning costs were not included for the restart FFTF option in the *NI Cost Report*. Several commentors remarked that the expense of plutonium-238 production cannot be justified when DOE needs to clean up existing problems at its sites.

Although the costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS, DOE prepared a separate *NI Cost Report*. This report would provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in this Final NI PEIS. Pursuant to CEQ regulations (40 CFR Section 1505.1(e)), such a document comparing alternatives should be made available to the public prior to any decision being made. DOE mailed this document to more than 730 interested parties on August 24, 2000. This report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided the summary of the *NI Cost Report* in Volume 2, Appendix P, in this Final NI PEIS.

1.5.5 Nuclear Nonproliferation Policy

Commentors expressed opinions about the nuclear nonproliferation implications of the proposed action. Commentors were concerned about keeping plutonium-238 out of the hands of third parties, and it was suggested that the purchase of plutonium-238 from Russia would stop proliferation of the material and the United States would know the disposition of the quantity purchased. Several commentors raised concerns about specific facilities described in the NI PEIS, including FDPF and FFTF. The use of highly enriched uranium fuel in FFTF was questioned related to a possible violation of U.S. nuclear nonproliferation policy. Conversely, the shutdown of FFTF that occurred previously was characterized as being done to discourage proliferation of nuclear weapons worldwide, but had instead weakened the U.S. position as a world leader in nuclear technology. There were comments about the timeliness of release of the *NI Nonproliferation Impact Assessment*, that no nonproliferation information was included in the Draft NI PEIS, and that nuclear nonproliferation policy should be considered by DOE in selection of its preferred alternative.

The plutonium being considered for production in this NI PEIS is plutonium-238, which is not the same isotope of plutonium that is used in nuclear weapons. The production of plutonium-238 does not present a nonproliferation concern. DOE developed the separate *NI Nonproliferation Impact Assessment*, published in September 2000, that analyzed the nonproliferation impacts of the actions considered in this PEIS and found that there are no U.S. nonproliferation policies, laws, regulations, or international agreements that preclude the use of any of the facilities in the manner described in the Draft NI PEIS. Although this policy analysis is not required under NEPA, it is an essential element in the decision-making process for the DOE nuclear

infrastructure. A summary of the *NI Nonproliferation Impact Assessment* is included in Volume 2, Appendix Q, of this Final NI PEIS. It is also available on the DOE NE web site (<http://www.nuclear.gov>).

1.5.6 Public Involvement

Commentors expressed opinions about the length of the comment period on the Draft NI PEIS, and said they wanted additional time to obtain and review relevant documents, including the *NI Cost Report* and *NI Nonproliferation Impact Assessment*. As identified in Section 1.1, the deadline for transmittal of comments was changed from September 11, 2000, to September 18, 2000 (as stated in the transmittal letters of the Draft PEIS and the Summary). While the official comment period ended on September 18, 2000, DOE addressed late comments to the extent practicable and considered all comments received through October 31, 2000, in preparing this Final NI PEIS. Comments that were received through September 30, 2000, along with corresponding responses, have been included in Chapter 2 of this volume. Direct responses are not included to comments that were received after September 30, 2000. However, all these comments were considered and are characterized by other comments received during the comment period (for which a response has been provided).

Many commentors expressed the opinion that public input is intended for “show only,” and that DOE has already made its decisions. Commentors also stated that they had given the same comments over and over again and that DOE representatives were not listening. DOE policy encourages effective public participation in its decision-making process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered all comments received from the public.

Some commentors expressed opinions about the conduct of the hearings, both positive and negative. The public hearing format was designed to be fair. The public hearing format used was based on stakeholder input and was presented in the Notice of Availability (65 FR 46443 et seq.) for the Draft NI PEIS. This format was intended to encourage public participation, regardless of the motivation for attending the hearing. It provided an opportunity for the participants to meet one another, exchange information, and share concerns, with DOE personnel available throughout the course of each hearing to answer questions. The meetings were facilitated by an independent moderator to ensure that all persons wishing to speak had an opportunity to do so. Persons wishing to comment were selected at random from the audience rather than according to the order in which they registered. This was accomplished by a random number drawing. In addition to the comment recorder stationed at the main hearing, a second recorder was available in an adjacent room to receive comments without the need to await selection at the main proceeding. The hearing format promoted open and equal representation by all individuals and groups.

1.5.7 Environmental Impacts

A number of commentors questioned the results of the environmental impact analysis and cumulative impacts, specifically at Hanford. Many of these comments focused on concerns that the proposed action would result in negative impacts to the health of individuals residing in the Hanford region. The NI PEIS analyzes the impacts of the various alternatives, and the environmental impacts associated with all proposed nuclear infrastructure activities are addressed in detail in Chapter 4 of Volume 1. Specifically, the environmental impacts associated with operation of the Hanford facilities during normal operations and from postulated accidents are presented in Section 4.3. These assessments were made using well-established and accepted analytical methods, as described in Appendixes G through L in Volume 2. The analytical methodology is conservative by nature; the actual impacts to the environment would be expected to be less than calculated. All impacts have been shown to be small. No fatalities among workers or the general public would be

expected over the 35-year operational period. The impacts to the biosphere (air, water, and land) were also evaluated and determined to be small.

Some commentors raised specific concern over potential contamination of the Columbia River resulting from the restart of FFTF. However, FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

A number of commentors also expressed concern that DOE would expose individuals in the Pacific Northwest to risks associated with importing of weapons-grade plutonium. None of the proposed alternatives involve the shipment of any weapons-grade plutonium to any port in the United States. Alternative 1 does postulate that DOE might decide at some point to import mixed oxide fuel from Europe to fuel FFTF. At this time, however, DOE has not proposed to import this fuel through any specific port. If DOE ultimately decides to import fuel from Europe, it would perform a separate NEPA analysis to select a port. This review would address all relevant potential impacts of overseas and inland water transportation, shipboard fires, package handling, land transportation, as well as safeguards and security associated with the import of SNR-300 mixed oxide fuel through a variety of specific candidate ports on the west and east coasts. It would take into account all public comments, including local resolutions, concerning the desirability of bringing mixed oxide fuel into the proposed alternative ports.

In the event that DOE decides to enhance its nuclear infrastructure, it would not expose any population to high, unacceptable risks under any alternative. Any transportation activities that would be conducted by DOE would comply with U.S. Nuclear Regulatory Commission (NRC) and U.S. Department of Transportation regulations. Associated transatlantic shipments would comply with International Atomic Energy Agency requirements. In Section J.6.2 of Volume 2, DOE reviewed the potential maximum impacts from the marine transportation of mixed oxide fuel from Europe to a representative military port (Charleston, South Carolina), and overland transportation to Hanford. Also in that section, the results of a bounding analysis show that the maximum potential radiological risks to the surrounding public from mixed oxide fuel shipments would be extremely small (e.g., less than 1 chance in a trillion for a latent cancer fatality per shipment from severe accidents at docks and in channels and less than 1 chance in 50 billion for a latent cancer fatality per shipment from overland highway accidents).

1.6 CHANGES FROM THE DRAFT NI PEIS

In response to comments on the Draft NI PEIS and as a result of information that was unavailable at the time of its issuance, this Final NI PEIS contains revisions and new information. These revisions and new information are indicated by sidebars. A brief discussion of the most important changes included in this Final NI PEIS is provided in the following paragraphs.

Chapter 1

Purpose and Need for Agency Action

As a result of public comments, additional discussion was incorporated to address DOE's production of medical, research, and industrial isotopes relative to global isotope production and availability. In addition, the discussion of the need for plutonium-238 production for space missions was expanded and updated to reflect the most recent planning guidance provided by NASA to DOE.

Issues Raised During the Public Comment Period on the Draft NI PEIS

Section 1.5, Issues Raised During the Public Comment Period on the Draft NI PEIS, was added to this Final NI PEIS.

Related NEPA Reviews

The Final NI PEIS was revised to add descriptions of the *Final Environmental Impact Statement, Management of Spent Nuclear Fuel from the K Basins at the Hanford Site, Richland, Washington* (DOE/EIS-0245F), and the *Environmental Assessment, Management of Hanford Site Non-Defense Production Reactor Spent Nuclear Fuel* (DOE/EA-1185). The impacts of these NEPA actions were factored into the assessment of potential cumulative impacts resulting from the NI PEIS proposed action.

This Final NI PEIS was also revised to reflect recent Records of Decision that have been issued for the *Final Environmental Impact Statement on a Proposed Nuclear Weapons Nonproliferation Policy Concerning Foreign Research Reactor Spent Nuclear Fuel* (DOE/EIS-0218F), the *Final Environmental Impact Statement for Treating Transuranic (TRU)/Alpha Low-Level Waste at the Oak Ridge National Laboratory, Oak Ridge, Tennessee* (DOE/EIS-0305), and the *Final Environmental Impact Statement for the Treatment and Management of Sodium-Bonded Spent Nuclear Fuel* (DOE/EIS-0306).

Changes from the Draft NI PEIS

Section 1.8, Changes from the Draft NI PEIS, was added to this Final NI PEIS.

Chapter 2

Transportation Requirements

Additional U.S. ports were named as candidates for receiving mixed oxide fuel from Europe.

Alternatives Considered and Dismissed

Information was provided to explain why the Isotope Production Facility at LANL, the Brookhaven LINAC (Linear Accelerator) Isotope Producer and the Alternating Gradient Synchrotron accelerator complex at Brookhaven National Laboratory, and CLWRs were not considered reasonable alternatives for the production of medical isotopes.

Information was also provided to explain why increasing the power levels at ATR and/or HFIR or installing rapid radioisotope retrieval systems would be insufficient to meet the long-term growth projection needs and therefore were dismissed as reasonable alternatives.

Preferred Alternative

The discussion of DOE's preferred alternative for accomplishing the proposed action, that is, Alternative 2, Use Only Existing Operational Facilities, Option 7, is included in this Final NI PEIS.

Summary of Environmental Impacts

Section 2.7 was revised in response to comments that it was difficult to compare environmental impacts among alternatives. Although estimates of the environmental impacts that would result from implementation of the

alternatives are the same as those in the Draft NI PEIS, the tables and accompanying text were reformatted for ease in comparing environmental impacts among alternatives and among options within alternatives. Section 2.7 was also revised to focus on incremental impacts that would result from implementation of the alternatives. Baseline environmental impacts were removed from the comparisons among alternatives and options. This information is now presented in Chapter 3.

Chapter 3

Affected Environment

Additional information was provided on the environmental baseline at each site, including graphics to more clearly illustrate existing surface water and groundwater conditions. Estimates of existing impacts for current HFIR/REDC operations were added to Sections 3.2.3.2 (Air Quality), 3.2.9.1.2 (Radiation Exposure and Risk), and 3.2.11.1 (Waste Inventories and Activities). Similarly, estimates for current ATR operations were added to Sections 3.3.3.2 (Air Quality), 3.3.9.1.2 (Radiation Exposure and Risk), and 3.3.11.1 (Waste Inventories and Activities). Estimates of existing impacts of maintaining FFTF in standby were added to Section 3.4.3.1 (Air Quality). Information was also provided on the impacts of the range fires affecting Hanford and INEEL during the summer of 2000. In addition, site data were updated to reflect recent measurements and analyses.

In response to public comments on the Draft NI PEIS, additional information on health studies conducted in the Hanford area was also incorporated.

Chapter 4

Air Quality

Stack parameters used for the air quality modeling were added. In response to public comment, estimates of the ambient air quality concentrations from FFTF sources were added to the deactivation section.

Water Resources

New water use and sanitary wastewater generation increments for REDC and FDPF were added to reflect the revised additional workforce required at these facilities and to be consistent with FMEF. Water use and wastewater generation rates for the new accelerator(s) and new research reactor alternatives were also revised. These changes were also incorporated into the waste management analyses.

Ecological and Cultural and Palentological Resources

These sections were updated to reflect that consultations concerning threatened and endangered species and cultural resources were conducted with appropriate Federal and state agencies. Consultations were also conducted with interested Native American tribes. No major issues were raised as a result of these consultations.

Socioeconomics

Section 4.3.1.1.8 was revised to reflect changes in the number of workers associated with FFTF operations and deactivation. The associated impacts on community services were also incorporated. In addition, the number of workers at the Oak Ridge Reservation was revised to reflect the entire site workforce rather than just the number of workers at the Oak Ridge National Laboratory.

Normal Operations

Based on more recent site data on occupational radiation exposure for workers at REDC, all worker health impacts for target processing at REDC, FMEF, and FDPF and for neptunium target storage at REDC, Chemical Processing Plant–651, and FMEF were updated. Also, low-energy accelerator source terms were modified to properly reflect normal operational emissions resulting in modifications to the population health impacts for all options of Alternative 3.

Facility Accidents

The high-energy accelerator analysis was redone to incorporate a more accurate revised source term, and the incremental risks for currently operating reactors were added to the tables. An additional analysis addressing industrial accidents was also performed and incorporated into Chapter 4.

Transportation

The neptunium inventory was revised to use the recently declassified actual inventory. The number of actual shipments from SRS to the processing facilities and the transportation risk estimates were modified accordingly.

Waste Management

The analysis for the Draft NI PEIS assumed that the waste generated from the processing of irradiated neptunium-237 targets is transuranic waste. However, as a result of comments received during the public comment period, DOE is considering whether the waste from processing of irradiated neptunium-237 targets should be classified as high-level radioactive waste and not transuranic waste. The Waste Management sections (i.e., Sections 4.3.1.1.13, 4.3.2.1.13, 4.3.3.1.13, and 4.4.3.1.13) were revised to reflect this different classification from what was assumed in the Draft NI PEIS.

Spent Nuclear Fuel Management

These sections were revised to quantify the generation of spent fuel from 35 years of operation and to state that dry spent nuclear fuel storage at the FFTF site is similar to NRC-approved methods currently being used for interim storage of commercial spent nuclear fuel. In addition, based on public comments, a reference was added about the K Basins spent fuel storage.

Cumulative Impacts

Cumulative impact tables in Section 4.8 were revised to present the contributions from each of the various site actions anticipated during the course of the operational period evaluated in this NI PEIS.

The air quality tables were also revised to incorporate the revised baseline from Chapter 3. In addition, waste management tables were revised to include the sites' treatment, storage, and disposal capacities for easier comparison of the waste generations by waste type to the waste management capacities at the sites.

Chapter 5

In response to public comments, a list of organizations that DOE contacted during the consultation process was added.

Volume 2

Summaries of the *NI Cost Report* and *NI Nonproliferation Impact Assessment* were added as Appendixes P and Q, respectively. NASA mission guidance correspondence was added as Appendix R.

Volume 3

Volume 3 of the NI PEIS was added to present the comments received during the public review period for the Draft NI PEIS and DOE's responses to these comments.

Chapter 2

Written Comments and DOE Responses

Commentor No. 2055: Travis Wells

Response to Commentor No. 2055

Draft PEIS Comment Form

I am strongly opposed to the use of the Hanford plant for FTF. I can understand how you could possibly consider running our environment any worse than it already is. Just take a look at all of the health problems this type of this same causes. I'm not sure if your aware of this but cancer rates were declining at the turn of the century and then started going back up when nuclear testing started. Maybe to you profits are more important than human rights and human life, but what good is all this money gonna do if something goes wrong and we all die. I am a registered voter and I refuse to vote for anyone who agrees with such policies. It's sick that you could ever consider putting the Hanford site back in use. And if you don't care about the health effects on you, take a second to look around all the people you love and see what could die because of this.

2055-1

2055-1: DOE notes the commentor's opposition to Alternative 1, Restart FTF.

2055-2

2055-2: Cancers are believed to be caused by a combination of hereditary and environmental factors, including radiological and chemical agents. Statistics from the National Cancer Institute indicate that the rate of cancer incidence and the rate of cancer mortality has dropped during the 1990's [NCI webpage (as of 10/19/2000) - <http://cancernet.nci.nih.gov/statistics.shtml> article entitled "Cancer Death Rate Declined in the 1990s for the First Time Ever"]. A survey sponsored by the National Cancer Institute and published in the Journal of the American Medical Association in 1991 (JAMA 1991:1403-1408) detected no general increase in the risk of cancer death for people living in 107 counties adjacent to or containing 62 nuclear facilities. The Hanford Site, Idaho National Engineering and Environmental Laboratory, and Oak Ridge Reservation were included in the survey. The study used cancer mortality data from Benton, Franklin, and Grant Counties in the survey for the Hanford Site (See Section 3.4.9.3 of Volume 1).

This PEIS has provided an estimate of the potential human health impacts associated with a range of reasonable alternatives as described in Section 2.5 of Volume 1. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Sections 4.3 through 4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from implementation of each of the alternatives. Alternative 1 includes restart of FTF, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with each alternative and with restarting FTF would be small.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail (Nuclear.Infrastructure-PEIS@hq.doe.gov)

Name (optional): Travis Wells

Organization: None

Home/Organization Address (circle one): 12003 NE Shaver

City: Postville State: IA Zip Code: 52720

Telephone (optional): _____

E-mail (optional): ratwells77@yahoo.com

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 2056: Amy Linstead

Draft PEIS Comment Form

To whom it may concern,

I think re-opening the FFTF is a mistake! The effect the FFTF had was environmentally destructive & unsafe.

The FFTF hasn't even cleaned up the mess they made before now they want to open it again & make another mess.

You have destroyed the Columbia with your pollution & now our river is disgusting & grotesque.

As far as destroying the Columbia goes you've already accomplished that but if you re-open the FFTF you will make the Columbia completely unfixable.

I hope you take this letter into consideration.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Amy Linstead

Organization: none

Home/Organization Address (circle one): _____

City: portland State: OR Zip Code: 97220

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19001 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Response to Commentor No. 2056

2056-1

2056-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2056-2

2056-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

2056-3

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (i.e., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.



Commentor No. 2056: Amy Linstead (Cont'd)

Response to Commentor No. 2056

In regards to the Columbia River, all environmental parameters (e.g. air, soil, surface water, groundwater, vegetation, animals, etc.) in and around the Hanford Site are monitored on a set frequency. The information is available to the public in annual monitoring reports. No food or water restrictions are currently in place outside the Hanford Reservation as a result of Hanford activities.

2056-3: DOE policy encourages effective public participation in its decision-making process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE considered comments received from the public. No decisions have been made with regard to the facilities and locations evaluated to fulfill the requirements of the DOE missions. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

Commentor No. 2057: Holly Linstead

Response to Commentor No. 2057

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Draft PEIS Comment Form *Holly Linstead*

To whom it concerns: _____

I strongly suggest not opening the FFTF who ever think this is a good idea. Obviously has not done their research or does not know what cause and effect are.

This is wrong and if they have not cleaned up the mess they have already made then what are you doing making more of a mess or even thinking of making one.

You don't understand the effects of what happened before.

You people really need to take a good a real good look at what happened before.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): *Holly Linstead*

Organization: *none Perkruse HS*

Home/Organization Address (circle one): *12003 NE Shaver St*

City: *Portland* State: *OR* Zip Code: *97226*

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

2057-1

2057-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2057-2

2057-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Commentor No. 2058: Anonymous

Response to Commentor No. 2058

Draft PEIS Comment Form

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



I oppose the restart of the
FFTF at Hanford nuclear reactor
because you kill people and poison
our environment. There is
no reason for all these things
you do. You can build a shed over
the crops to keep the insects
out.

2058-1

2058-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2058-2

2058-2: The environmental impacts associated with operation of the Hanford facilities during normal operations and from postulated accidents are presented in Section 4.3 of the NI PEIS. The assessments were made using well established and accepted analytical methods, as described in Appendixes G through L. The analytical methodology is conservative by nature; the actual impacts to the environment would be expected to be less than calculated. All impacts have been shown to be small. No fatalities among workers or the general public would be expected over the full 35-year operational period. The impacts to the biosphere (air, water, and land) are also shown to be small.

All air emissions and wastewater discharges would be in accordance with applicable permit and regulatory requirements. The releases of air pollutants and contaminated liquid are addressed in Section 4.3 of the NI PEIS. The release of air pollutants would result in concentrations well below Federal and state air standards (Table 4-13). The release of radioactivity and hazardous chemicals into the atmosphere would have a negligible effect on human health (Tables 4-17 and 4-19, respectively). There would be no discernible impacts to groundwater or surface water quality (Section 4.3.1.1.4). All impacts on ecological resources, including animals and fish, associated with operation of the FFTF would be small Section 4.3.1.1.6).

It is concluded that operation of the FFTF would have small adverse effects on the environment.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): _____

Organization: _____

Home/Organization Address (circle one): 12003 NE

Shaver

City: Portland, OR State: OR Zip Code: 97220

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

Commentor No. 2059: Joyce Fitzgerald

Response to Commentor No. 2059

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

Please Restart
FFTF
for medical isotopes

2059-1

2059-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Joyce Fitzgerald

Organization:

Home/Organization Address (circle one): 4301 English Court

City: West Richland State: WA Zip Code: 99373

Telephone (optional):

E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Collette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4692
Email: Nuclear.Infrastructure-PEIS@hq.doe.gov



Draft PEIS Comment Form

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT
 RESTART FFTE NOW?

1500 PEOPLE DIE EACH DAY FROM CANCER.
 THE ADMINISTRATION HAS HAD SEVERAL YEARS
 TO DEVELOP A STRATEGY AND IMPLEMENTING
 POLICY FOR PROVIDING MEDICAL ISOTOPES TO
 REDUCE OUR 90% DEPENDENCY ON IMPORTS.

THE FFTF FACILITY, ALBERT PAID FOR
 BY OUR TAXPAYERS, IS THE ONLY FACILITY
 IN THE WESTERN HEMISPHERE WITH THE CAPABILITY
 OF PRODUCING MEDICAL ISOTOPES IN VARIETY (ABOUT
 60), QUANTITY AND MOST IMPORTANT POINT
 TO MEET MOST OF OUR MEDICAL ISOTOPE NEEDS.
 ACCELERATORS CANNOT EQUAL THE FFTF'S
 CAPABILITIES, BUT ARE ALSO NEEDED TO
 DIVERSIFY THE PRODUCTION OF MEDICAL ISOTOPES
 FOR WHICH THE ACCELERATORS ARE MORE SUITED.

REMEMBER 95% OF THE AMERICAN PEOPLE WOULD
 UNDOUBT OF YOUR HEALING NOR ARE EVEN
 AWARE OF OUR TECHNICAL NATIONAL TREASURE, THE FFTF.
 IF THEY WERE AWARE THEIR VOICES WOULD REVERBERATE
 OVERSHADOW THE DISAPPOINTED VOICES OF THE MINORITY
 VIEWS OF THE ANTI-NUCLEAR AND ENVIRONMENTAL FOES.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): DENNIS A FITZGERALD - CANCER FIGHTER

Organization: From The Trenches

Home/Organization Address (circle one): 4301 ENGLISH CANY

City: WEST RICHMOND State: VA Zip Code: 22353

Telephone (optional): 509-627-0936

E-mail (optional): FromTheTrenches@aol.com

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 toll-free telephone: 1-877-562-4593 • toll-free fax: 1-877-562-4592
 Email: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00

2060-1

2060-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

**Commentor No. 2061: Seattle City Council Members
(N. Licata, P. Steinbrueck, R. Conlin, J. Nicastro)**

08/25/2000 17:15 2862338854

N LICATA

PAGE 01



Seattle City Council

August 25, 2000

Honorable Bill Richardson,
Secretary of Energy
U.S. Department of Energy
1000 Independence Ave. SW
Washington, D.C. 20585

Dear Secretary Richardson:

We support your initiatives for discussions and use of independently facilitated, negotiations regarding the future of Hanford's FFTF Nuclear Reactor, which you put forward at the Washington State Democratic Convention on June 10th in a meeting with Washington Democrats. These commitments were innovative efforts at ensuring meaningful dialogue on an issue that has created deep opposition. We congratulate you for your willingness to make commitments to improve the EIS and engage in principled negotiations. We are growing increasingly concerned, however, with the apparent bias of the EIS, and the public participation process for the EIS.

Restart of the FFTF Nuclear Reactor and resumption of Plutonium processing at Hanford would have potentially catastrophic impacts on the health of Northwest citizens and our environment. Our constituents are entitled to a fair and impartial process to consider all reasonably foreseeable impacts and reasonable alternatives.

The Department is preventing our constituents and ourselves from reviewing and commenting on the Department's assessment of many of those potential impacts and alternatives by separating them from the Draft Environmental Impact Statement (EIS) and only disclosing them in reports to be made available after the public hearing are over. Apart from the bias of such an approach, this seems to be a clear violation of the National Environmental Policy Act (NEPA). Major public concerns stated in our comments for the scoping of this EIS, including those detailed in the Seattle City Council and Portland City Commission Resolutions opposing FFTF restart (and formally entered into the record at scoping hearings) are ignored in the Draft EIS.

It is not acceptable to have left out of the Draft EIS the following important details:

- what the Department will do with the nuclear and toxic wastes from restarting FFTF and Plutonium operations at Hanford.

1100 Municipal Building, 600 Fourth Avenue, Seattle, WA 98104-1876
(206) 884-8888, Fax: (206) 884-8587, TTY: (206) 233-0025
E-Mail Address: council@ci.seattle.wa.us internet Address: http://www.pan.ci.seattle.wa.us
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Response to Commentor No. 2061

- 2061-1:** DOE notes the commentors' concerns. This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives.
- 2061-2:** DOE policy encourages effective public participation in its decision making process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.
- 2061-3:** The evaluation presented in the NI PEIS considered both normal operations and accidents and indicates that the environmental and human health impacts of these facilities would be low.
- 2061-4:** See responses to Comments 2061-1 and 2061-2.
- 2061-5:** The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS. DOE made every effort to obtain, analyze, and disclose all required information to make a decision on expanding nuclear infrastructure. CEQ (40 CFR 1500 et seq.) and DOE (10 CFR Part 1021) implementation regulations do not require inclusion of cost and nonproliferation studies in an environmental impact statement. The basic purpose of the NI PEIS is to describe the alternatives under consideration for implementation (Section 2.5 of Volume 1) and the environmental impacts that would occur if these alternatives were implemented (Chapter 4 of Volume 1). Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. The associated cost report and nonproliferation report were made available to the public on August 24, 2000 and September 8, 2000, respectively. DOE mailed these documents to approximately 730 interested parties, and these reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in public reading rooms. DOE has also

Commentor No. 2061: Seattle City Council Members (Cont'd)
(N. Licata, P. Steinbrueck, R. Conlin, J. Nicastro)

- the costs of restarting the FFTF reactor and each alternative (especially when the Department has target budgets that are not adequate to comply with the Hanford Clean-Up Agreement)
- the impacts on the nation's nuclear non-proliferation policies from restarting the reactor and use of Plutonium or High Enriched Uranium fuels
- the independent assessment of the need for particular medical isotopes and the suitability of the FFTF reactor to produce them.

For each of these critical areas, the Department has chosen to issue a report separate from the Draft EIS and not to release that report before the public hearings on the Draft EIS.

We are dismayed that the Draft EIS fails to disclose that the Department's own blue ribbon medical advisory committee recommended last April that *"the FFTF not be considered as a viable long-term source of research radioisotopes."* Additionally, neither disclosed or referenced in the Draft EIS are the NERAC Subcommittees for Isotope Research and Production Plannings' findings regarding 1) the suitability of the FFTF reactor for production of research medical isotopes, 2) the claims of the contractors regarding FFTF's costs and projected revenues for producing isotopes, and 3) the "poor" rating of the manufacturing practices at Hanford are.

The Draft EIS should have considered the alternatives recommended by the Subcommittee, and fully disclosed its criticism of the claims made by the FFTF's contractors. Instead, the Draft EIS and DOE documents repeat the cost and isotope need claims that the Subcommittee found to be flawed and overly optimistic. The public deserves to have this fully disclosed in the Draft EIS.

The concerns of the City of Seattle (Resolution 30060 and Resolution 28848) regarding the import of Plutonium on board ships passing through inland waters (such as Puget Sound or the Columbia River to the Port of Portland), and transport of Plutonium through the crowded Puget Sound region, are entirely ignored in this EIS. A shipboard fire involving a shipment of Weapons Grade Plutonium fuel in inland waters poses horrific consequences. Exposure of our constituents to such risk is entirely unacceptable. Other major concerns raised in the Portland and Seattle resolutions, and by Members of Congress, are similarly ignored in the Draft EIS. The Department undermines the public confidence in its consideration of the restart of FFTF when it proposes such actions and ignores the formal input from elected officials and the region's major cities.

As the hearings on the Draft Environmental Impact Statement (EIS) approach, the Department has not provided for adequate notice of the hearings to our constituents, has not changed its plans for conduct of the hearings, and those in charge of the EIS have

2061-8

2061-9

2061-10

2061-11

2061-12

2061-13

2061-14

Response to Commentor No. 2061

provided summaries of the Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment in Appendixes P and Q, respectively, in the Final NI PEIS.

- 2061-6:** DOE has read and considered the public concerns detailed in the Resolutions of the Seattle City Council and the Portland City Commission. Section 1.4 of Volume 1 and the expanded discussion in Appendix N summarize the issues and concerns raised during the scoping process.
- 2061-7:** Management of wastes that would be generated under implementation of Alternative 1 (Restart FFTF) is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.
- 2061-8:** The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). Nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted fund designated for Hanford cleanup, regardless of the alternative(s) selected.
- 2061-9:** DOE notes the commentors' concern that an independent assessment of the need for particular isotopes and the suitability of FFTF is not included in the NI PEIS. Section 1.2.1 of Volume 1 discusses the need

Commentor No. 2061: Seattle City Council Members (Cont'd)
(N. Licata, P. Steinbrueck, R. Conlin, J. Nicastro)

06/25/2006 17:15 2062330054

N. LICATA

PAGE 83

failed to live up to expectations for meaningful discussions regarding the substance of the EIS.

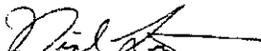
Last year, the conduct of the hearings was itself a major controversy because the Department refused to use a sign in list for determining the order of speakers. Again, the Department appears intent to allow the process to appear biased by allowing the Department's moderator to choose the order of speakers. Last year, this resulted in the spokespeople for the region's major public interest groups not being called on to speak until late in the night at hearing after hearing.

We are also disturbed that the Department has identified public interest groups as "opposition" and "protest" groups, thus requiring them to pay for police in order to hold pre-hearing workshops. We must reiterate that the Cities of Seattle and Portland are also officially opposed to the restart of FFTF.

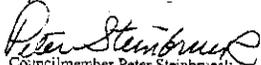
We urge the Department to take immediate steps to do the following:

1. Provide proper notice designed to notify our constituents that these hearings are on an EIS regarding the possible restart of Hanford's FFTF Nuclear Reactor and Plutonium processing.
2. Utilize unbiased procedures for the conduct of the hearings.
3. Discontinue the characterization of groups as "opposition" or "protest" and ensure that there is no intimidation of public comment.

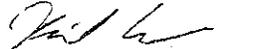
Sincerely,



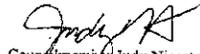
Councilmember Nick Licata



Councilmember Peter Steinbrueck



Councilmember Richard Conlin



Councilmember Judy Nicastro

2061-14
(Cont'd)

2061-15

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2061-17

2061-18

Response to Commentor No. 2061

for isotopes based on the Expert Panel and NERAC subcommittee recommendations. As further discussed in the response to Comment 158-13 and presented in Section 1.5 of Volume 1, the recommendations of these independent review groups were taken into consideration in developing the range of reasonable alternatives evaluated in the NI PEIS. NERAC is an independent Federal advisory committee appointed by the Secretary of Energy to advise DOE on civilian nuclear energy research program as noted in Section 1.2 of Volume 1.

2061-10: The draft Waste Minimization and Management Plan for the Fast Flux Test Facility (May 2000) and the NERAC Isotope Subcommittee report (April 2000) were referenced in the NI PEIS and were available prior to the public hearings. The NI PEIS cost and Nonproliferation reports were made available on August 24 and September 8, 2000, respectively; immediately after they were completed, as discussed in response to Comment 2061-5.

2061-11: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel convened to forecast future demand for medical isotopes estimated that the expected growth rate of medical isotope use during the next 20 years will range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and

Commentor No. 2061: Seattle City Council Members (Cont'd)
(N. Licata, P. Steinbrueck, R. Conlin, J. Nicastro)

Response to Commentor No. 2061

12/06/93
JN:ssj

RESOLUTION 22248

A RESOLUTION stating the City's position that high level nuclear wastes should not be moved through Seattle or the Puget Sound area by water or land transportation.

WHEREAS, in response to a proposal from the Federal Department of Energy in 1986 to ship high-level nuclear waste from Asia through Puget Sound and Seattle to inland destinations, the Mayor and all Councilmembers signed letters to the Secretary of Energy requesting a site-specific EIS before undertaking such shipments; and

WHEREAS, in 1990 the City Council again, this time by resolution, opposed a Department of Energy proposal to ship high-level radioactive wastes from the Hanford Nuclear Reservation to West Germany through the City and Port of Seattle; and

WHEREAS, this proposal was also withdrawn; and

WHEREAS, in 1991, the Department of Energy made another policy proposal for a ten-year program to transport from 100-352 cask-shipments of high-level nuclear waste from research reactors in foreign countries to DOE facilities in South Carolina and Idaho through Puget Sound ports without a complete EIS and again, the Council, through Resolution 28433, opposed such shipment; and

WHEREAS, the Department of Energy on October 21, 1993 began a public comment period on the scope of an EIS for a proposed policy which would permit acceptance through the Port of Seattle of spent nuclear fuel containing enriched uranium of U.S. origin from foreign research reactors; and this EIS will evaluate the impact of such shipments on marina ports of entry, overland transportation routes and storage at its Hanford or the Idaho National Engineering Laboratory (INEL) site, until a means for permanent disposition is available; and

WHEREAS, the DOE press release of October 21, 1993 appears to suggest that it wishes to return up to 700 spent fuel elements from foreign research reactor while the EIS on the acceptance policy is being prepared; and

WHEREAS, the City Council, the Port of Seattle, and the Longshoremen's Union in Seattle continue to oppose these nuclear shipments through Seattle without adequate safeguards, procedures and risk assessments in place, in advance of any such shipments; NOW, THEREFORE,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF SEATTLE, THE MAYOR CONCURRING, THAT

cost-efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without disturbing the existing missions of these facilities.

DOE has taken the Expert Panel and NERAC report recommendations under consideration in developing the range of alternatives evaluated in the NI PEIS. These reports were made available to the public at the NI PEIS public information centers and on the Internet at www.nuclear.gov.

2061-12: The commentors concern that DOE would expose constituents in the Seattle area to risks associated with the transport of weapons-grade plutonium is noted. None of the purposed alternatives involved the shipment of any weapons-grade plutonium to any port in the United States. Alternative 1 does postulate that DOE might decide at some point to import mixed oxide fuel from Europe to fuel FFTF. At this time, however, DOE has not proposed to import this fuel through any specific port. If DOE ultimately decides to import fuel from Europe, it would perform a separate NEPA review to select a port. This review would address all relevant potential impacts of overseas and inland water transportation, shipboard fires, package handling, land transportation, as well as safeguards and security associated with the import of SNR-300 mixed oxide fuel through a variety of specific candidate ports on the west and east coasts. It would consider all

Commentor No. 2061: Seattle City Council Members (Cont'd)
(N. Licata, P. Steinbrueck, R. Conlin, J. Nicastro)

RESOLUTION

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I. It is the City's position that no shipments of high level nuclear waste, from any source and to any destination requiring transport through the State of Washington, shall be moved through Seattle by land or water transportation without complete site-specific EIS's for each port and each transportation corridor involved, which conclusively establish that shipments will not pose risk to the health or safety of Seattle's residents.

II. It is the City's position that the EIS which is being prepared for the proposed policy should be as thorough and detailed as possible, addressing all potential risks to human health and the environment. The EIS should explore a range of alternatives including leaving the nuclear waste in situ until a strategy for disposal is resolved upon; having DOE take title to the material at the point of its generation, rather than when it arrives at the storage facility; using less-populated locations than the Port of Seattle for transfer from ship to land transport; and using a less congested and dangerous transportation corridor than through Seattle and over the Cascades. It should fully evaluate accidents or events which might result in breakage or leaking from the transport casks, as well as the resulting risks of harm from such leaks and the existence and availability of appropriate emergency equipment and facilities.

III. It is further the city of Seattle's position that if it is not completely satisfied with the EIS, and Seattle is chosen as a Port of Entry, the City will continue, by all means available, to oppose such a plan.

Response to Commentor No. 2061

public comments, including local resolutions, concerning the desirability of bringing mixed oxide fuel into the proposed alternative ports.

In the event that DOE decides to enhance its nuclear infrastructure, it would not expose any population to high, unacceptable risks under any alternative. Any transportation activities that would be conducted by DOE would comply with U.S. Nuclear Regulatory Commission and U.S. Department of Transportation regulations. Associated transatlantic shipment would comply with International Atomic Energy Agency requirements. In Section J.6.2, DOE reviewed the potential maximum impacts from the marine transportation of mixed oxide fuel from Europe to a representative military port, Charleston, South Carolina, and overland transportation to Hanford. Also in that section, a bounding analysis demonstrates that the maximum potential radiological risks to the surrounding public from mixed oxide fuel shipments would be extremely small (e.g., less than 1 chance in a trillion for a latent cancer fatality per shipment from severe accidents at docks and in channels and less than 1 chance in 50 billion for a latent cancer fatality per shipment from overland highway accidents).

2061-13: DOE provided notice of scheduled public hearings in accordance with the requirements of CEQ and DOE regulations (i.e., 40 CFR Parts 1503.1 and 1506.6 and 10 CFR Part 1021.313, respectively). This included announcement of the hearings in the Federal Register as well as in the local media. In addition, copies of the Draft NI PEIS and/or the Summary (including the public hearing schedule) were sent to each individual or group listed to receive it at the address on record. Additional notification to the public concerning meetings on the Draft PEIS were made by the Oregon Office of Energy to members of 20 focus groups in six Oregon communities and other Oregon interest groups.

2061-14: The public hearing format was designed to be fair and unbiased. The public hearing format used was based on stakeholder input and was presented in the Notice of Availability (65 FR 46443 et seq.) for the Draft NI PEIS. This format was intended to encourage public participation, regardless of the motivation for attending the hearing. It provided an opportunity for the participants to meet one another, exchange information, and share concerns with DOE personnel available throughout the course of each hearing to answer questions. The

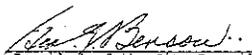
Commentor No. 2061: Seattle City Council Members (Cont'd)
(N. Licata, P. Steinbrueck, R. Conlin, J. Nicastro)

Response to Commentor No. 2061

Page 3
RESOLUTION

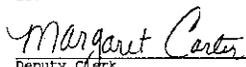
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2 IV. This resolution shall be transmitted by the City Clerk to
3 the Secretary of the U.S. Department of Energy and the
4 Congressional delegation from the State of Washington.
5

6 ADOPTED by the City Council of the City of Seattle the
7 6th day of December, 1993, and signed by me in open
8 session in authentication of its adoption this 6th day of
9 December, 1993.

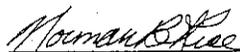
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11 
12 President of the City Council

13 Filed by me this 9th day of December, 1993.
14

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16 BY:

17 
18 Deputy Clerk
19

20
21 THE MAYOR CONCURRING:

22 
23 Norman B. Rice, Mayor
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meetings were facilitated by an independent moderator to ensure that all persons wishing to speak had an opportunity to do so. Persons wishing to comment were selected at random from the audiences rather than according to the order in which they registered. This was accomplished by a random number drawing. In addition to the comment recorder stationed at the main hearing, a second recorder was available in an adjacent room to receive comments without the need to await selection at the main proceeding. The hearing format used promoted open and equal representation by all individuals and groups.

2061-15: DOE does not engage in or condone the actions alleged in the comment. DOE did not and does not label organizations or individuals. Neither does it interfere with workshops held by an organization, nor exert any influence or authority in the matter of fees for security and law enforcement charged by the owners or managers of facilities in which public meetings are held. Such matters are determined by the rules and regulations adopted by or applied to these facilities, consistent with local laws and municipal requirements.

For the record, DOE did not characterize public hearings participants as "opposition" or "protest" groups, and further, did not attempt to recommend or influence any meeting facility fees or security measures applicable to any group or individual.

2061-16: The commentors' concern for proper notice of the public hearing process is addressed in response to Comment 2061-13.

2061-17: The commentors' request to establish procedures for unbiased hearings is addressed in response to Comment 2061-14.

2061-18: The issue of opposition groups is addressed in response to Comment 2068-15.

Commentor No. 2062: Aldine P. Gedeon

Mrs. Aldine Gedeon
85950 Territorial Rd
Eugene OR 97402-9206



COLETTE BROWN
U.S. DEPT. OF ENERGY
19901 GERMANTOWN RD.
GERMANTOWN, MD 20874

ATTN: NE-50
20874+1207

RESTART FAST FLUX TEST FACILITY
FFTF IS NEEDED TO PROVIDE
MEDICAL ISOTOPES.

Mrs. Aldine P. Gedeon
85950 TERRITORIAL RD.
EUGENE, OR 97402-9206

2062-1

Response to Commentor No. 2062

2062-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 2064: Mary Mayther-Slac

Hanford Watch
 2285 SE Cypress
 Portland, Oregon 97214



Ms. Colette Brown
 U.S. Department of Energy
 Office of Space and Defense Power Systems
 NE-50
 19901 Germantown Road
 Germantown, Maryland 20874-1290

3874+1207 [Barcode]

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

IT IS DANGEROUS !! THE GOVERNMENT
MADE A COMMITMENT TO CLEANING
UP HANFORD. THEY ARE NOT KEEPING
THAT PROMISE. I AM DISGUSTED BY
YOUR LACK OF INTEGRITY AND DIS
REGARD FOR OUR SAFETY + OUR PLANET.

Name MARY MAYTHER-SLAC
 Address 38707 SE LUSTED RD
 City, state BORING, OR Zip 97009

2064-1

2064-2

2064-3

Response to Commentor No. 2064

- 2064-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 2064-2: FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.
- 2064-3: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Commentor No. 2065: Brian Barnett

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U. S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

0874+1207 [Barcode]

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

The long-run effects have not been adequately answered. Democratic processes of economic, technical & environmental impacts have been & are being badly abused

Name Brian Barnett
Address 109 SE ALDER #219
City, state Portland OR Zip 97214

Response to Commentor No. 2065

2065-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2065-2: The concerns expressed in this comment with respect to the long-term effects of FFTF operation are noted. The environmental impacts associated with restart and operation of FFTF are presented in Section 4.3 of the NI PEIS. All air emissions and wastewater discharges would be in accordance with applicable permit and regulatory requirements, such that short- and long-term impacts would be small. The release of criteria air pollutants would result in concentrations well below Federal and state air standards (Table 4-13). The release of radioactivity and hazardous chemicals into the atmosphere would have a negligible effect on human health (Tables 4-17 and 4-19). No long term adverse health effects, including cancer and genetic disorders, would be anticipated. There would be no discernible impacts to groundwater or surface water quality Section 4.3.1.1.4). All impacts on ecological resources, including animals and fish, would be small (Section 4.3.1.1.6). The management of all wastes (Section 4.3.1.1.13) would be conducted in accordance with applicable Federal and state laws and regulations and appropriate DOE orders. The generation of spent nuclear fuel from 35 years of FFTF operations would represent less than 1 weight-percent of the total spent nuclear fuel inventory presently stored at Hanford (Section 4.3.1.1.14). DOE is committed to transfer the spent fuel to the national geologic repository for ultimate disposition.

2065-1

It is concluded that nuclear infrastructure activities would have small effects on the environment, both in the long term as well as the short term.

2065-2

2065-3: DOE is committed to discharging its responsibilities in an open and unbiased manner and providing the public with comprehensive environmental reviews of its proposed actions. This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the environmental impact analysis of DOE's proposed alternatives for meeting mission requirements. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

2065-3

Commentor No. 2066: Betty Holman Corker

9/15/2000

Colette E. Brown
NE-504
U.S. Dept. of Energy
Hermantown, MD

Dear Colette Brown,

I am 87 years old -
was born in the state
of Washington and have
been very unhappy over
the Hanford contaminated
nuclear site. I hope

Response to Commentor No. 2066

Commentor No. 2066: Betty Holman Corker (Cont'd)

and pray that we will
not restart FFTF which
will cause many environ-
mental and health problems
to the workers and people
around the area.

Sincerely,

Betty Holman Corker
4128-55 Ave N E
Seattle, WA
#98105

2066-1

2066-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2066-2

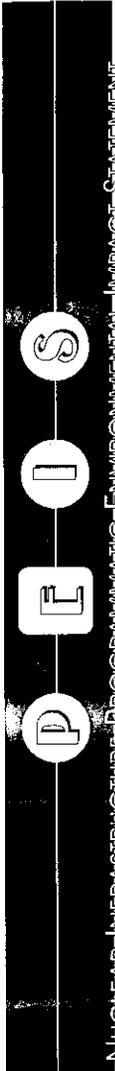
2066-2: This NI PEIS provides estimates of human health impacts associated with a range of reasonable alternatives. The methodology used provides realistic results based upon our current knowledge of the health impact of low doses of radiation. Sections 4.3 through 4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from implementation of each of the alternatives. Alternative 1 includes restart of FFTF, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Worker safety is a key element of the Department of Energy's Radiological Health and Safety Policy (DOE P 441.1, April 26 1996). This policy states in part that Department of Energy facilities must "conduct radiological operations in a manner that controls the spread of radioactive materials and reduces exposure to the workforce and the general public and that utilizes a process that seeks exposure levels as low as reasonably achievable." Each Department of Energy site, including Hanford, is required to implement a radiological control program with the intent to meet this policy goal. Based on the assessment of worker health impacts for all of the alternatives and options considered that make use of Hanford facilities, no increase in cancer fatalities among the facility workers would be expected. For example in Alternative 1 option 3, all of the activities (target irradiation and processing) occur at Hanford facilities. As shown in Section 4.3.3.1.9, the expected consequences are less than one additional fatal cancer among the workforce; that is, no additional fatal cancers would be expected.

Commentor No. 2067: Curtis A. Kooiker

Response to Commentor No. 2067

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Draft PEIS Comment Form

I support the operations startup of the FFTF to meet the needs of medical isotopes, PU238 and research. The FFTF can meet almost every and any application of all the other options combined. We should not purchase any medical isotopes or PU238 from other countries. We should not purchase PU238 from Russia unless we include the costs to clean up the nuclear waste dumps and Reactors located in Russia.

2067-1

2067-1: DOE notes the commentor's support for Alternative 1, Restart FFTF, and opposition to purchasing medical isotopes or plutonium-238 from other countries. However, the commentor should note that the United States currently purchases limited quantities of plutonium-238 from Russia and approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada.

2067-2

2067-2: The public health and safety, the environmental impacts, and the total cost (including cleanup costs) associated with the plutonium-238 production in Russia are under Russian control. The cost for the purchase of Russian plutonium-238 is determined by the terms and conditions of the negotiated contract between the U.S. and Russia.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Curtis A. Kooiker

Organization: _____

Home/Organization Address (circle one): 1108 Fox trot Lane

City: Richland State: VA Zip Code: 99352

Telephone (optional): 509-627-5063

E-mail (optional): Thekooiker@aol.com

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



Commentor No. 2068: Kathleen Trever, INEEL Oversight, State of Idaho, Governor's Office



David R. Mathias, Governor
Kathleen L. Trever, Coordinator

900 North Skyline, Suite C • Idaho Falls, Idaho 83402
1410 North Hutton • Boise, Idaho 83706

September 18, 2000

Colette E. Brown, Document Manager
Office of Space and Defense Power Systems (NE50)
Office of Nuclear Energy, Science, and Technology
U. S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

RE: State of Idaho Comments - *Draft Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility (Draft EIS)*

Dear Ms. Brown:

The State of Idaho has the following comments on the above-referenced Draft EIS:

- INEEL appears to have the most existing capabilities for performing this mission at a single location, thereby minimizing transportation and construction and modification of facilities. The Final EIS should provide a more straightforward comparison of the impacts and capabilities for performing the various aspects of this mission at single locations.
- Summary page S-14 indicates the Advanced Test Reactor (ATR) has insufficient capacity to meet long-term needs for medical isotope production and nuclear research and development. The Final EIS should clarify the ATR's capacity to perform these missions, as ATR representatives have previously indicated to us that ATR does have sufficient capacity. The EIS should also provide more detailed projections for medical isotope needs during the timeframe evaluated.
- The Draft EIS does not clearly indicate how much neptunium-237 would be sent to INEEL for irradiation at the ATR. The final EIS should include the volume of neptunium-237 and number of shipments involved over the 35-year campaign. The Final EIS should also clarify how long Pu-238 produced would be stored prior to shipment to Los Alamos National Laboratory.

2068-1

2068-2

2068-3

2068-4

An Idaho state program that independently monitors activities at the INEEL on behalf of the citizens of Idaho.

☎ IF: (208) 528-2600 Boise: (208) 373-0498

☎ IF: (208) 528-2605 Boise: (208) 373-0429

— www2.state.id.us/deq/mc/main_op.htm

Response to Commentor No. 2068

- 2068-1:** The impacts associated with performing all mission activities at a single site would be at Hanford and are presented in Section 4.4.2.1, Alternative 2, Option 2. If either Alternative 3, Construct New Accelerator(s) Section 4.5) or Alternative 4, Construct New Research Reactor (Section 4.6) were selected for implementation, INEEL, ORR, and Hanford would be assessed in subsequent NEPA documents as potential sites for all mission activities. This approach is consistent with the programmatic nature of this nuclear infrastructure EIS.
- 2068-2:** The NI PEIS Volume 1, Summary Section S.4 and Section 2.6.1 were revised to include a discussion on ATR capacity.
- 2068-3:** A forecast for future demand for medical isotopes and the expected growth rate of medical isotope use during the next 20 years is provided in Section 1.2 of the NI PEIS. The growth projections were also adopted by DOE as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use at levels consistent with the Expert Panel findings.
- 2068-4:** The Final NI PEIS has been revised to clearly indicate in Table J-3 that there would be a total of 24 neptunium-237 shipments from SRS to support the domestic production of plutonium-238. These shipments would occur over a 30-month period. This estimate is based on 446 kilograms of neptunium-237 being available at SRS for shipment. This information was classified at the time the Draft PEIS was developed and has since been declassified. The actual number of shipments to a given irradiation facility, such as ATR, would depend on DOE's future allocation of irradiation core volumes to meet plutonium-238 needs. The Final NI PEIS assumes plutonium-238 produced by irradiation of neptunium-237 would be shipped to Los Alamos National Laboratory annually to meet any demand up to 5 kilograms per year. On this basis, plutonium-238 chemically separated in a given facility would be held there no longer than one year.

Commentor No. 2068: Kathleen Trever (Cont'd)
INEEL Oversight, State of Idaho, Governor's Office

Ms. Colette E. Brown

Page 2

September 18, 2000

- The State of Idaho recommends that the Final EIS explain the difference between what constitutes reprocessing prohibited by U.S policy and the reprocessing proposed in this EIS. The Final EIS should incorporate the recommendations contained on page 6-7 of DOE's Office of Arms Control and Nonproliferation's Nonproliferation Impact Assessment for this project (September 2000).
- The position DOE takes in this Draft EIS regarding the classification of waste derived from dissolved neptunium-237 targets is contrary to DOE's direction, articulated in the *Implementation Guide* prepared for DOE Order 435.1. In Volume I, page 4 -70 of the Draft EIS, DOE states, "No high-level radioactive waste would be associated with neptunium-237 target fabrication or processing in the FDPF." And on page 4-72, DOE states, "Although it may be managed as if it were high-level waste, the transuranic waste would not be designated as high-level radioactive waste." In short, in this Draft EIS, it is DOE's position that waste products removed from solutions of dissolved irradiated target material would be classified as transuranic waste.

Confusingly, the EIS also indicates that because INEEL does not currently generate transuranic waste, the waste could be managed as high-level waste. The Final EIS should reconcile the definition of waste products with DOE's waste management order 435.1.

In DOE G 435.1, DOE takes the position that, "For the purposes of managing high-level waste under DOE M. 435.1, spent nuclear fuel includes spent driver elements and/or irradiated target elements that contain transuranium elements."¹ As spent nuclear fuel, the dissolution of such target elements for the purpose of removing Pu-238 would constitute reprocessing. As explained in DOE G 435.1, "...the term reprocessing is not defined statutorily. However, reprocessing is considered by the Department to be those actions necessary to separate fissile elements (U-235, Pu-239, U-233, and Pu-241) and/or transuranium elements (e.g. Np, Pu, Am, Cm, Bk) from other materials (e.g. fission products, activated metals, cladding) contained in spent nuclear fuel for the purposes of recovering desired materials."²

From the above, it should be clear that under the adopted position of the Department as applied to the Draft EIS, irradiated neptunium-237 targets are spent nuclear fuel, since the irradiation process is expressly conducted to produce the transuranic element Pu-238. Using the Facility Dissolution Processing Facility (FDPF) at the Idaho Nuclear

¹ DOE G 435.1, II.A. Definition of High-Level Waste, *Components and Equipment Contaminated with High-Level Waste.*

² DOE G. 435.1, II.A. Definition of High-Level Waste, *Background.*

2068-5

2068-6

Response to Commentor No. 2068

2068-5: The purpose and scope of the NI PEIS is to evaluate the environmental impacts of no action and alternatives. This is the reason why DOE generated a separate Nuclear Infrastructure Nonproliferation Impact Assessment published in September, 2000. DOE will use the separate nonproliferation impact assessment report in its decision making process along with other factors.

DOE has also provided a summary of the Nuclear Infrastructure Nonproliferation Impact Assessment in Appendix Q in the Final NI PEIS, including an explanation of the difference between what constitutes reprocessing prohibited by U. S policy and the processing proposed in this PEIS. DOE will use the recommendations and information in this impact assessment its decision-making process. DOE's decision will be announced in the formal Record of Decision.

2068-6: The point raised in the comment is that the NI PEIS does not follow DOE Order 435.1 regarding management of radioactive wastes. The confusion seems to arise when the commentor indicates that the wording in the NI PEIS is in conflict with the Implementation Guide for the Order.

The Implementation Guide referred to in the comment is a guidance document but does not impose requirements. In this case, the guidance suggests that it is appropriate to manage radioactive waste, such as wastes from irradiated target elements, as high-level radioactive wastes but it does not mandate management of such materials as spent fuel or the processed wastes as high-level radioactive waste. What DOE Order 435.1 does require is that alternative management practices be safe and protective of human health and the environment. The guidance document is just that, a guidance for how to interpret the orders with the idea of giving several methods for safe treatment and disposal without mandating a change from the Order/Manual. Spent nuclear fuel [in the NWSA of 1982, and in the definitions attached to the Manual for DOE Order 435.1] is defined as fuel that has been withdrawn from a nuclear reactor following irradiation, the constituent elements of which have not been separated by reprocessing.

Commentor No. 2068: Kathleen Trever (Cont'd)
INEEL Oversight, State of Idaho, Governor's Office

Ms. Colette E. Brown

Page 3

September 18, 2000

Technology and Engineering Center to dissolve the irradiated targets and recover the transuranic element Pu-238 for future use is clearly reprocessing as intended in the DOE guidance. Therefore, it follows that any waste generated from the reprocessing of the neptunium-237 targets would be high-level waste, as defined in the Nuclear Waste Policy Act.

Historically, DOE has declared only waste from the first cycle of reprocessing to be high-level waste.³ In this regard, the removal of transuranic waste products from the dissolved target solution would constitute the first cycle of reprocessing and would qualify as high-level waste. The liquid waste remaining after the first cycle waste is removed and Pu-238 is recovered, may or may not be high-level waste depending upon its characteristics. As provided in the Nuclear Waste Policy Act, it may be high-level waste if it contains fission products in sufficient concentrations to warrant permanent isolation. DOE M 435.1 indicates that the Department can make this determination.

Finally, since the dissolution of irradiated neptunium-237 targets and the recovery of Pu-238 constitutes reprocessing, DOE will have to carefully determine the status of any objects contaminated with associated high-level waste. DOE G 435.1 provides guidance on making waste incidental to reprocessing determinations for such contaminated wastes and residues. It is by following this procedure that DOE can determine whether such wastes would be more properly managed as transuranic or low-level and therefore reclassified accordingly.

The Draft EIS must discuss DOE's position as adopted in DOE Order 435.1 and elaborated in supporting documentation. In addition, the implications of the waste being classified as high-level and the appropriate treatment options should be explained.

- DOE is currently preparing a *Final High-Level Waste and Facilities Disposition EIS, DOE/EIS-0287D* (HLW & FD EIS) for the management of liquid and calcined waste generated when uranium-235 was recovered from spent nuclear fuel at the Idaho Chemical Processing Plant, now called the Idaho Nuclear Technology and Engineering Center (INTEC). The preparers of this EIS should coordinate with those involved in the HLW & FD EIS, to determine if the high-level waste from reprocessing neptunium-237 can be added to the existing inventory at INTEC and treated in accordance with related decisions. The current plan is to have all the high-level waste at INTEC treated and ready to leave Idaho for interim storage or disposal in a geologic repository by 2035. This schedule would be relatively comparable to that proposed for the Pu-238 campaign.

³ The State of Idaho disagrees with this position, as indicated in the State's Foreword to the Idaho High-Level Waste and Facilities Disposition Draft EIS. (December 1999)

Response to Commentor No. 2068

2068-7: The use of proposed alternative facilities associated with processing of neptunium-237 targets would have no impact on schedules or available funding for high-level radioactive waste programs at the INEEL site. At INEEL the tanks would not be used although certain facilities at the Idaho Nuclear Technology Engineering Center (INTEC) would be used to treat the wastes resulting from processing the irradiated targets. These are reliable systems that would process a maximum of 1,050 cubic meters of low-level radioactive waste over the 35-year nuclear infrastructure operational period. The higher activity waste would be treated as a solid form via a stand-alone vitrification system, separate from any tank waste treatment system. No existing or planned high-level radioactive waste facilities would be used to treat the wastes resulting from processing the irradiated targets.

2068-6

2068-7

Sections 4.3.1.1.13, 4.3.2.1.13, 4.3.3.1.13, and 4.4.3.1.13 were revised to address comments received during the public comment period. This section now states that "DOE is considering whether the waste from processing of irradiated neptunium-237 targets should be classified as high-level radioactive waste and not transuranic waste. Irrespective of how the waste is classified (i.e., transuranic or high-level radioactive waste), the composition and characteristics are the same and the waste management activities (i.e., treatment and on-site storage) as described in this NI PEIS would be the same. In addition, either waste type would require disposal in a suitable repository. If it is transuranic waste, it would be nondefense waste and could not be disposed of at WIPP under current law. Because nondefense transuranic waste has no current disposal path, DOE Headquarters' approval would be necessary before a decision is made to generate such waste, as required by DOE Order 435.1. If the waste is classified as high-level radioactive waste, it is assumed for the purposes of this analysis that Yucca Mountain, Nevada, if approved, would be the final disposal site for DOE's high-level radioactive waste."

Commentor No. 2068: Kathleen Trever (Cont'd)
INEEL Oversight, State of Idaho, Governor's Office

Ms. Colette E. Brown

Page 4

September 18, 2000

- In any event, DOE should determine an appropriate disposal location for waste classified as non-defense transuranic waste prior to its generation.

|| 2068-7

If you have any questions or concerns, please call me at (208) 373-0498 or Ann Dold at (208) 528-2615.

Sincerely,



Kathleen Trever
Coordinator-Manager

KT/nrh

cc. Ann Dold, Manager
Rick Denning, Environmental Scientist
Richard Kimmel, NEPA Document Manager, HLW & FD EIS
Roger Twitchell, NEPA Compliance Officer, DOE-ID

Response to Commentor No. 2068

Commentor No. 2069: Gloria K. Koll

ATTN: Information for Public Comment

6488 South Admiralty Way
Freeland, WA 98249
Koll@wnidbey.com
September 18, 2000

Colette E. Brown
US Department of Energy
Germantown, MD

Dear Colette.Brown:

More wastes and contamination must not be added at Hanford. Restarting the reactor would cause more liquid waste, delay Hanford clean-up, and threaten the Columbia River.

2069-1

Direct efforts to cleaning up this dangerous area. Do not restart the reactor and add to the uncontrolled, perhaps uncontrollable, mess.

2069-2 2069-3

I am further outraged that, in response to my previous letter as a concerned citizen, you spent \$15.00 of taxpayer money on postage, not to mention the cost of printing, to send me seven pounds (I weighed it!) of technical material. Rather than your techno-justification for this project, use the common sense you were taught in elementary school: don't make another mess until you've cleaned up the one you already made.

2069-4

2069-2

Sincerely,



Gloria Koll

Copy to Washington Senators Murray and Gorton

Response to Commentor No. 2069

2069-1: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (i.e., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

2069-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Commentor No. 2069: Gloria K. Koll (Cont'd)

Response to Commentor No. 2069

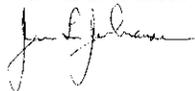
- 2069-3:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 2069-4:** DOE works carefully to strike a balance between keeping the public informed about potential impacts from its proposed actions in a timely manner, as required by NEPA and CEQ regulations, and controlling the cost of the NEPA compliance process. A Summary was prepared for the Draft NI PEIS and this Final NI PEIS as required by CEQ regulations, and the public had the option of receiving the Summary or both the Summary and the NI PEIS in hardcopy or via CD-ROM. Electronic publishing via the Internet is also used extensively by DOE for NEPA analyses and many other types of documents in order to reduce publications costs and material usage. Both the Draft PEIS and this Final NI PEIS have been made available on the NE website (<http://www.nuclear.gov>) and on CD-ROM.

Commentor No. 2070: James L. Johansen

Sept 12 2000

Dear Collette Brown/Secretary Richardson,
Please accept the following as public comments on the Draft Environmental Impact Statement on the Nuclear Infrastructure EIS. As a citizen of the Pacific Northwest, I am deeply concerned about the United States Department of Energy's proposal to restart Hanford's Fast Flux Test Facility Nuclear Reactor. I wish to have my values incorporated into the formal administrative record and taken into consideration when adopting the final record of decision. I also want you to respond to my concerns before you make your record of decision. Considering Hanford's overwhelming problems, including the crisis with tank waste treatment, as well as the damage caused by and radiation released from the Hanford wildfire, restarting FFTF is absolutely unacceptable. We must deal with the waste already at Hanford and focus on the clean-up mission. FFTF maintenance has already gobbled up \$100 million in clean-up money and distracted from desperately needed clean-up. Tank wastes are already seeping towards the Columbia River. More wastes must not be added to those tanks. Clean-up must be the only priority. We must save the Columbia River. Also, I object to the fact that you are asking citizens to comment on an incomplete study. You have not told us how you will deal with non-proliferation issues or additional waste from FFTF. Should FFTF be restarted, that decision will be illegal under Federal law and will be overturned! Do the right thing, shut down FFTF now and save the future of the Columbia River!
Sincerely,

James L. Johansen



Please Save the Columbia River!!

Response to Commentor No. 2070

- 2070-1: DOE notes the commentor's concerns. This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. DOE prepared a separate Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such an ancillary document need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed this document to about 730 interested parties on September 8, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Nuclear Infrastructure Nonproliferation Impact Assessment in Appendix Q in the Final NI PEIS. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.
- 2070-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford and protection of the Columbia River. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., DOE's Richland Operations Office, U.S. Environmental Protection Agency, and the State of Washington Department of Ecology). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected. .

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE).

Commentor No. 2070: James L. Johansen (Cont'd)

Response to Commentor No. 2070

The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Hanford tank waste issues are not within the scope of this PEIS, as none of the alternatives considered would add to these waste volumes.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

In regards to the Hanford wildfire of 2000, the DOE Richland Operations Office, the State of Washington Department of Health, and U.S. Environmental Protection Agency performed environmental monitoring on and around the Site to assess potential radiological impacts. The wildfire did not cause a release of radioactive materials from any Hanford facilities but did result in resuspension of radioactive materials which were already in the environment. The very low levels of radioactive materials that were resuspended were slightly above natural background levels and required several days of analysis to quantify. Information on this event has been made available to the public and can be accessed at <http://www.Hanford.gov/envmon/indes.html>. This site also provides a link to information on the independent offsite air monitoring that was conducted by the U.S. Environmental Protection Agency.

2070-3: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

2070-4: Management of wastes that would be generated under implementation of Alternative 1 (Restart FFTF) is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify

Commentor No. 2070: James L. Johansen (Cont'd)

Response to Commentor No. 2070

that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site .

2070-5: See response to comment 2070-3. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Commentor No. 2071: Marvin M. Johnson

14410 S.W. 112th Ave., #6
 Tigard, OR 97224
 (503)639-7178
 September 18, 2000

Colette E. Brown, ME-50
 U.S. Department of Energy
 Office of Nuclear Energy,
 Science and Technology
 19901 Germantown Road, Room A-270
 Germantown, Md 20874

Dear Ms. Brown:

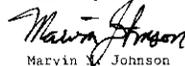
Having attended the DOE presentation in Portland on August 29, reading the literature provided, and considering the testimony, I distilled some relevant facts:

1. Medical isotopes are needed now and in the future.
2. The Hanford fast flux test facility cannot produce them simply by restarting.
3. The FFTF is more accident prone than a newer facility designed for isotope production.
4. The impetus for restarting the FFTF for isotope production is a ruse; the isotopes can be produced safer in a new US production site or purchased more economically from new Canadian facilities.
5. Nuclear energy for NASA exploration and military projects is madness. Have NASA engineers forgotten how to use solar power?

Another space probe like the Cassini mission would risk the destruction of all life and the systems that support life as we know it. The Cassini capsule hurtled over 70 pounds of Plutonium 238 back to Earth, using the Earth's gravitation system to pivot and accelerate the space probe. NASA makes mistakes--remember the Mars missions. (The US must unilaterally ban nuclear energy from space, or risk losing what remaining respect it has from the world's peoples).

The No Action Alternative seems prudent to me as long as it does not impede the Hanford cleanup schedule. This action also would be a clear message to Russia that the US does not favor more cold war adventurism.

Sincerely,


 Marvin M. Johnson

2071-1

2071-2

2071-3

2071-4

2071-5

2071-6

Response to Commentor No. 2071

2071-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for the No Action Alternative.

2071-2: FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

2071-3: The NI PEIS evaluates the environmental impacts of a range of reasonable alternatives to fulfill the requirements of the proposed action, which include the production of medical and industrial isotopes, the production of plutonium-238 for future NASA space exploration missions, and civilian nuclear research and development. In addition to restarting the FFTF, the NI PEIS also evaluates alternatives that would either employ the use of existing facilities or rely on the construction of new facilities.

DOE acknowledges that other manufacturers can produce certain isotopes that are economically attractive. In fact, the United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements.

Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report,

Commentor No. 2071: Marvin M. Johnson (Cont'd)

Response to Commentor No. 2071

as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term (less than 5 years). Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

DOE notes the commentor's concern for NASA's use of nuclear materials for space missions and interest in the development of alternative energy sources for space missions, although issues such as NASA research priorities are beyond the scope of this NI PEIS. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. Plutonium-238 sources are used only when they enable the mission or enhance mission capabilities. None of the missions stated in the NI PEIS are defense- or weapons-related.

- 2071-4:** DOE notes the commentor's concern for NASA's use of nuclear materials for space missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. The scope of this Nuclear Infrastructure PEIS is limited to analysis of alternatives to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development.
- 2071-5:** See response to comment 2071-1. With respect to cleanup of wastes at Hanford, the proposed action and cleanup of wastes at Hanford are independent programs and actions related to one will not impact the other. However, it should be noted that the cleanup of legacy wastes at Hanford is beyond the scope of the NI PEIS.
- 2071-6:** DOE notes the commentor's viewpoint.

Commentor No. 2072: Thomas S. Tenforde

September 15, 2000

Ms. Colette E. Brown
Office of Space and Defense
Power Systems (NE-50)
Office of Nuclear Energy,
Science and Technology
U.S. Department of Energy
19901 Germantown, MD 20874
Germantown, MD 20874

SUBJECT: Nuclear Infrastructure PEIS

Dear Ms. Brown:

I am writing as an advocate for the restart of the Fast Flux Test Facility to produce medical isotopes and to conduct other nuclear services and science missions of importance to the United States.

The need for FFTF as a major supplier of isotopes for the treatment of cancer, cardiovascular disease, and other human health problems is beyond question. At the present time, there are no other reactors in the United States with the capabilities of FFTF for producing medical radioisotopes, and the U.S. must currently rely on foreign suppliers for many of the isotopes used for both the diagnosis and treatment of disease. In addition to its remarkable capabilities for producing isotopes for medicine, industry and research, the FFTF has demonstrated its capability for safe and reliable operations over a ten-year period dating from the early 1980s to 1992.

During the past two decades there have been remarkable advances in the use of targeted radioisotope therapy of cancers that are difficult, and in some cases, impossible to treat by conventional methods such as chemotherapy. The basic limitation to using these new targeted therapeutic methods has been the limited supply of medical isotopes in the United States, and the Department of Energy must respond by making these isotopes available for use in nuclear medicine procedures. There is no other available domestic source with the capability of FFTF for producing these isotopes, most of which have short half-lives and must be produced in the United States to assure both reliable delivery and high quality. In addition, the 50-MW pool reactor proposed as one alternative in the PEIS has a thermal neutron energy spectrum and a relatively low neutron flux, making it unable to match FFTF's capability to produce large quantities of a wide variety of medical isotopes.

My recommendation to DOE, however, goes beyond just the restart of FFTF for producing isotopes to treat cancer and other diseases. There are several diagnostic isotopes in short supply such as iodine-123, which is used for imaging to detect tumors in the brain and other soft tissues, that can only be produced by cyclotrons. My opinion and strong recommendation to DOE is that a hybrid option should be chosen in which FFTF is restarted and, in addition, for a relatively small incremental cost of approximately 15%, a cyclotron with an energy of 50 to 100 MeV and a high beam current should be constructed at a DOE site with an existing radiochemical processing facility. This low-energy cyclotron would be dedicated to the reliable, year-around production of proton-rich medical isotopes. Because the programmatic EIS considers both the FFTF and low-energy cyclotron options, only site-specific environmental documentation would be required for the cyclotron option in order to implement this full course of action. These additional NEPA

2072-1

2072-2

Response to Commentor No. 2072

- 2072-1:** DOE notes the commentor's support for Alternative 1, Restart FFTF, and opposition to Alternative 4, Construct New Research Reactor.
- 2072-2:** As discussed in Section 1.3 of Volume I, in addition to the range of reasonable programmatic alternatives evaluated in the NI PEIS, DOE could choose to combine components of several alternatives in selecting the most appropriate strategy. The combination suggested by the commentor is an example that could be selected in the Record of Decision.

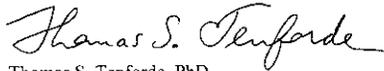
Commentor No. 2072: Thomas S. Tenforde (Cont'd)

Ms. Colette E. brown
September 15, 2000
Page 2

studies could be carried out in parallel with the initial stages of work required to restart FFTF, thereby avoiding any further delays in the reactivation of FFTF.

The combined FFTF and low-energy cyclotron option would provide the capability to produce the full set of radioisotopes needed by nuclear medicine physicians for the diagnosis and treatment of cancer and other diseases, and for medical research. It is, in my opinion, the optimal approach to take for improving the quality of health care for Americans in a cost-effective manner that uses the full range of technology offered by modern nuclear medicine.

Sincerely,



Thomas S. Tenforde, PhD
2438 Alexander Avenue
Richland, WA 99352
(509) 375-3089

**2072-2
(Cont'd)**

Response to Commentor No. 2072

Commentor No. 2073: Karen Bowman

September 14, 2000

Ms. Colette E. Brown
 NE-50 - Office of Nuclear Science
 Energy & Technology
 U.S. Department of Energy
 19901 Germantown Road
 Germantown, MD 20874

Dear Ms. Brown:

This letter is to express my support for the restart of the Fast Flux Test Facility, and I would like to state some reasons why I do.

- 1) There is no question that used in some ways, nuclear materials can and have been very harmful, and also that clean-up of the Hanford Site contamination is very necessary. **This is a unique opportunity to assign a mission to the FFTF that can serve to compensate for some of the harm that has historically been done by actually doing some very real good.** Since it's known that the FFTF is not part of the clean-up problem, will not contribute to the clean-up problem or create one, nor take money from the clean-up budget, it's the **right thing to do.**
- 2) The FFTF can be likened to a national treasure yet to be unearthed. It is a state-of-the-art facility that's never had a real chance to show what she can do, and **now is her time.** **The mission proposed for the FFTF - producing medical isotopes for diagnostics and treatment and pu-238 for NASA - is a worthy one from every standpoint:**
 - The facility is **capable** of producing large quantities of needed isotopes and pu-238 and is **already built and paid for.** This in itself is a most compelling reason to restart. To shut down this perfectly serviceable reactor and then spend millions and millions building new facilities to do the same thing this reactor is capable of would be just plain stupid, not to mention irresponsible and unaccountable. Startup would cost far less than any other proposed option and would show taxpayers that the government is doing its best to be fiscally responsible, in that it wouldn't just throw away a perfectly good facility to suit political whims.
 - Medical isotopes are sorely needed to battle disease, both to diagnose and to treat. This is the treatment of the future for cancers and many other afflictions, and the future is **now.** Yes, we can buy isotopes from other countries, but why send our dollars elsewhere when we can produce them here? Haven't the lessons been learned about relying on other countries and then falling prey to their changing governments? How many more people must needlessly suffer and die before we provide this product in sufficient quantities to make a difference? **We need first to take care of ourselves**

2073-1

Response to Commentor No. 2073

- 2073-1:** DOE notes the commentor's support for Alternative 1, Restart FFTF, and opposition to building new facilities (i.e., new accelerator(s) or research reactor).
- 2073-2:** DOE notes the commentor's views and observations and concerns regarding misinformation in the public participation process. It is DOE policy to encourage public input on matters of regional, national and international importance as part of its commitment to facilitate a public participation process that is open and unbiased.

Commentor No. 2073: Karen Bowman (Cont'd)

Response to Commentor No. 2073

from within our own country, and only when we cannot, go to another for what we need.

3) You may be aware that the DOE's Hanford complex has long been the staple of Tri-Cities, Washington economy, and that strong efforts are being made to diversify through attracting new, private businesses. It is interesting that in all the hearings I've attended thus far, not once have I heard the vision been spoken of that seems so clear to me: If we produce isotopes here, many of them, because of their short half-lives, will need to stay here and patients - and perhaps researchers - will need to come here to use them. This will open the doors for a more extensive medical community to serve the public, thus serving the public in two ways:

- First and by far most importantly, by providing a **method to improve health and relieve suffering**;
- Second, by **adding to the desired diversity through creating a major regional "medical hub"** where patients know they'll receive the best of treatment, thus **improving the local economy while reducing dependence on Hanford's payroll**.

I have attended several of the PEIS hearings, and continue to be alarmed and concerned at the misinformation being disseminated by Heart of America and others. How this can be allowed to go on, I simply do not understand. Shame on the DOE for not clearly requiring that information must be **accurately** presented from both sides in the interest of **fully and correctly** informing the public. In my mind, every citizen has the right to disagree with a proposed program, but does **not** have the right to try to sway public opinion through half-truths, blatant lying and fear-mongering, and this is what Gerald Pollett and others do best. As a tragic consequence, otherwise rational people have a great fear of what is being proposed for the Fast Flux Test Facility. (Remember the "Raging Grannies" at the Seattle PEIS hearing last month? I had the opportunity to speak [civily] with a couple of them; sadly, one of them actually told me she'd rather that one of her children or grandchildren **died** than use "anything nuclear" to help them, even should that be the only method open to them to diagnose or treat. By the way, that comment elicited quite a surprised expression from the other Granny. Perhaps that will cause her to re-think what she's doing.)

I appreciate the opportunity to express my views to you in this letter, as well as to attend the hearings. I plead with you to ignore the political aspect and heed the simple truth and common sense of this matter: **Restarting the FFTF is the right decision to make.**

Sincerely,


Karen Bowman
211 Saint St.
Richland, WA 99352
(509) 375-0731

2073-1
(Cont'd)

2073-2

2073-1

Commentor No. 2074: Richard J. Giever

September 12, 2000

Ms. Collette Brown
 United States Department of Energy
 Office of Space and Defense Power Systems (NE-50)
 19901 Germantown Road
 Germantown, Maryland 20874

RE: FAST FLUX REACTOR AT RICHLAND WASHINGTON

Dear Ms. Brown:

I have been in the practice of cancer medicine for approximately 18 years. During that time, I have actively been involved with the use of radioactive isotopes in the treatment of malignant disease. I use temporary, permanent and infusional radioactive isotopes in my care of cancer patients as deemed appropriate. There is no question that the medical use of radioactive isotopes is well established and quite beneficial for many cancer patients.

I am aware that the Fast Flux Test Facility at the Hanford Nuclear Reservation near Richland, Washington is currently being assessed for restart versus mothballing. I would strongly urge you to consider a restarting of FFTF. I believe that only through active research and clinical trials using radioactive isotopes can we learn how to optimally utilize their value in the treatment of cancer patients. From everything that I have read and heard, the FFTF facility is an optimal facility for producing radioactive isotopes for medical purposes. I would hope that you would strongly consider this possible benefit to the United States and the people of the world when you review this facility's potentials.

If I can be of any assistance to you in discussing the potential value of radioactive isotopes for the treatment of cancer, please contact me.

Sincerely,

Richard J. Giever, M.D., F.A.C.R.O.
 Chair Cancer Committee
 Kennewick General Hospital and Our Lady of Lourdes Medical Center
 RJG:TTSjk
 09/12/00

2074-1

Response to Commentor No. 2074

2074-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 2075: Ruth Yarrow

Response to Commentor No. 2075

Draft PEIS Comment Form

I urge the DOE to choose option 5, shutting down the FFTF permanently, with no new missions. My reasons include the following:

1) Hanford is the most contaminated nuclear site in the western hemisphere. In accordance with its present mission of clean-up, there should be NO new waste streams.

2) In the EIS, medical isotopes are misleadingly portrayed a limited availability of isotopes as hampering research, when top radioisotope users (e.g. at the Univ. of WA) consistently report having no problem finding the isotopes they need. Furthermore, the EIS implies that the FFTF would solve this "problem" when in fact even the NERAC committee recommended against using the FFTF for isotope production for research, and the 1995 National Academy of Sciences Institute of Medicine report recommends NOT restarting reactors such as the FFTF for this purpose.

3) Other very promising approaches to fighting cancer, such as using antibodies specific to cancer, as Dr. Appelbaum is presently doing at the Fred Hutchinson Cancer Research Center, do NOT involve radioactive waste. *

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Ruth Yarrow

Organization: _____

Home/Organization Address (circle one): _____

4417 Cascadia Ave S.

City: Seattle State: WA Zip Code: 98118

Telephone (optional): _____

E-mail (optional): _____

COMMENTS MUST BE POSTMARKED BY September 18, 2000

For more information contact: Colette E. Brown, NE-SO
 U.S. Department of Energy • 19001 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
 E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



7/12/00 * 4) Pu-238 production is not needed, since the small amount NASA needs can be purchased from Russia.

NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



2075-1

2075-2

2075-3

2075-4

2075-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2075-2: FFTF restart would not impact the schedule or available funding for existing cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram funds designated for Hanford cleanup, regardless of the alternative(s) selected. As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (i.e., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

2075-3: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings.

Commentor No. 2075: Ruth Yarrow (Cont'd)

4417 Cascadia Ave. S.
Seattle, WA 98118
September 14, 2000

To: Colette E. Brown

Public hearings are supposed to be to hear the public. For the public to contribute their wisdom to a decision, key information needs to be available to the public. At the recent hearings on the US Department of Energy's (DOE's) infrastructure, including the Fast Flux Test Facility (FFTF), the opportunity for the public to be informed and to be heard was seriously jeopardized. Here are some of the problems I observed, and suggestions for improvement.

Problem: In Seattle on August 30, you noted that you would present the EIS and the five options for the future of the FFTF but in reality you presented a list of arguments about why the facility should be restarted. **Suggestion:** The public should have an opportunity to hear an alternative view at the start of the meeting.

Problem: The venue (a room in the Convention Center) was cavernous with serious noise distractions from outside, the date was at the height of interested public being away on vacation, and parking was either very expensive or very difficult. **Suggestion:** Please hold the hearing in one of the Northwest Rooms at the Seattle Center in late September.

Problem: Information about the projected costs of the five alternatives was not available to the public before the meeting, an appalling omission. **Suggestion:** Please provide the relevant information or postpone the hearing.

Problem: Central to the entire discussion is the proposed use of the FFTF to produce medical isotopes, and but the specific recommendation of the National Academy of Science's Institute of Medicine report on the nation's radioisotope needs was not included in the EIS. **Suggestion:** Adhere to the openness initiatives launched by the DOE in 1993, and provide the relevant information to the public in a timely manner.

Problem: Non-proliferation is of critical importance to the survival of life on our planet, but was not considered in the materials for this hearing. **Suggestion:** Again, provide the relevant information.

Problem: While DOE acknowledged that the plutonium-238 need for NASA could be met more cheaply by purchasing it from abroad than by restarting the FFTF, the environmental impact study dismisses this option, and omits information from NASA about how little is needed. **Suggestion:** Again, provide the relevant information.

Problem: Any production at FFTF will produce new radioactive waste streams on the most contaminated site in the western world, a fact of overriding importance, not clearly presented in the EIS. **Suggestion:** Once again, please provide the relevant information.

Thank you for your attention to these requests.

Sincerely yours,



Ruth M. Yarrow

Response to Commentor No. 2075

Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

The commentor points out that both the National Academy of Sciences Institute of Medicine 1995 Report and the April 2000 NERAC Subcommittee for Isotope Research and Production Planning Final Report recommend against restarting reactors, such as FFTF, for isotope production. However, the conclusions presented in the more recent NERAC Report were made in the context of the facility producing research isotopes as its sole mission. DOE agrees that the FFTF's large size and configuration are not particularly well suited for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of the FFTF for the production of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production". In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates use of the FFTF when coupled with the other proposed missions.

DOE has taken the Expert Panel and NERAC report recommendations under consideration in developing the range of alternatives evaluated in the NI PEIS. These reports were made available to the public at the NI PEIS public information centers and on the Internet at www.nuclear.gov.

The United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. However Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to

2075-5

2075-6

2075-3

2075-6

2075-7

2075-2

Commentor No. 2075: Ruth Yarrow (Cont'd)

Response to Commentor No. 2075

clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

- 2075-4:** Genetic research and other research will hopefully lead to other effective ways to prevent and fight cancers. However, certain radioisotopes currently offer effective treatment for some cancers. Consistent with its mandates under the Atomic Energy Act, DOE is proposing this enhancement for the purposes of addressing three primary needs: 1) to support the increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and for which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear energy research and development in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio.
- 2075-5:** DOE notes the commentor's views concerning DOE's presentation at the Seattle, Washington public hearing.
- 2075-6:** The costs and nuclear nonproliferation impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such ancillary documents need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed these documents to more than 730 interested parties on August 24 and September 8, 2000, respectively. Both reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided summaries of the Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment in Appendixes P and Q, respectively in the Final NI PEIS.
- 2075-7:** Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In

Commentor No. 2075: Ruth Yarrow (Cont'd)

Response to Commentor No. 2075

addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Commentor No. 2076: David Wootan

David Wootan
1476 Oxford Ave
Richland, WA 99352
(509)627-5663

September 17, 2000

Colette E. Brown
Office of Nuclear Energy, Science and Technology
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

Dear Ms Brown:

Attached is a paper that I would like to submit for consideration in determining the preferred option for the Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, including the Role of the Fast Flux Test Facility. This paper illustrates the flexibility and effectiveness of the FFTF in producing unique neutronic environments for medical isotope production, basic nuclear research, and development testing. The large available volume and high neutron flux level make the FFTF uniquely suited to simultaneously perform the anticipated civilian nuclear energy research and development and isotope production missions for the United States.

Sincerely,



David Wootan

Response to Commentor No. 2076

2076-1

2076-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 2077: John Serop Simonian

9759 El Arco Dr.
Whittier, CA 90603-1303

September 17, 2000

Colette Brown
Department of Energy
Office of Space & Defense Power Systems, NE-50
19901 Germantown Rd.
Germantown, MD 20874

Dear Ms. Brown:

It has come to my attention that the Department of Energy is considering reopening previously closed plutonium-238 production facilities. The stated purpose for this expansion of Pu-238 use is to power future space missions. The production of Pu-238 would resume at Hanford, Washington, Oak Ridge, Tennessee, or Idaho Falls, Idaho.

Any expansion of the use of nuclear power anywhere in the world should concern us as Americans. The branching out of this dangerous energy source into space is even more alarming. Since the discovery and implementation of nuclear fission and fusion in the middle of the twentieth century, scientists have promised us that nuclear power would only benefit the world. The benefits, however, come at enormous cost to human life and freedom. One need look no further than the tens of thousands of civilians incinerated in Japan in 1945, the Polynesian islanders forced to undergo irradiation at the hands of Western powers in the 1950s and 1960s, the thousands around the world who have suffered unspeakable health problems because of meltdowns at nuclear power plants, and the billions of tax dollars wasted by world governments on building huge nuclear arsenals.

Clearly, the Department of Energy's love affair with nuclear power and with the almighty nuclear power industry's lobbyists has caused our government to move away from safer sources of power. It is understandable that NASA would like to travel to Mars more quickly, but the professional curiosity of already over-funded scientists should not override the rights of all Americans and all people to a world habitat free from nuclear power and its unmanageable waste, not to mention the disastrous effects of nuclear accidents. For this reason, I join with millions around the world in calling on you to halt the expansion of plutonium production. Will you please send me a summary copy of the final environmental impact study of the expansion of production of Pu-238?

Sincerely,



John Serop Simonian

2077-1

2077-2

Response to Commentor No. 2077

- 2077-1:** DOE notes the commentor's opposition to the use of nuclear power. The scope of this Nuclear Infrastructure PEIS is limited to analysis of alternatives to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development. The three missions are civilian nuclear energy missions and are not defense-related.
- 2077-2:** The purpose of the NI PEIS is to evaluate the environmental impacts of a range of reasonable alternatives to fulfill the proposed action, one of which is the domestic production of plutonium-238. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions. The commentor has been added to the NI PEIS mailing list and will receive a copy of the Final NI PEIS Summary.

Commentor No. 2330: Victoria Meier

Hanford Watch
2285 SE Cypress
Portland, Oregon 97214



Ms. Colette Brown
U.S. Department of Energy
Office of Space and Defense Power Systems
NE-50
19901 Germantown Road
Germantown, Maryland 20874-1290

3874+1207 [Barcode]

Public comment on Nuclear Infrastructure Draft Programmatic Environmental Impact Statement (NI PEIS)

I am opposed to restart of the Fast Flux Test Facility reactor because:

It is unsafe. It is already horribly
polluted and we need to use the money for
clean-up. Too much time has been wasted.
The FFTF is actually not a good source for
radioisotopes. We must work for peace, not war.

Name VICTORIA MEIER
Address 4669 EXETER STREET
City, state WEST Linn, OR Zip 97068

Response to Commentor No. 2330

2330-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

While it would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production". In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with supporting the other stated missions.

2330-2: FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

2330-3: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., DOE's Richland Operations Office, U.S. Environmental Protection Agency, and the State of Washington Department of Ecology). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

**Commentor No. 2332: Port of Pasco Commissioners
(O.E. Boston, Jim Klindworth, Del Lathim)**



904 E. ANSBURGH
P.O. Box 769
Pasco, WA 99301
Phone: 709.547.3378
Fax: 409.547.2347
portofpasco@portofpasco.org

PORT COMMISSIONERS:
O.E. "Ernie" Boston
James T. Klindworth
Del Lathim

EXECUTIVE DIRECTOR:
James L. Toomey

August 31, 2000

Colette Brown, Document Manager
Office of Nuclear Energy, Science and Technology
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

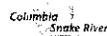
Dear Ms. Brown:

The Port of Pasco has been a long time supporter of the Fast Flux Test Facility (FFTF) and strongly supports the objectives of the Department of Energy's Energy Program and specifically the implementation of the various uses attributed to the restart of the Fast Flux Test Facility (FFTF) as outlined in the Draft Environmental Impact Statement. We unequivocally support the use of FFTF for production of isotopes for medicine, space missions as well as other commercial isotope research and development projects.

The Draft EIS evaluation of these alternatives clearly shows the capability and superiority of the FFTF over other alternatives being considered.

Residents of Franklin and the surrounding counties were involved in the design construction and operation of FFTF. They are extremely knowledgeable about the facility's track record for safe operation. We would object to our federal tax dollars being spent to build a new facility, or retrofit an existing facility that has less capability than FFTF. We were pleased that the cost analysis done by the Department of Energy, as part of the current Environmental Impact Statement, confirms that FFTF is clearly the preferred alternative for the programs considered based on the availability, capacity for multi product missions, demonstrated technology, cost effectiveness, safety and minimal environmental impact.

We believe that the FFTF has been clearly identified in the EIS studies to be the preferred options for meeting the identified program missions without any significant negative social, environmental, or economic impacts. Operation of the FFTF will provide significant positive economic and social impacts not only to the Pacific Northwest, but also to the nation. Not only through its capability to supply currently unavailable or limited medical isotopes for general use but for its other capabilities attributed with a reactor of this magnitude.



Response to Commentor No. 2332

- 2332-1:** DOE notes the commentor's support for Alternative 1, Restart FFTF.
- 2332-2:** DOE notes the Commissioners' concerns and their support for Alternative 1, Restart FFTF.
- 2332-3:** No decisions have been made with regard to the facilities and locations evaluated to fulfill the requirements of the DOE missions. However, in accordance with Council on Environmental Quality regulations (40 CFR 1502.14(e)), DOE has identified its preferred alternative in Section 2.8 of Volume 1 of the Final NI PEIS. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.
- 2332-4:** The commentor is correct on the separation of DOE program funding sources. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected. Therefore, restart of FFTF would not impact current cleanup schedules.

Decommissioning FFTF, including associated costs and cleanup, is not within the scope of the NI PEIS. Before decommission activities were undertaken, DOE would prepare the appropriate environmental documentation to address the associated environmental impacts. Cost assessments would also be prepared.

DOE remains committed to cleaning up the Hanford Site independent of ultimate decision on FFTF. The amounts of wastes associated with decommissioning FFTF would be small. The schedule for cleaning up these other wastes would not be affected if FFTF were restarted.

2332-1

2332-2

2332-3

Commentor No. 2332: Port of Pasco Commissioners (Cont'd)
(O.E. Boston, Jim Klindworth, Del Lathim)

Furthermore, the startup and operation of the FFTF for the missions evaluated in this EIS will not interfere with or detract from the Hanford cleanup mission. The funding for FFTF programs is provided through Nuclear Energy program appropriated funds, which by law are separately appropriated and segregated from the Environmental Management program. But, if the decision is made to shutdown FFTF and decommission it, then responsibility for the facility would be transferred to the Environmental Management program, which would have a major negative impact on the limited cleanup program funding that is available.

2332-4

It is time for the Department of Energy to develop a new legacy and the Port of Pasco is asking you to make the bold decision to restart the reactor. We request that the assets of the FFTF receive an objective, balanced, and realistic evaluation of the alternatives during the preparation of the Record of Decision on this EIS.

2332-3

Respectfully, Port of Pasco Commissioners,

O.E. "Ernie" Boston
President

Jim Klindworth
Vice-President

Del Lathim
Secretary

Response to Commentor No. 2332

Commentor No. 2618: Lesley Pomeroy

Secretary, The

From: Lesley Pomeroy [apigee@hotmail.com]
Sent: Tuesday, August 29, 2000 4:03 PM
To: Secretary, The
Subject: Hanford

Dear Secretary Richardson,

Please do not allow the restarting of the test reactor at Hanford Nuclear Reservation!!! There are so many reasons why this project should be stopped. The fact that we still have the radioactive and chemical wastes up there are polluting the environment should be reason enough not to continue. As the Secretary of Energy, why won't you shut this facility down and invest our tax dollars and future in safe renewable energy sources like solar energy? I doubt you will even read this e-mail, but whoever does, it's your planet too. We can still make a difference. Stop the Fast Flux Test Facility!

**Sincerely,
Lesley Pomeroy**

2618-1

2618-2

2618-3

Response to Commentor No. 2618

- 2618-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 2618-2:** DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "... ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.

- 2618-3:** DOE notes the commentor's interest in alternative energy sources, although issues of research and development of alternative energy sources are beyond the scope of this Nuclear Infrastructure PEIS. The DOE missions to be addressed in this EIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies.

Commentor No. 2619: Patrick Sobotta
Nez Perce Tribe



Nez Perce

ENVIRONMENTAL RESTORATION & WASTE MANAGEMENT
 P.O. BOX 365 · LAPWAI, IDAHO 83540-0365 · (208) 843-7376 / FAX: 843-7378

September 15, 2000

William D. Magwood, IV, NE-1
 U.S. Department of Energy
 1000 Independence Ave., S.W.
 Washington, D.C. 20585

RE: Draft Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility, July 2000; DOE/EIS-0310D

Dear Mr. Magwood:

The Nez Perce Tribe's Environmental Restoration and Waste Management (ERWM) Program's main purpose is the oversight and participation in the clean-up and restoration at the Hanford Nuclear Reservation. The basis for the Tribe's involvement is the Treaty of 1855, in which the Federal Government acknowledged committed to protecting our retained usual and accustomed Columbia River rights. Resource areas in the Hanford Reach and elsewhere are protected by our treaties and provide the basis for the relationship between the U.S. Department of Energy (DOE) and the Nez Perce Tribe.

The Nez Perce Tribal Executive Committee has passed a Resolution (see attachment) opposing the restart of the Fast Flux Test Facility (FFTF) and to permanently deactivate FFTF (with no new missions). FFTF could potentially impede upon access to treaty resource sites. The possible health benefits do not outweigh the creation of new waste when new technologies are still needed to treat waste already in existence. Obligated funding should be redirected to the mission of clean-up and restoration efforts at Hanford. Treatment of wastes are still in need of new technologies.

The Nez Perce Tribe ERWM appreciates the opportunity to provide comments on the Draft NI PEIS, July 2000; DOE/EIS-0310D. If you have any questions please contact Patrick Sobotta at (208) 843-7375 or e-mail at pats@nezperce.org.

Sincerely,

Patrick Sobotta
 ERWM Director

2619-1

2619-2

2619-3

Response to Commentor No. 2619

- 2619-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.
- 2619-2:** DOE values its relationship with the Nez Perce Tribe and remains committed to treaty resource rights and access. Based on your discussion on September 28, 2000, with Mr. Dan Tano of the Department's Richland Operations Office staff, the concern about access to treaty resource sites is premised on your understanding of the waste and funding impact the Fast Flux Test Facility could have on Hanford Nuclear Reservation cleanup and restoration, a program in which the Nez Perce Tribe participates and provides oversight, pursuant to its interests under the Treaty of 1855. Specifically, we understand your position to be that in order to protect Tribal treaty-reserved resources, funding should be used for environmental cleanup at Hanford rather than for the Fast Flux Test Facility.

First, should the Department decide to restart the Fast Flux Test Facility, the waste streams would not impact the Hanford cleanup and would be managed according to a Waste Minimization and Management Plan being developed in consultation with the States of Oregon and Washington. Second, the Secretary is committed to maintaining the Hanford cleanup as a top priority. The management and possible enhancement of DOE's nuclear facility infrastructure based on the Secretary's decision, including the Fast Flux Test Facility if the decision called for its restart, would not divert or reprogram any funding from Hanford cleanup activities. The Hanford Site environmental restoration activities would continue in accordance with the Tri-Party Agreement.

Therefore, should DOE restart the Fast Flux Test Facility, we believe its operation would not impede in any way Nez Perce Tribe access to treaty resource sites. The Fast Flux Test Facility may eventually serve an important role in the Nation's science infrastructure. Given the limited and declining nuclear research infrastructure in the United States, we believe that an exhaustive evaluation of this facility is warranted.

- 2619-3:** The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to

Commentor No. 2619: Patrick Sobotta (Cont'd)
Nez Perce Tribe

NP 00-470

RESOLUTION

WHEREAS, the Nez Perce Tribal Executive Committee has been empowered to act for and in behalf of the Nez Perce Tribe, pursuant to the Revised Constitution and By-Laws, adopted by the General Council of the Nez Perce Tribe on May 6, 1961 and approved by the Acting Commissioner of Indian Affairs on June 27, 1961; and

WHEREAS, the Nez Perce Tribal Executive Committee (NPTEC) is the governing body of the Nez Perce Tribe; and

WHEREAS, the Nez Perce Tribe has been designated an affected Tribe since 1982 under the Nuclear Waste Policy Act (NWPA); and

WHEREAS, the Nez Perce Tribe has interests on the Hanford Nuclear Reservation, that include protecting our sovereignty, resources, culture, health and safety; and

WHEREAS, the Fast Flux Test Facility (FFTF) is an experimental facility consisting of special custom made components with no real mission that has been shown to cost \$60 million per year to keep it in standby mode; and

WHEREAS, the United States Department of Energy is currently drafting an Environmental Impact Statement (EIS) that will consider options for the disposition of the FFTF, including the restart of the facility.

NOW, THEREFORE BE IT RESOLVED, that the NPTEC opposes the spending of dollars on projects such as the FFTF and urges that those dollars be used to clean up and protect those Tribal treaty-reserved resources which have been contaminated or are being threatened by Hanford activities.

BE IT FINALLY RESOLVED, that the Nez Perce Tribe urges the United States Department of Energy to select as the preferred alternative for the FFTF draft EIS the permanent closure and demolition of the FFTF.

Response to Commentor No. 2619

Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Commentor No. 2619: Patrick Sobotta (Cont'd)
Nez Perce Tribe

NP 00-470

CERTIFICATION

The foregoing resolution was duly adopted by the Nez Perce Tribal Executive Committee meeting in Regular Session on September 12, 2000, in the Richard A. Halfmoon Council Chambers, Lapwai, Idaho, a quorum of its members being present and voting.

BY: *Arthur M. Taylor, Jr.*
for Arthur M. Taylor, Jr., Secretary

ATTEST:

Samuel N. Penney
for Samuel N. Penney, Chairman

Response to Commentor No. 2619

Commentor No. 2620: Janet Kimball

8051 28th NE
Seattle WA 98115
20 September 2000

Secretary Bill Richardson
Department of Energy
1000 Independence Avenue
Washington, D.C. 20585

Dear Mr. Richardson:

I am writing about the Hanford Nuclear Reservation.

I am encouraging you to shut down the FFTF and focus on CLEAN UP. Although Senator Gorton states the FFTF will generate radionuclides for cancer therapy, these can be made more efficiently in newer facilities. And although he states that restarting the FFTF will bring needed jobs to the Richland area, true clean up of existing problems will generate jobs and provide a lasting legacy of environmental restoration.

Yours truly,



Janet Kimball

Response to Commentor No. 2620

- 2620-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2620-2: Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.
- 2620-3: The NI PEIS evaluates the environmental impacts of a range of reasonable alternatives for enhancing DOE's existing nuclear facility infrastructure to support production of isotopes for medical, research, and industrial uses; production of plutonium-238 for use in future NASA space exploration missions; and U.S. nuclear research and development needs for civilian application. In addition to restarting the FFTF, the NI PEIS also evaluates alternatives that would either employ the use of existing facilities or rely on the construction of new facilities specifically designed to support the proposed action.
- 2620-4: The Record of Decision for the PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

Commentor No. 2621: Luis Ojeda**Secretary, The**

From: Luis A. Ojeda [lojeda@owl.com]
Sent: Sunday, September 10, 2000 1:05 PM
To: Secretary, The; INFRASTRUCTURE-PEIS, NUCLEAR;
 senator_torricelli@torricelli.senate.gov%internet; senator@dpm.senate.gov%internet;
 senator@scumer.senate.gov%internet; senator_dewine@dewine.senate.gov%internet;
 senator_voinovich@voinovich.senate.gov%internet; senator_specter@specter.senate.gov%
 internet; senator@santorum.senate.gov%internet; senator@hollings.senate.gov%internet;
 senator@thurmond.senate.gov%internet; senator@hutchinson.senate.gov%internet;
 phil_gram@gramm.senate.gov%internet; Senator_frist@frist.senate.gov%internet;
 senator@broaz.senate.gov%internet; senator@feinstein.senate.gov%internet;
 senator@boxer.senate.gov%internet; b_graham@graham.senate.gov%internet;
 connie@mack.senate.gov%internet; frank_lautenberg@lautenberg.senate.gov%internet;
 Rick Mounce
Subject: For Medical Isotopes!

Dear Senators,

I write to you today to ask you to support the restart of the Fast Test Flux Facility (FFTF) for the production of medical isotopes. Medical isotopes are changing the face of medical treatments in the area of cancer treatment and arthritis therapy, just to name a few. Some scientists think they may be the long sought after "cure" for cancer. The FFTF is undergoing the preparation of an Environmental Impact Statement (EIS) right now. The Department of Energy (DOE) is expected to issue a record of decision in December of this year on the fate of the FFTF based on this EIS and comments from the public. Thanks for your time and consideration on this matter.

Luis Ojeda
 3001 South 38th Avenue
 West Richland, WA 99353
 (509) 567-5884

|| 2621-1

Response to Commentor No. 2621

2621-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 2622: Sandra Piper

Secretary, The

From: S Piper [sun4sand@yahoo.com]
Sent: Wednesday, September 20, 2000 12:13 PM
To: Secretary, The
Subject: Fires at Hanford

Sandra Piper
14837 206th Ave. SE
Renton, Wa 98059

Mr. Bill Richardson
1000 Independence Ave. SW
Washington, DC 20585

Dear Secretary Richardson,

I'm writing to let you know of the concern I have about the present and future site conditions at the Hanford reservation.

I understand that the most recent wildfires traveled across two areas of waste storage at Hanford. I also understand that when it was monitored six miles from the site during the fire, levels of radiation detected were 50 clicks of the geiger counter (1000x) above the normal level.

I believe it is time to pay attention to the potential for disaster that exists with the improperly stored containers of radioactive waste. It's time to admit scientists have been unable to find a way to safely hold these wastes for their entire projected radioactive lifespan.

The proximity of Hanford's leaking containers to the Columbia River, which brings water along the southern part of our state and our border with Oregon must be respected. Since the waste can't be seen; the tendency may be to deny it's a problem. We all know that scientists have detected radiation in the groundwater next to the site.

Response to Commentor No. 2622

2622-1: DOE notes the commentor's concerns regarding the high-level waste tanks at Hanford 200 Area. The high-level waste tank issues are not within the scope of this NI PEIS, as none of the alternatives described in Section 2.5 of Volume 1 would add to these waste volumes. The Hanford Site environmental restoration activities are a high priority to DOE and are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

With regard to groundwater contamination, it is currently limited to the Hanford Site and no food or water restrictions are currently in place outside the Hanford Reservation as a result of Hanford activities. All environmental parameters (e.g. air, soil, surface water, groundwater, vegetation, animals, etc.) in and around the Hanford Site are monitored on a periodic basis. The information is available to the public in annual monitoring reports.

With regard to the Hanford wildfire of 2000, the DOE Richland Operations Office, the State of Washington Department of Health, and U.S. Environmental Protection Agency performed environmental monitoring on and around the Site to assess potential radiological impacts. The wildfire did not cause a release of radioactive materials from any Hanford facilities but did result in resuspension of radioactive materials which were already in the environment. The very low levels of radioactive materials that were resuspended were slightly above natural

2622-1

Commentor No. 2622: Sandra Piper (Cont'd)

In the worst case scenerio; let's say the toxic wastes mingle with the waters of the Columbia, and bring the radiation along it's path out to the ocean. What effect would it have on our ecosystem and our food sources? Would you want to tell your children you were partly responsible? The prospects are grim and the consequences will be, local, national or even global.

I urge you to consider the futures of our children and make the truly courageous decision to shut down the reactors. Let's end the creation of more "unstorable" waste and refocus on cleaning up the area as carefully as possible.

Sincerely,

Sandra Piper

P.S. Please include my comments as part of the Draft Nuclear Infrastructure Peis on the FFTF Nuclear Reactor!

**=====
Sandy.**

2622-1
(Cont'd)

2622-2

2622-1

Response to Commentor No. 2622

background levels and required several days of analysis to quantify. Information on this event has been made available to the public and can be accessed at <http://www.Hanford.gov/envmon/index.html>. This site also provides a link to information on the independent offsite air monitoring that was conducted by the U.S. Environmental Protection Agency.

More specific to the stated missions presented in the NI PEIS, FFTF is located approximately 4.5 miles from the Columbia River and will have no discharges to the river and no radioactive or hazardous discharges to the groundwater. Analyses presented in Chapter 4 of the NI PEIS (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4) indicate that there would be no discernible impacts to groundwater or surface water quality from the stated missions.

It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

2622-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2623: Shelley Cimon

September 12, 2000

The Honorable Bill Richardson
Secretary of Energy
Forrestal Building
1000 Independence Avenue SW
Washington D.C. 20585

Dear Secretary Richardson:

This letter is in response to a request for comment on the recently issued draft Environmental Impact Statement that discusses the restart of Hanford Nuclear Reservation's Fast Flux Test Facility (FFTF) to meet expanded isotope production and nuclear energy research missions. I am adamantly opposed to the restart of FFTF for these missions. You must permanently shut down this reactor.

The Hanford Nuclear Reservation is a national, environmental disaster, the scale of which most Americans are unaware. I have formally participated in the cleanup dialogue for the past 13 years now, representing Oregon through a governor appointed board and currently as co-vice chair of the site specific advisory board. It is requisite that we keep our vision to the task at hand: the cleanup of Hanford.

We have seen no compelling need for the production of medical isotopes through a restart of FFTF. This mission, though important, is not of a magnitude great enough to justify the restart of an aging relic of the cold war when we currently have, at hand, an adequate source for these isotopes. A report published by a subcommittee of the Department of Energy's Nuclear Energy Research Advisory Committee states that FFTF is not economically viable, and that we have other reactors within the DOE complex which could serve that purpose. They are located in Tennessee and Missouri. They have been identified and their efficacy must be addressed in this EIS.

I have continually heard for countless years the DOE position that we cannot look outside of our country for isotopes, yet Canada is currently one of our major suppliers. They are also in the process of building two more heavy water reactors expressly for the purpose of producing medical isotopes. This stance does not hold water, (nor do 67 leaking tanks at Hanford). Our needs for an adequate supply for these isotopes can most certainly be met without a restart of FFTF.

It is incredible, to me, that this EIS ignored addressing very viable alternatives to fill the demands for isotopes. Nor did it include in it the issue of the waste produced by this proposed production and the inability and unwillingness of our government to address the fundamental cleanup issues of waste already produced and ill-managed at Hanford.

It is my understanding that in May NASA informed the Department of Energy that they would no

Response to Commentor No. 2623

2623-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

2623-2: See response to comment 2623-1.

2623-3: DOE notes the commentor's concerns regarding high-level waste tank and cleanup issues at Hanford. The high-level waste tank issues are not within the scope of this NI PEIS, as none of the alternatives considered would add to these waste volumes. The Hanford Site environmental restoration activities are a high priority to DOE and are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.

FFTF is located approximately 4.5 miles from the Columbia River and will have no discharges to the river and no radioactive or hazardous discharges to the groundwater. Analyses presented in Chapter 4 of the NI PEIS (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4) indicate that no discernible impacts to groundwater or surface water quality would result from implementation of the alternatives described in Section 2.5 of Volume 1.

Chapter 4 of Volume 1 addresses the environmental impacts that would be due to the treatment, storage, and disposal of the waste generated by the nuclear infrastructure missions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

2623-4: The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically

2623-1
2623-2

2623-3

2623-4

2623-5

2623-6

Commentor No. 2623: Shelley Cimon (Cont'd)

longer need the fuel that FFTF might have produced. This underscores, once again, the lack of missions which would justify economically or morally the restart of this reactor.

There is no justifiable mission for the restart of the FFTF. It is time to stop spending taxpayer money trying to build a structurally robust case for restart. Let's focus instead on structurally robust designs for containment of the waste we've already produced. People of the Northwest have paid dearly for the cold war effort. The Columbia River which is the lifeblood of the NW is already compromised. The future health of our children should not be jeopardized, too. Permanently shut down the FFTF. It is the morally right thing to do.

Sincerely,



Shelley Cimon
1208 First Street
La Grande, Oregon 97850
(541) 963-0853

2623-6
(Cont'd)

2623-7

2623-3

Response to Commentor No. 2623

attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

2623-5: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. Hanford Site

Commentor No. 2623: Shelley Cimon (Cont'd)

Response to Commentor No. 2623

cleanup is funded through the DOE Environmental Management Program Office. The stated missions considered in this PEIS would be funded by the DOE Office of Nuclear Energy, Science and Technology, which has no funding connection to cleanup and waste management activities. Therefore, the stated missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

The NI PEIS addresses the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed missions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and appropriate DOE orders.

- 2623-6:** A May 22, 2000, correspondence from NASA to DOE identified that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.
- 2623-7:** DOE notes the commentor's opposition to restarting FFTF for expanding its existing nuclear facility infrastructure. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy

Commentor No. 2623: Shelley Cimon (Cont'd)

Response to Commentor No. 2623

Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

Draft PEIS Comment Form

*Dam Writing in support of FFTF.
 It seems those who would benefit
 from its operation are being
 held hostage by those who have
 political agendas not educated
 concerns.
 My mother died of bone cancer in
 1966 after 3 years. She was almost 16gr.
 Did she think about how any
 idea what that does to a family?
 My parents lost their judgement
 & divorced. My Mom has never
 been the same again. Please
 consider the benefits FFTF would
 provide.
 Thank you.*

2624-1

2624-2

2624-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

2624-2: DOE notes the commentor's views. The selection of facilities and site locations for accomplishing expanded civilian nuclear energy research and development and isotope production missions is not a political decision. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
- returning this comment form to the registration desk at the meeting or to the address below
- calling toll-free and leaving your comments: 1-877-562-4593
- faxing your comments toll-free to: 1-877-562-4592
- commenting via e-mail: NuclearInfrastructure-PEIS@hq.doe.gov

Name (optional): VALJEANNE B. MEADOWS

Organization:

Home/Organization Address (circle one): 102 Bremner St.

City: Richland State: WA Zip Code: 99352

Telephone (optional): 509-6280383

E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 11, 2000

for more information contact: Collette E. Brown, 18-50
 U.S. Department of Energy • 19901 Germantown Road • Germantown, MD 20874
 Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-662-4592
 E-mail: NuclearInfrastructure-PEIS@hq.doe.gov



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 NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Commentor No. 2625: Paige Knight Hanford Watch

HANFORD WATCH
2285 S.E. CYPRESS
PORTLAND, OR 97214
(503) 232-0848

September 12, 2000

The Honorable Bill Richardson
Secretary of Energy and Cleanup
Forrestal Building
1000 Independence Avenue SW
Washington, D.C. 20585

Dear Secretary Richardson:

I am writing you and sending a copy of this statement to Colette Brown rather than the reverse because I do not trust that you will get a full and accurate accounting of public comments here in the Northwest on the restart of the Fast Flux Test Facility. My doubts are based on past experience, since this is our fifth time in addressing these issues. After five different attempts and 8 years to get the public to support the restart of the waste producing FFTF and the FMEF (although it was not given a full view of environmental and cost impacts in the Draft PEIS), you can imagine the discouragement we feel as well as our outrage.

Before I summarize some of the specific faults in this promotional document, let me give you a sense of the public interest in this issue. In the last 3 hearings in Portland, we have had a turnout of 350, 400 and nearly 500 citizens. Hood River and Seattle have had significant attendance from their citizens as well – from 250 in the small town of Hood River to 400 at each of two of the Seattle hearings. This past week the Tri-City FFTF boosters made a concerted attempt to skew the sentiments across the region of Oregon and Washington by bussing around 50 supporters of the restart to each hearing. Yes, there are around 5 or 6 activists who travel to the Tri-Cities on these rounds of hearings to represent a different point of view, but we have not attempted to demonstrate to the U.S. DOE that there is mixed sentiment in the Tri-City area. Thus, I encourage you to look at the testimony coming from these hearings in an accurate light. This may not be presented to you by Ms. Brown and the Office of Nuclear Energy, Science and Technology, who obviously have their own financial interest at heart rather than the health and safety of the residents of this region.

It is of deep concern to us that at a recent meeting of the Environmental Restoration Committee of the Hanford Advisory Board, when Keith Klein, Richland DOE Manager presented us his vision for accelerated Hanford cleanup, he was surprised to learn that some of the buildings he envisioned being demolished in the 300 area at Hanford were included in the PEIS to support the restart of the FFTF. As usual there is a disconnect between local sites and Headquarters, between cleanup programs and production programs. Around 8,000 people over the past several years have wisely stated that the cleanup mission at Hanford is thwarted when production missions create more wastes. This PEIS stated that the wastes to be produced by restart of the FFTF were "insignificant" compared to the wastes already tallied at Hanford. In light of the lack of adequate funding and delays in the cleanup of no amount of waste can rightfully be considered INSIGNIFICANT.

Throughout the entire PEIS, the longest term view of wastes and impacts was for the supposed 35 years the reactor would be operating. The wastes from it (16 tons), while deemed miniscule in the draft publicity piece, are part of the everlasting gargantuan legacy of wastes that are not being

Response to Commentor No. 2625

2625-1: DOE, and the Secretary of Energy in particular, is aware that there is a considerable difference of public opinion regarding the alternatives evaluated in this NI PEIS to accomplish the DOE missions, including direct support as well as opposition to Alternative 1 (Restart FFTF).

The commentor's concerns regarding the attendance of persons from the Tri-Cities area at the Seattle, Washington and Hood River and Portland, Oregon public hearings are noted. It is DOE policy to encourage public input on matters of regional, national and international importance as part of its commitment to facilitate a public participation process that is open and unbiased. It is not uncommon or illegal under CEQ regulations for individuals and special interest groups, who may be for or against a particular proposed action or alternative, to attend multiple meetings including those outside their "home" area. However, DOE believes and strives to ensure that the hearing format used serves to promote open and equal representation by all individuals and groups, regardless of the motivation for attending.

CEQ (40 CFR 1500 et seq.) and DOE (10 CFR Part 1021) implementation regulations do not require inclusion of cost and nonproliferation studies in an environmental impact statement. The basic purpose of the NI PEIS is to describe the alternatives under consideration for implementation (Section 2.5 of Volume 1) and the environmental impacts that would occur if these alternatives were implemented (Chapter 4 of Volume 1). Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. The associated cost report and nonproliferation report were made available to the public on August 24, 2000 and September 8, 2000, respectively. DOE mailed these documents to approximately 730 interested parties, and these reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in public reading rooms. DOE has also provided summaries of the Cost Report and Nuclear Nonproliferation Impact Assessment in Appendixes P and Q, respectively, in the Final NI PEIS.

2625-1

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2625-3

2625-4

Commentor No. 2625: Paige Knight (Cont'd)
Hanford Watch

cleaned up at Hanford as promised us since 1989. Hanford is the only DOE site that has no tank waste treatment system, it is the most contaminated site in the Western Hemisphere, and it is the most urgent environmental disaster facing our nation. We continually face budget shortfalls. We are told that the money for FFTF comes from a different budget. We find this kind of rhetoric and money shell-game deceitful. The PEIS' exploration of environmental impacts and risks to the public is a sham. One of the speakers who has degrees in environmental science state that this PEIS is a bad piece of homework on the part of the writers. That is an understatement! It is hopefully the last in a long series of studies and documents that has cost the taxpayer millions of dollars. Just think of how much more work on cleanup could have been accomplished for the same price!

Let me summarize a few other aspects that lead so many of us to oppose the restart of the FFTF:

· The need for the use of this reactor is questionable at best: the PEIS refused to look at our current contractual supplies of PU-238 from Russia; NASA has stated that it no longer needs PU-238 in quantities to justify the restart of the reactor; we already have a ready supply of isotopes from Canada and other reactors—Colette Brown stated that the goal is to have all capacities for these product be within our own country — who has come up with this national policy in the midst of our country's dogged drive toward a global economy?

· The cost document on this proposal just arrived in the mail-after the hearings, as has the non-proliferation document. The DOE continues this duplicitous piece-mealing of issues which is also a tremendous waste of taxpayer money. For those who took the time to make their statements at the hearings, they now have to incorporate two new documents into their previous statements or not be heard.

· The subcommittee of the DOE's Nuclear Energy Research Advisory Committee states that the FFTF would not be an economically viable or dependable source of isotopes for research purposes and that other reactors are better suited to this mission. This committee's findings which were published in April, were completely missing from the PEIS which came out in August. Disconnect???? Deceit????

· Viable alternatives to the proposed uses for the FFTF were glossed over or disregarded in the PEIS.

It is obvious to those of us who stand to gain no jobs, but all of the ill effects of the restart of the FFT, that far too much time, energy, and money has been diverted by the special interests of the Nuclear Research Institute, Pacific Northwest National Laboratories and others. Dollars, time and energy diverted away from cleanup. This reactor is truly in search of a mission. The Department of Energy owes it to the Northwest region to close the reactor down and focus on Keith Klein's vision for cleanup of the Hanford site.

Sincerely,

Paige Knight, HANFORD WATCH

2625-3

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2625-3

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2625-10

Response to Commentor No. 2625

In preparing the Final NI PEIS, DOE carefully considered comments received from the public. All pertinent information and public input will be provided to the Secretary so that he may make an informed and unbiased decision with respect to the alternatives presented in this NI PEIS.

- 2625-2: The 300 Area Revitalization Plan (DOE 1999) provides for continued Multi-program R&D operations in the 300 Area, including operation of various laboratories, office facilities, and services. It also provides for consolidation (but not complete elimination) of radiological operations, with support for Hanford Site facility transition and environmental restoration efforts. The plan does not require closure of the 325 and 306-E buildings as long as they are needed for active research projects. Operation of these facilities would not violate any existing agreements between DOE and stakeholders or other legal obligations, nor would it affect ongoing or planned environmental restoration and facility transition activities.
- 2625-3: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., DOE's Richland Operations Office, U.S. Environmental Protection Agency, and the State of Washington Department of Ecology). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF

Commentor No. 2625: Paige Knight (Cont'd)
Hanford Watch

Response to Commentor No. 2625

through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected. Therefore, FFTF restart would not impact the schedule or available funding for existing cleanup activities.

- 2625-4:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement.

As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (i.e., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

The cumulative environmental impact assessment provided in Section 4.8.3.3 takes into account the radiation exposure to the public from all reasonably foreseeable Hanford Site activities over the 35 year timeframe. The activities considered in the cumulative impact assessment

Commentor No. 2625: Paige Knight (Cont'd)
Hanford Watch

Response to Commentor No. 2625

include future waste management activities as estimated in the Hanford Comprehensive Land Use Plan, tank waste remediation, K Basin spent nuclear fuel management, decommissioned naval reactor plant disposal, Plutonium Finishing Plant Stabilization and the proposed NI PEIS operations at FFTF and FMEF or RPL. As shown in Table 4-173, the dose to the maximally exposed individual would be expected to remain well within regulatory limits. Based on an exposure period of 35 years, 0.21 (<1) latent cancer fatalities would be expected to occur among the local population over the 35-year period as a result of Hanford related radiation exposure.

2625-5: The commentor's concerns about the adequacy of the impact and risk assessments are noted.

The impact assessments performed for the NI PEIS are comprehensive in scope, employ state-of-the-art analytical methodologies, and are consistent with the approach taken by the Department in the preparation of numerous other environmental impact assessments. The results of the impacts associated with nuclear infrastructure actions that may be implemented are presented and discussed in Chapter 4; each of the environmental disciplines that may be affected is addressed. More detailed discussions of the impact methodology, including computer codes and other assessment techniques, are presented in Appendixes G through M. Appropriate references are given to support the presentations.

2625-6: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

2625-7: Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the

Commentor No. 2625: Paige Knight (Cont'd)
Hanford Watch

Response to Commentor No. 2625

potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost.

The May 22, 2000, correspondence from NASA to DOE identifies that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily Molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. Further, supplies of many research isotopes are not readily available from existing foreign or domestic sources, causing a number of medical research programs to be

Commentor No. 2625: Paige Knight (Cont'd)
Hanford Watch

Response to Commentor No. 2625

terminated, deferred, or seriously delayed. As such, reliance on these other sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

- 2625-8:** The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without disturbing the existing missions of these facilities.
- 2625-9:** A number of alternatives to the use of FFTF were considered in the NI PEIS. In addition to FFTF, the PEIS evaluated ATR, HFIR, commercial light water reactors, a new accelerator(s), and a new research reactor. It also evaluated a number of other irradiation facilities; however, these were dismissed from further consideration for a variety of reasons (Volume 1, Section 2.6). Among the reasons they were dismissed was the fact that they lacked sufficient neutron production capacity, were fully dedicated to existing missions, were not capable of steady-state neutron production, had insufficient power to sustain adequate steady

Commentor No. 2625: Paige Knight (Cont'd)
Hanford Watch

Response to Commentor No. 2625

state neutron production, were unable to produce a constant, reliable source of neutrons due to dependency on operating schedules of their primary missions, are under construction with capacity fully dedicated to other panned mission, or have been permanently shut down.

2625-10: See response to comment 2625-6.

Commentor No. 2626: Barbara Clark

P.O. Box 1222
Walla Walla, WA 99362
September 5, 2000

Secretary Bill Richardson
US Department of Energy
Germantown, MD 20874-1290

Dear Mr. Richardson:

RE: PU-238/FFTF EIS

I was unable to attend the August 31 public hearing held in Richland regarding plutonium production at FFTF, and hope that this letter may be considered as testimony.

I am dismayed that once again it is proposed to add more waste to the Hanford site before the contamination already here is cleaned up. The existing soil and water contamination and leaking tanks are a serious and continuing hazard to health and safety.

The recent fire on the reservation and releases of plutonium into the air demonstrated clearly that existing wastes are not adequately confined or protected from spreading. It would be irresponsible and unfair of the DOE to add further contamination until we have learned how to deal with the waste that is already here.

Nor is it ethical to divert money from cleanup into production. Cleanup has to be the first and only mission of the Hanford site until it is completely accomplished. Although some work has been done, the most critical cleanup has not even begun.

At a time when the Northwest is being threatened with breaching of dams to save salmon, it certainly makes no sense to retard cleanup of the Columbia River and even possibly increase contamination of salmon habitat. Is there no coordination of policy in this area?

We have wasted unconscionable amounts of time, money, and energy since 1987 continually re-visiting the question of new production at Hanford. It's time to stop allowing the federal government and the majority who live in this region to be jerked around by a few people in Richland who can't see beyond their own personal wants. I spoke to one scientist who wants to re-start FFTF because "it's such an elegant little reactor"; others I've discussed this with consider cleanup to be trivial and unmanly..

The Tri-Cities economy does not need new production; cleanup provides immense amounts of federal money. What Tri-Cities does need is an unequivocal and final decision from DOE that there will be no re-start of plutonium production and equally unequivocal direction to get on with the cleanup that they're being paid to do.

Very truly yours,



Barbara Clark

2626-1

2626-2

Response to Commentor No. 2626

2626-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford and protection of the Columbia River.

Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

The stated mission is not resumption of weapons production. DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

Regarding the concerns over the possible migration of contaminants to the Columbia River, the Hanford Site has a comprehensive waste minimization and pollution prevention program in place as summarized in Section 3.4.11.8 of Volume 1 that would govern any proposed site

Commentor No. 2626: Barbara Clark (Cont'd)

Response to Commentor No. 2626

activities. More specific to the alternatives evaluated in the NI PEIS, FFTF is located approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to the groundwater. Analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6 3.2.4) indicate that there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of the existing Hanford facilities in support of the stated missions. Also, no water quality impacts would be expected as a result of permanent deactivation of FFTF (Section 4.4.1.2.4).

Regarding the Hanford wildfire of 2000, the DOE Richland Operations Office, the State of Washington Department of Health, and the U.S. Environmental Protection Agency performed environmental monitoring on and around the Hanford site to assess any potential radiological impacts. The wildfire did not cause a release of radioactive materials from any Hanford facilities, but did result in the resuspension of radioactive materials which were already present in the environment. The very low levels of radioactive materials that were resuspended were only slightly above natural background levels and required several days of analysis to quantify. Information on this event has been made available to the public and can be accessed at <http://www.Hanford.gov/envmon/indes.html>. This site provides a link to information on the independent offsite air monitoring that was conducted by the U.S. Environmental Protection Agency.

2626-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, for plutonium-238 production.

Commentor No. 2627: Eric L. Platz

1524 South Sunset Drive
Tacoma, Washington 98465

August 31, 2000

William Richardson
Secretary of Energy
USDE
James Forrestal Building
1000 Independence Ave. S. W.
Washington, DC
20585

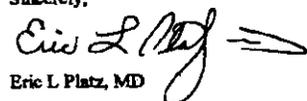
Dear Secretary Richardson,

I am writing as a member of Physicians for Social Responsibility to strongly protest the proposal to restart the Fast Flux Facility at the Hanford Nuclear Reservation. I am especially concerned that the public is being misled with bogus claims regarding a potential shortage of medical isotopes. It is my understanding that A) No such shortage exists, B) In the event of a shortage, a *clean* facility would be used for their production, and C) This issue is being used as a "Let's use Hanford to *cure cancer*" smokescreen to obscure the facts about plutonium production, the real motive for reactivation.

In addition, the Fast Flux restart issue potentially draws attention away from the mandate to clean up the entire Hanford Reservation, a *true* public health hazard.

Please put me on record as *absolutely opposed* to any plan to restart the Fast Flux Facility.

Sincerely,


Eric L. Platz, MD

Response to Commentor No. 2627

2627-1

2627-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2627-2

2627-2: DOE notes the commentor's opposition to restarting FFTF for enhancing its existing nuclear facility infrastructure. Consistent with its mandates under the Atomic Energy Act, DOE is proposing this enhancement for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio.

2627-3

DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications.

Commentor No. 2627: Eric L. Platz (Cont'd)

Response to Commentor No. 2627

These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

While some existing DOE reactors may possess the potential capability or capacity to support research isotope production, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without disturbing the existing missions of these facilities. Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions (basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short term (less than 5 years).

2627-3: DOE notes the concern of the commentor that the restart of the FFTF draws attention from the mandate to clean up the Hanford facilities. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.

Commentor No. 2627: Eric L. Platz (Cont'd)

Response to Commentor No. 2627

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2 of Appendix N, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "... ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

Commentor No. 2628: Donlee and William Deamud

1700 Fowler St.
Mount Vernon, WA 98274
September 7, 2000

Bill Richardson,
U.S. Energy Sec'y
Washington D.C.

Dear Mr. Richardson:

We can hardly believe that once again the issue of restarting a test reactor at Hanford has slithered onto the DOE table, smelling very much like pork barrel.

PLEASE! Let WA State be without more nuclear waste and let the gov't keep it's word in really cleaning up the horrific contamination of 50 years. There have been endless delays, promises, and much shifting of the blame with little progress. Now, even the glassification complex and process has been delayed to begin in 2007 with an extension to 2011, but DOE is willing to spend millions to restart the reactor.

Why doesn't the DOE and gov't officials just admit they don't know what to do with "IT" and will postpone dealing with "IT" indefinitely, that is, the tons of nuclear waste.

However, the U.S. has recently become interested in the world environment intending to help Russia clean up its nuclear sub base and save the oceans from further contamination. What other country might we volunteer to help out in this regard - maybe start bringing the waste from other countries to Hanford again as was done in the past.

So many people have been lied to regarding their health and safety in working in nuclear weapons production plants, exposure of persons to radiation releases, and from lies, servicemen have become ill from nuke tests and chemicals.

There are hazardous waste sites everywhere, fertilizers even showing up with radioactive material as well as asbestos and heavy metal products.

There are unbelievable amounts of chemical warfare canisters, stockpiled, (with some leakage), and it is not known how to safely dispose of them.

Does any of the above facts sound rational to you?

The U.S. needs to sign the non-proliferation treaty and become a true world leader, commanding respect at home and abroad.

Sincerely,



P.S. \$50 million or more
to Russia

2628-1

2628-2

2628-1

2628-3

2628-2

2628-4

Response to Commentor No. 2628

2628-1: Restoration of the Hanford Site and waste management activities are the primary missions at Hanford.

Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e. Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement.

Implementation of the nuclear infrastructure alternatives described in Section 2.5 of Volume 1 would not impact Hanford cleanup activities. Potential health effects associated with normal operations and releases from a spectrum of accidents, including severe accidents, were evaluated for the alternatives described in Section 2.5 of Volume 1. All of the alternatives, including the restart of FFTF, are shown to pose little risk to the health and safety of the public.

2628-2: The incremental impacts associated with managing an additional 16 metric tons of heavy metal of FFTF spent nuclear fuel were evaluated in Section 4.3.1.1.14 of the NI PEIS for the restart of the FFTF. The radiological impact to the public from overall radionuclide releases from the entire FFTF complex during the last year of reactor operation was less than 0.0001 mrem/year. Additionally, the dose contribution from FFTF spent nuclear fuel management would be expected to be a small fraction of the FFTF reactor operation dose. Therefore, it would have no discernable impact on the 0.1 mrem/year dose from the existing 2133 MTHM Hanford spent nuclear fuel inventory. The currently used FFTF specific spent nuclear fuel storage system designs (i.e., facility storage vessels and dry storage casks) are the key contributors for determining that the incremental radiological and environmental impacts are small.

In addition to evaluating on-site management of the NI PEIS related FFTF spent fuel, section 4.3.1.1.14 also states that "the spent [FFTF] nuclear fuel would be packaged in acceptable containers and shipped to a geologic repository for ultimate disposal." Disposal of DOE spent nuclear fuel is within the scope of a separate EIS titled, "Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent

Commentor No. 2628: Donlee and William Deamud (Cont'd)

Response to Commentor No. 2628

Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada” (DOE/EIS-0250D, July 1999). As directed by the U.S. congress through the Nuclear Waste Policy Act, as amended, Yucca Mountain is designated, and is currently being characterized, as the candidate site for constructing a geologic repository for disposal of high-level radioactive waste and spent nuclear fuel.

2628-3: The purposes for which FFTF, and the other facilities evaluated under each of the alternatives, does not include any defense-related activities.

Current DOE safety regulations require the accurate reporting of radiological exposures. The data used to quantify offsite consequences is derived from reports (available to the public) on the normal operational releases at the facilities being evaluated (for example DOE/RL-99-41 Radiological Air Emissions Report for the Hanford Site Calendar Year 1998). These reports are generated in response to DOE requirements for radiological control. DOE Order 231.1 Environment, Safety, and Health Reporting requires an annual radiation dose summary addressing doses to workers and members of the public. DOE radiological control requirements are designed with the intent to meet the legal requirements of 10CFR 835, and there are provisions for enforcement actions should the requirements of 10CFR835 not be met. In order to meet these requirements, DOE has established the DOE Radiological Health and Safety Policy (DOE P 441.1, April 26 1996). Accuracy of radiological records is among the goals of this policy: the policy states in part “Ensure radiological measurements, analyses, worker monitoring results and estimates of public exposures are accurate and appropriately made.”

DOE notes the commentor’s concern regarding waste generation. As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE’s policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 2628: Donlee and William Deamud (Cont'd)

Response to Commentor No. 2628

The NI PEIS addresses the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed.

This NI PEIS has provided estimates of human health impacts associated with a range of reasonable alternatives for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems, including the restart of FFTF. The methodology used provides realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

2628-4: The U.S. has signed the nuclear non-proliferation treaty. The plutonium being considered for production in this EIS is plutonium-238 which is not an isotope of plutonium that is used in nuclear weapons. The production of plutonium-238 does not present a nonproliferation concern. DOE developed a separate Nuclear Infrastructure Nonproliferation Impact Assessment, published in September, 2000, that analyzed the nonproliferation impacts of the actions considered in this PEIS and found that, "There are currently no U.S. nonproliferation policies, laws, regulations or international agreements that preclude the use of any of the facilities in the manner described in the Draft NI PEIS."

*Commentor No. 2630: James R. Beaver, Mayor, City of
Kennewick*



August 31, 2000

The Honorable Bill Richardson, Secretary
U.S. Department of Energy
1000 Independence Avenue SW
Washington, D.C. 20585

RE: Fast Flux Test Facility (FFTF) Draft Environmental Impact Statement (EIS)

Dear Secretary Richardson:

The Tri-Cities offers a National Laboratory that is known throughout the world for its innovations. The Hanford Site brings to our community a highly skilled workforce that contributes greatly to the success of the Department of Energy. The restart of the FFTF for the production of isotopes for medicine, space missions and research and development projects will only add to the success of DOE and this community. I understand the Department of Energy's position for the EIS scoping hearings. Preparing an Environmental Impact Statement formally involves the public in any decision about FFTF's future. I want to address the positive effects of an expanded role for the FFTF.

Are Medical Isotopes needed? Medical isotopes are increasingly being used in research and in providing new, cost-effective, cutting-edge technologies for the diagnosis and treatment of disease, including cancer, heart disease, and arthritis. Diagnostic isotopes provide improved images of internal organs. This makes earlier detection possible and provides better data for diagnosis. The United States is importing more than ninety percent of the reactor-produced medical isotopes currently used to save a significant number of the lives of our citizens. Market projections for utilization of medical isotopes for diagnosis and treatment show our country will need new production sources to assure a domestic supply to meet the increasing demand.

Reactor Safety – The FFTF was designed, constructed, and safely operated as a state of the art reactor with world isotope production capabilities and is the newest, most sophisticated reactor in the U.S. Department of Energy's complex and as such is an irreplaceable national asset. The reactor's cooling system is inside a building that was designed and tested to meet stringent containment criteria. The reactor uses a safety system designed to automatically shutdown if there is an abnormal condition. Before FFTF began operation, the Nuclear Regulatory Commission and the advisory Committee on Reactor Safeguards performed an extensive review of the Plant design and the Final

Response to Commentor No. 2630

2630-1 2630-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

**Commentor No. 2630: James R. Beaver, Mayor, City of
Kennewick (Cont'd)**

Safety Analysis Report. Our community helped design and construct the operation of the FFTF and is very knowledgeable about the facility's track record for safe operation.

How Will Wastes Be Stored & Disposed? The current storage of contaminated waste from patients at hospitals and treatment centers has in some cases been managed poorly due to lack of proper training and facility needs. The DOE site has the capabilities and knowledge base on how to store waste associated with medical isotope research and treatment, and a final waste minimization plan will be conducted to include an analysis of all waste associated with medical isotopes.

FFTF should no longer be maintained in a stand-by mode. The citizens of our country deserve better. Our country needs the capability to provide isotopes for cancer victims. FFTF provides that solution.

Sincerely,



James R. Beaver
Mayor

2630-1
(Cont'd)

Response to Commentor No. 2630

Commentor No. 2631: Stephen Bomkamp

3944 SW 97th St.
Seattle, WA 98136
8/31/00

Secretary of Energy
U.S. Department of Energy
Washington, D.C.

Secretary Bill Richardson:

Last night I attended the hearing in Seattle on the draft Environmental Impact Statement concerning the restart of the FFTF at Hanford and found it very interesting. I heard two groups giving conflicting testimony. It boiled down to an issue of credibility. Arguing against restart was Heart of America and the Physicians for Social Responsibility and some other groups and also a number of unaffiliated individuals. Arguing for restart was a group of men who identified themselves as "private citizens, representing no one but myself", who were, apparently, nuclear industry workers from Hanford, all wearing matching T-shirts.

The Hanford engineers have a large vested interest in this issue. I do not know if they work directly for the Department of Energy or if they work for private companies who do contract work for the DOE, but, either way, they probably have high-paying jobs, milking taxpayer money from the government cash cow. And here they were, lobbying the Energy Department for an expansion of their job opportunities while claiming to be just ordinary citizens concerned by the shortage of nuclear isotopes. They were well rehearsed and well orchestrated. Each speaker had a slightly different emphasis, leading me to believe that they had worked together on their prepared statements, so that all points would be covered without much overlap and repetition. Perhaps they did not even write their own statements but were merely reading pieces of their company position. If they were truly "private citizens" acting on their own, who just happened to have picked out the same T-shirts to wear last night, they all got themselves to the meeting on their own, taking vacation time as necessary. I suspect that it is more likely that they were paid to be there and arrived together in a bus chartered by their employer. I would not be surprised if this same group of men attended the hearings in Hood River, Portland and Richland as well as in Seattle. You might check with Colette Brown to verify this.

The people opposed to the restart of FFTF were not wearing matching T-shirts and were obviously private citizens who were not being paid to be there or, if they were being paid, it was by a non-profit organization subsisting on donations from other concerned citizens and dedicated to promoting a safer

2631-1

Response to Commentor No. 2631

2631-1: It is DOE policy to encourage public input on matters of regional, national and international importance as part of its commitment to facilitate a public participation process that is open and unbiased. It is not uncommon or illegal under CEQ regulations for individuals and special interest groups, who may be for or against a particular proposed action or alternative, to attend multiple meetings including those outside their "home" area. While DOE does not pay contractors working on DOE projects or its civil service personnel to attend public hearings, it does not specifically prohibit individuals from attending as private citizens.

2631-2: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information.

The United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. However Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

Commentor No. 2631: Stephen Bomkamp (Cont'd)

world. There is not much money to be made in opposing nuclear power. I felt more inclined to believe these people.

Each group accused the other of dishonesty, but I could see and hear the Hanford engineers misrepresenting themselves.

Also at the meeting was a woman who read a letter that Senator Gorton wrote for the meeting in which he said that Heart of America was lying. Senator Gorton is often referred to as "Slippery Slade". He is notorious for sneaking controversial legislation through the Senate by attaching the legislation as riders to important appropriations bills. I do not think Senator Gorton is an honest man. When he says someone is lying, it makes me think they are telling the truth.

One of the arguments presented in favor of restarting FFTF is that medical isotopes are in critically short supply. Is this true? If it is true, why do I not know about it? I know that transplantable organs are in critically short supply. Hardly a month goes by that I do not hear about someone on a waiting list for a heart or a liver. And I have known people undergoing cancer treatment and I hear about many more people in that situation and never once have I heard about medical isotope shortages. The only time I hear about isotope shortages is when people are arguing to restart the FFTF. Is this just more deception by the nuclear industry?

Ever since the Manhattan Project, the nuclear industry has been surrounded by secrecy, obfuscation and deceit. We are constantly reassured that nuclear power is safe. And we are constantly shocked by Three Mile Island, Chernobyl, Hanford downwinders, and on and on. How are we to believe assurances of safety this time after what has gone before?

It is utter lunacy to be manufacturing substances which will be lethal for ten times longer than our civilization has existed. It is even worse to be storing these substances in un-lined pits and allowing them to leak into the groundwater and into rivers. Until safe methods of storage and disposal are devised I promise I will oppose any moves to expand the nuclear industry. Please, Secretary Richardson, if you are a sane and honorable man, do not restart the FFTF. Please, clean up the mess at Hanford as you are required by the 1995 Tri-Party Agreement and put those engineers in matching T-shirts to work developing a safe, permanent waste-disposal system.

Sincerely,
Stephen Bomkamp



2631-1
(Cont'd)

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Response to Commentor No. 2631

Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions basic energy sciences or defense. DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term (less than 5 years).

2631-3: DOE is required under the National Environmental Policy Act (NEPA) 42 U.S.C. 4321 et seq., to prepare an environmental impact statement when its actions could significantly affect the quality of the human environment. The NEPA public participation process has provided an opportunity for all interested parties, including members of the public, and local, state, and Federal officials, to independently review and comment on the Draft NI PEIS. Therefore, any interested party has the capability to examine the data, assumptions, and analytical techniques used in the assessments of the impacts of each alternative.

The analyses in the PEIS have been performed using radiological data taken from the three sites considered in the range of reasonable alternatives. This data is collected under controls instituted to meet DOE radiological control requirements which are in turn designed with the intent to meet the legal requirements of 10CFR 835, and there are provisions for enforcement actions should the requirements of 10CFR835 not be met. In order to meet these requirements, DOE has established the DOE Radiological Health and Safety Policy (DOE P 441.1, April 26, 1996). Accuracy of radiological records is among the goals of this policy: the policy states in part "Ensure radiological measurements, analyses, worker monitoring results and estimates of public exposures are accurate and appropriately made." DOE Order 231.1 Environment, Safety, and Health Reporting requires an annual radiation dose summary addressing doses to workers and members of the public. The data used to quantify offsite consequences has been derived from reports (available to the public) on the normal operational releases from operation of the facilities at Hanford, INEEL, and Oak Ridge (for example DOE/RL-99-41

Commentor No. 2631: Stephen Bomkamp (Cont'd)

Response to Commentor No. 2631

Radiological Air Emissions Report for the Hanford Site Calendar Year 1998).

- 2631-4:** The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

As discussed in Volume 1 of the NI PEIS (Section 3.4.11.2), low-level radioactive waste and mixed low-level radioactive wastes are the only types of radioactive wastes that can be disposed in a burial ground. Low level radioactive waste that would qualify for disposal by this method would have to meet stringent waste and package acceptance criteria (i.e. only short half-life radionuclide content, high integrity packaging, etc.). The Hanford Site's 200 Area's Low-Level Waste Burial Ground (i.e., trenches) are regulated by DOE under the Atomic Energy Act of 1954, as amended, and under DOE Order 435.1, Radioactive Waste Management.

The 200 Area's Low-Level Burial Ground also contain the following three active permitted mixed waste trenches whereby mixed low-level waste is both stored and disposed of: (1) Trench 31 is a permitted, lined Subtitle C disposal trench that is currently utilized for greater than 90-day storage of mixed low-level radioactive waste; (2) Trench 34 is permitted, lined Subtitle C disposal trench currently utilized for the disposal of mixed low-level radioactive waste that has been treated and is compliant with Land Disposal restrictions; and (3) Trench 94 is a permitted, unlined disposal trench utilized for the disposal of decommissioned naval reactor components. Use of Trench 94 for naval reactor compartments is authorized under a special exemption from the State of Washington Department of Ecology (Ecology). Currently, the Low-Level Burial Ground has a Part A Permit approved by Ecology under the State of Washington Dangerous Waste Regulations, State of Washington Administrative Code (WAC) 173-303, and, as such, is an interim status treatment, storage, and disposal (TSD) unit under the Resource

Commentor No. 2631: Stephen Bomkamp (Cont'd)

Response to Commentor No. 2631

Conservation and Recovery Act (RCRA). The permitted active and future mixed waste units of the Low-Level Burial Ground meet all regulatory requirements of WAC 173-303 and RCRA and will be incorporated into the Hanford Site RCRA Facility Part B Permit and will operate under final status regulations. In early June 2000, a working draft of the Hanford Site RCRA Facility Part B Permit application was submitted to Ecology.

- 2631-5:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 2631-6:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.

Commentor No. 2632: T. James Bigham

**T. James Bigham
6125 Rowena River Rd.
The Dalles, OR. 97058**

Secretary of Energy
U.S. Department of Energy
1000 Independence Ave.
Washington D.C. 20585

9-5-2000

Dear Mr. Richardson;

Are you listening? Do you have trouble understanding? I am opposed to the restart of the FFTF reactor for any reason. I ask you to stop this study process! If you proceed, I request you include the following in your environmental impact statement on this issue:

1. Demonstrate a compelling need for any new missions recommended, with full consideration of alternative means of meeting those needs.

2. Characterize all existing contaminant sources at Hanford and all other sites before adding additional waste. Analyze all potential new waste streams and their cumulative impact to the environment at all sites.

3. Do a cost benefit analysis for all alternatives, including total life cycle costs, waste treatment and disposal costs. Examples - Linear accelerator vs FFTF.

4. Analyze the cost to the current clean-up budget for both maintenance and possible restart. Accurate and verifiable startup figures must be calculated and included.

5. Include any other companion facilities and their costs, waste streams and potential impacts to the environment, including reprocessing.

6. Analyze all transportation costs and risks, including public safety and any counter terrorist actions that may be needed.

7. Allow for independent nuclear safety oversight of FFTF restart and operation if restart is recommended.

8. Analyze all impacts from additional spent fuel storage.

9. Disclose all safety and environmental risks associated with FFTF restart based on a new safety analysis.

In addition, there needs to be another alternative #5 that deactivates FFTF without new production missions.

Response to Commentor No. 2632

2632-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF. It should be noted that Alternative 5 as presented in the NI PEIS does not include any new missions.

2632-2: Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. The NI PEIS evaluates the environmental impacts of a range of reasonable alternatives for accomplishing this mission. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

2632-3: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., DOE's Richland Operations Office, U.S. Environmental Protection Agency, and the State of Washington Department of Ecology). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The current inventory of wastes managed at the Hanford Site are identified in Section 3.4.11.1 of Volume 1. In addition, the generation rates of wastes associated with the NI PEIS options that use Hanford facilities are compared with the current waste generation rates at the site in Section 4.3 of Volume 1. As stated in Sections 4.3.1.1.13, 4.3.3.1.13, and 4.4.3.1.13, the generation rates of wastes at Hanford associated with the options that utilize either FFTF, FMEF and or RPL/306-E would be much smaller than the current waste

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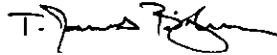
2632-10

Commentor No. 2632: T. James Bigham (Cont'd)

I sent you the following some time ago. Perhaps you would do me the service of reading it. How many more do you suppose I will send before I decide that the department of energy of the United States does not serve me and does not work for me. That the department is not my servant but a monolithic juggernaut that caters to the interests of corporations while it ignores the citizens.

Please do the right thing- no ftf-complete clean-up now.

Sincerely,



T. James Bigham

Secretary of Energy
U.S. Department of Energy
1000 Independence Ave.
Washington D.C. 20585

1-24-99

Dear Mr. Richardson;

My family and I live in a house we have built on the banks of the Columbia River. We recognize the rarity of the natural beauty of this part of our land and do what we can to be responsible stewards of the Columbia and its environment. We have lived here for ten years and have sadly witnessed other Secretaries of the DOE backslide, prevaricate, or in the best of cases, stand idle while promised efforts to deal seriously with the environmental crisis of the Hanford area slip way unmet and unfulfilled.

The problems at Hanford are not being addressed in any meaningful way. The Department of Energy has not made a good faith effort to clean up the disgusting and lethal mess it has made. USDOE has constantly resisted acknowledging the seriousness of this problem and has resisted accepting responsibility for getting on with the clean-up.

Now you have announced that you have ordered an environmental impact study of restarting the FTF. Does your job have anything at all to

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2632-12

Response to Commentor No. 2632

generation rates at the site. These volumes would also be small in comparison to the existing inventory at the site (Section 3.4.11.1, Volume 1). These comparisons were also made for the other options which involved INEEL and ORR facilities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

2632-4: NEPA does not require that cost-benefit analyses be provided in an EIS, and none have been provided in this Final NI PEIS. The estimated costs of the range of reasonable alternatives are presented in the Cost Report, summarized in Appendix P of the Final NI PEIS. However, the Cost Report is not a cost-benefit analysis. While it is reasonable to believe that the benefits of medical isotopes are substantial, the purpose of this NI PEIS is to describe the nuclear infrastructure missions (Section 1.2 of Volume 1), a range of reasonable alternatives for satisfying the mission requirements (Section 2.5 of Volume 1), and the environmental impacts that would result from implementation of the alternatives. According to 40 CFR Section 1502.23, if a cost-benefit analysis exists, it must be reported and summarized in the NI PEIS.

2632-5: Companion (to FTF) facilities at Hanford that have the potential to provide nuclear infrastructure support activities are FMEF and RPL Building 306-E. FMEF could support plutonium-238 and medical industrial production and nuclear research and development (Volume 1, Section 2.3.2.3 of the NI PEIS); RPL/Building 306-E could support medical/industrial isotope production and nuclear research and production (Volume 1, Section 2.3.2.4). FMEF is assessed in the NI PEIS for possible use in each alternative except Alternative 5, "Shutdown FTF." RPL/Building 306-E is assessed for possible use only in Alternative 1, "Restart FTF."

Potential impacts to the environment associated with FMEF and RPL Building 306-E operations are addressed in Chapter 4 of the NI PEIS. Consequences are shown to be small during normal operations; risks associated with postulated accidents are also shown to be small. Specific to waste streams, there would be no discharges to the Columbia River and no radioactive or hazardous discharges to groundwater; impacts to groundwater or surface water quality would not be discernible.

Commentor No. 2632: T. James Bigham (Cont'd)

do with the development and exercise of responsible energy policy?. Do you care that DOE has not lived up to its promise to clean up the Hanford site? Are you aware that DOE's request to relax the standards for cleanup violate state and federal standards and endanger the lives and the health of citizens, especially children, who live in this area? Do you understand that FFTF will generate more liquid high level radioactive waste, the very problem USDOE has thus far done so little to deal with?

I want to believe in my government. I want to believe in its laws and the administration of justice. I need you to now demonstrate that this government seeks to safeguard its citizens and act in the long term best interests of its people. In the warm months of the year, my family plays in the water of the Columbia nearly every day . We should be able to do this without the danger of being affected by our government's negligence.

Please, I beg you, shut down the FFTF. Do not mothball it. Do not delay a decision. Shut it down forever and get on with the real job at hand. Clean up the Hanford site so that you would feel safe feeding fish caught there to your family.

Sincerely,

T. James Bigham

2632-12
(Cont'd)

2632-13

2632-10

2632-12

Response to Commentor No. 2632

CEQ (40 CFR 1500 et seq.) and DOE (10 CFR Part 1021) implementation regulations do not require inclusion of cost studies in an environmental impact statement. The basic purpose of the NI PEIS is to describe the alternatives under consideration for implementation (Section 2.5 of Volume 1) and the environmental impacts that would occur if these alternatives were implemented (Chapter 4 of Volume 1). Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. The associated cost report was made available to the public on August 24, 2000.

2632-6: The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS. DOE made every effort to obtain, analyze, and disclose all required information to make a decision on expanding nuclear infrastructure. The costs and nuclear nonproliferation impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. As discussed in the response immediately above, a separate cost report was made available to the public on August 24, 2000. A nonproliferation report was made available to the public in September 8, 2000. DOE mailed these documents to more than 730 interested parties. Both reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided summaries of the Cost Report and Nuclear Nonproliferation Impact Assessment in Appendixes P and Q, respectively, Final NI PEIS.

Appendix J contains a comprehensive risk analysis of all materials transported under the alternatives defined in the NI PEIS. The results of the risk analysis is shown in detail in Table J-7 and J-8, and summarized in Chapters 2 and 4 of Volume 1 and the Summary Volume for this PEIS. These results show that the risk to the public is small under all alternatives.

Sections 2.4.3 and 2.4.4 of Volume 1 provide general descriptions of DOE's systems to protect special nuclear materials from possible terrorist activities. DOE would rely on the Transportation Safeguards System for overland transportation and purpose-built ships operating in accordance with International Atomic Energy Agency guidance for the at-sea transportation.

Commentor No. 2632: T. James Bigham (Cont'd)

Response to Commentor No. 2632

2632-7: At this time, an independent safety review of the restart of FFTF is not required. The FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

In the event that FFTF restart is selected in the Record of Decision, complete safety and operational readiness reviews will be performed prior to the restart. The FFTF Safety Analysis Report is routinely reassessed and updated when required to address any changes in plant configuration due to physical modifications or changes in plant operation procedures. The operational readiness review would assess the current updated Safety Analysis Report to ensure that the analyses bound the reactor-operating envelope for the stated missions. The analyses presented in this NI PEIS reflect the proposed changes to the reactor core (including fuel and irradiation targets) to perform the stated missions.

2632-8: The discussion in the Summary and Section 4.8.3.5 of Volume 1 on the cumulative impacts for spent nuclear fuel management at Hanford was revised to clarify that the management of the existing spent nuclear fuel at Hanford results in a dose of less than 0.1 millirem per year to the maximally exposed member of the public. This dose is well within the DOE limits given in DOE Order 5400.5. As discussed in that Order, the dose limit from airborne emissions is 10 millirem per year, as required by the Clean Air Act; drinking water is 4 millirem per year, as required by the Safe Drinking Water Act; and the dose limit from all pathways combined is 100 millirem per year. DOE has committed to remove the spent nuclear fuel at Hanford for ultimate disposition in a geologic repository.

2632-9: FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. This NI PEIS has examined the risks associated with the operation of the FFTF for 35 years for the purpose of producing isotopes for medical use, research and development, and for the production of radioactive heat sources for power supply systems. Section 4.3 of Volume 1 provides the results of

Commentor No. 2632: T. James Bigham (Cont'd)

Response to Commentor No. 2632

the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. (Accident analysis is described in Appendix I and the normal operations risk analysis is described in Appendix H.) The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Additionally, in the event that FFTF restart is selected, a new Safety Analysis Report will be prepared and subjected to a thorough independent review process. The facility reanalysis as part of the Safety Analysis Report update process would ensure that the analyses bound the reactor-operating envelope for the duration of FFTF operation. The Safety Analysis Report would be routinely reassessed and updated when required to address any changes in plant configuration or changes in plant operation procedures. This continuing safety analysis updating would include analysis of changes that may occur as a result of facility aging during the 35 years of operation.

2632-10: See response to comment 2632-1.

2632-11: DOE policy encourages effective public participation in its decision making process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final PEIS, DOE has assessed and considered both oral and written comments received on the Draft PEIS during the public comment period and has responded to these comments in the Final PEIS. Volume 3 of the NI PEIS contains public comments received on the NI PEIS and DOE responses to those comments. These comments are summarized, tabulated, and cross-referenced by commentor, category, and method of submission. A summary discussion is also provided of the overall prevailing issues raised during the public comment period.

2632-12: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE

Commentor No. 2632: T. James Bigham (Cont'd)

Response to Commentor No. 2632

The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement.

A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Public meetings were held on this formal milestone change. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.

DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "... ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

Implementation of the alternatives described in Section 2.5 of Volume 1 would not relax the standards for cleanup or violate laws or regulations. Potential health effects associated with normal operations and releases from a spectrum of accidents, including severe accidents, were evaluated for the alternatives described in Section 2.5 of Volume 1. All of the alternatives, including the restart of FFTF, are shown to pose little risk to the health and safety of the public.

2632-13: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (i.e. solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. High-level radioactive waste would not be generated from merely operating FFTF. It is DOE's policy

Commentor No. 2632: T. James Bigham (Cont'd)

Response to Commentor No. 2632

that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The use of proposed alternative facilities associated with processing of neptunium-237 targets would have no impact on schedules or available funding for high-level radioactive waste programs at Hanford. The higher activity waste would be treated as a solid form via a stand-alone vitrification system, separate from any tank waste treatment system. Therefore, the existing Hanford high-level radioactive waste facilities would not be used, and as analyzed in the PEIS, no existing or planned high-level radioactive waste facilities would be used to treat the wastes resulting from processing the irradiated targets.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

Commentor No. 2633: Bob Anderson
Benton County Democratic Central Committee

Bob Anderson, Chairman
 Benton County Democratic Central Committee
 1108 W. 14th Avenue
 Kennewick, WA 99337
 (509) 586-8056

August 31, 2000

The Honorable William Richardson
 Secretary of the United States Department Of Energy
 1000 Independence Avenue SW
 Washington, D.C. 20585

Dear Secretary Richardson:

The Benton County Democratic Central Committee (BCDCC) met on October 20, 1999 and passed the attached resolution in support of restarting the Fast Flux Test Facility (FFTF) at Hanford.

On April 22, 2000 the Benton County Democratic Party adopted a platform, which states:

"Cancer is the second leading cause of death in this country, with 600,000 cancer victims dying annually. The American public cannot accept current expensive and agonizing traditional treatments with their devastating side effects. Chemotherapy and radiation use a buckshot approach which frequently causes nausea, hair loss, bone weakness, lymph edema, burned and blistering skin, chronic coughing, and increased susceptibility to shingles. These old-fashioned treatments are effective for 40 percent of the patients and cost \$105 billion annually. It is unconscionable not to devote all efforts to starting production of medical isotopes at the Fast Flux Test Facility (FFTF).

Good results with kinder and gentler treatment of cancer using medical isotopes have been achieved at the University of Washington Fred Hutchinson Cancer Treatment Center in Seattle. Outstanding success has been achieved in treating blood cancers, such as non-Hodgkin's lymphoma. Prostate cancer can be treated on an outpatient basis using medical isotope seeds instead of expensive surgery and hospitalization.

If these and additional new developments in cancer treatment are to be available to every American citizen in the future, we will need the production capability of FFTF to provide the quantity and quality needed of several different and new medical isotopes. The American public should not have to depend on medical isotopes produced in Canada, Russia, and South Africa when we have a facility right in our own back yard (Richland, Washington) which is not being adequately funded because of political manipulations and delays.

Response to Commentor No. 2633

2633-1

2633-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Commentor No. 2633: Bob Anderson (Cont'd)
Benton County Democratic Central Committee

Continued operation of FFTF has widespread support among scientists, educators, informed physicians, cancer survivors, and knowledgeable grass roots organizations because medical isotopes, which can be produced at FFTF, are an effective way of treating several kinds of cancer.”

The Nuclear Infrastructure Draft Programmatic Environmental Impact Statement released on July 21, 2000 has reinforced our belief for the need to restart FFTF.

As Chairman and spokesman for the Benton County Democratic Central Committee I ask that restart of FFTF be ordered.

Sincerely,



Bob Anderson, Chairman
Benton County Democratic Central Committee

2633-1
(Cont'd)

Response to Commentor No. 2633

Attachment: Resolution in Support of Restarting FFTF adopted October 20, 1999

Commentor No. 2633: Bob Anderson (Cont'd)
Benton County Democratic Central Committee

**Resolution In Support of
 Restarting the Fast Flux Test Facility
 at Hanford ¹**

WHEREAS, medical isotopes are increasingly being used in research and in providing new, cost-effective, cutting-edge technologies for the diagnosis and treatment of disease, including cancer, heart disease, and arthritis; and

WHEREAS, the United States is importing more than ninety percent of the reactor-produced medical isotopes currently used to save a significant number of the lives of our citizens; and

WHEREAS, market projections for utilization of medical isotopes for diagnosis and treatment show our country will need new production sources to assure a domestic supply to meet the increasing demand; and

WHEREAS, the Hanford Fast Flux Test Facility (FFTF) has unique capabilities for providing large quantities and a wide variety of high quality medical isotopes; and

WHEREAS, the FFTF was designed, constructed, and safely operated as a state of the art reactor with world class isotope production capabilities and is the newest, most sophisticated reactor in the U .S. Department of Energy complex and as such is an irreplaceable national asset; and

WHEREAS, the FFTF is presently being maintained in a stand-by mode;

NOW, THEREFORE BE IT RESOLVED, the Benton County Democratic Central Committee hereby encourage U.S. Department of Energy Secretary William Richardson to order the restarting of the FFTF.

¹ Adopted by Benton County Democratic Central Committee on October 20, 1999

Response to Commentor No. 2633

Commentor No. 2634: Robert O. Olson, Sr.

ROBERT O. OLSON, MD, FACOG
1478 E. KELLY RD. BELLINGHAM, WA. 98228
PHONE:(360)398-7153 FAX:(360)398-8094
email:drbobolson@aol.com
29 August 2000

Secretary of Energy William Richardson
US Department of Energy
James Forrestal Building
1000 Independence Avenue, SW
Washington, DC 20585

Dear Mr. Richardson:

I am writing as a Physician and Public Health advocate to urge you to not fund restarting of the Fast Flux Test Facility at Hanford Washington. Studies clearly show that this technology is not necessary for medical isotope purposes.. This facility needs all funding to be directed toward cleaning up that facility. Cleaning the facility would create far more jobs for the area and would finally stop the pollution to the air, soil, and ground water.

From a Medical standpoint, further testing and development for nuclear weapons or medical Isotopes will serve no worthwhile purpose and will just further contaminate the Hanford area. This is totally unacceptable. Please review testimony of groups supporting no further funding and I trust you will come to the right decision on this matter.

I shall be looking forward to your reply and thank you for your consideration.

Sincerely,



Robert O. Olson, Sr., MD

Response to Commentor No. 2634

- 2634-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.
- 2634-2: The only missions being considered by DOE are those analyzed in the NI PEIS, which are the production of isotopes for medical, research, and industrial uses; plutonium production for future NASA space exploration missions; and U.S. nuclear research and development needs for civilian application. None of the alternatives in the NI PEIS include defense missions and would not contribute to future weapons testing and development.
- DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.
- 2634-3: The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Commentor No. 2634: Robert O. Olson, Sr. (Cont'd)

Response to Commentor No. 2634

Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.

Socioeconomic impacts of the alternatives are discussed throughout Chapter 4 of Volume 1. The analysis shows that none of the alternatives would significantly impact direct and indirect jobs in the potentially affected areas.

Commentor No. 2635: Spencer Marston

Response to Commentor No. 2635

Draft PEIS Comment Form

I SUPPORT THE SELECTION OF FFTF AS THE PREFERRED ALTERNATIVE TO MEET THE PRESSING UNITED STATES NEEDS FOR RESEARCH AND MEDICAL ISOTOPES.

2635-1

2635-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

There are several ways to provide comments on the Nuclear Infrastructure PEIS. These include:

- attending public meetings and giving your comments directly to DOE officials
returning this comment form to the registration desk at the meeting or to the address below
calling toll-free and leaving your comments: 1-877-562-4593
faxing your comments toll-free to: 1-877-562-4592
commenting via e-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov

Name (optional): Spencer Marston

Organization:

Home/Organization Address (circle one):

City: Clifton Hts State: PA Zip Code: 19018

Telephone (optional):

E-mail (optional):

COMMENTS MUST BE POSTMARKED BY September 11, 2000

For more information contact: Colette E. Brown, NE-50
U.S. Department of Energy • 19903 Germantown Road • Germantown, MD 20874
Toll-free Telephone: 1-877-562-4593 • Toll-free Fax: 1-877-562-4592
E-mail: Nuclear.Infrastructure-PEIS@hq.doe.gov



NUCLEAR INFRASTRUCTURE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT



Commentor No. 2636: Tom Clements
Nuclear Control Institute

From: Tom Clements [mailto:clements@nci.org]
 Sent: Thursday, September 28, 2000 2:41 PM
 To: INFRASTRUCTURE_PEIS, NUCLEAR
 Cc: Brown, Colette
 Subject: for NI PEIS

To Whom it Concerns:

The following facility which is discussed in a LANL news lease MUST be considered as part of DOE's NI PEIS. Exclusion of this facility and isotope production at Brookhaven National Laboratory in the final PEIS will taint the NEPA process.

Mention of isotopes in the news release underscores the need for the NI PEIS to present a list of all isotopes currently used and projected for use and which facilities currently produce them and which facilities could produce them in the future. All U.S. potential and actual production facilities must be included, not just FFTF, HFIR, and ATR.

Tom Clements

Nuclear Control Institute

New facility will ensure steady supply of medical isotopes
 Los Alamos National Laboratory

News Release

September 11, 2000

LOS ALAMOS, N.M., Sept. 11, 2000 __ To ensure that U.S. researchers have a steady supply of medical isotopes, the U.S. Department of Energy's Los Alamos National Laboratory is building a new Isotope Production Facility to replace an existing facility. Construction of the \$16.5 million IPF began in February, and the project should be completed in June 2002.

Once operational, the IPF will support eight months of isotope production annually. Combining its output with similar isotope production capabilities at

2636-1

Response to Commentor No. 2636

2636-1: DOE notes the commentor's views. The Isotope Production Facility (IPF) at Los Alamos National Laboratory produces radioisotopes using the Los Alamos Neutron Science Center's (LANSCE) half-mile accelerator that delivers medium-energy protons. Among other isotopes, the IPF's three major products include germanium-68, strontium-82, and sodium-22. As a result of changing DOE missions, the production of radioisotopes at target area "A" of the LANSCE has been rendered inoperable. In order to replace the level of production lost due to this change, DOE is completing a new and more efficient IPF that would allow DOE to continue to produce most of these same isotopes in an effort to meet existing demand. As addressed in Section 2.6.1 of the NI PEIS, IPF at LANSCE was considered but dismissed from further evaluation because, although it can be used in tandem with the Brookhaven Linac Isotope Producer (BLIP) located at the Brookhaven National Laboratory to supply near-term isotope requirements, it is unlikely that these facilities could accomplish reliable, increased isotope production at the level needed to support projected needs.

In 1998, an Expert Panel convened to forecast future demand for medical isotopes estimated that the expected growth rate of medical isotope use during the next 20 years will range between 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These growth projections were adopted by DOE as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. As addressed in Section 2.6.1 of the NI PEIS, IPF at LANSCE was considered but dismissed from further evaluation because, although it can be used in tandem with the Brookhaven Linac Isotope Producer (BLIP) located at the Brookhaven National Laboratory to supply near term isotope requirements, it is unlikely that these facilities could accomplish reliable, increased isotope production at the level needed to support projected needs.

For the purposes of analyses in the NI PEIS, a representative set of isotopes was selected on the basis of the recommendations of the Expert Panel, medical market forecasts, reviews of medical literature, and more than 100 types of ongoing clinical trials that use radioisotopes for the treatment of cancer and other diseases. These isotopes, which are

Commentor No. 2636: Tom Clement (Cont'd)
Nuclear Control Institute

Brookhaven National Laboratory in New York will ensure doctors and researchers an adequate, year-round supply of accelerator-produced medical isotopes.

U.S. researchers use medical isotopes to perform 36,000 diagnostic procedures daily and 50,000 therapies annually, along with 100 million lab tests annually. DOE's Office of Isotopes for Medicine and Sciences estimates the annual value of these procedures to the medical industry at between \$7 billion and \$10 billion.

Los Alamos' Neutron Science Center Division and Chemistry Division have produced some of these medical isotopes, such as Strontium-82 and Germanium-68, at Technical Area 53 for more than 20 years under DOE's Isotope Production and Distribution Program, said Carol Burns, deputy director for C Division.

"The program is an essential element of the nation's overall health-care system, and Los Alamos' ability to deliver key medical isotopes to customers is a critical part of the DOE program," she added.

Researchers use radioisotopes in clinical trials; to diagnose and treat diseases such as cancer, epilepsy and coronary artery disease; to perform research and development of new pharmaceuticals; and in other medical research and treatment applications. Millions of patients would be adversely affected if medical isotopes weren't available.

In the past, targets were irradiated with LANSCE's half-mile-long linear accelerator, then shipped to a Chemistry Division facility at Technical Area 48 for processing. Los Alamos processes irradiated targets obtained from other sources worldwide as well.

Needed upgrades to LANSCE's facility and accelerator eventually will make it impossible for Los Alamos to continue using the current isotope production facility. To avoid interruption of the nation's medical isotope supply and continue serving this important mission, DOE's Office of Nuclear Energy funded construction of the new Isotope Production Facility.

Response to Commentor No. 2636

comprised of both reactor- and accelerator- produced isotopes, are listed in Chapter 1, Volume 1 of the NI PEIS along with a brief description of their medical and/or industrial applications. These include research isotopes with currently limited availability, such as Copper-67, as well as commercial isotopes whose current application is inhibited by lack of availability or high cost, such as Palladium-103. However, the absence of any specific isotope from these tables should not be interpreted to mean that it could not be considered for production under the proposed action. DOE expects that the actual isotopes and specific amounts produced as a result of the proposed action would vary from year to year in response to the focus of clinical research and the specific market needs occurring at that time.

Commentor No. 2636: Tom Clement (Cont'd)
Nuclear Control Institute

The new facility, also located at TA_53, will irradiate a wide range of materials underground, including rubidium chloride, gallium and other targets, using a portion of the LANSCE proton beam. The irradiated targets will be raised to ground level via a specially designed transport system and placed in certified shipping containers. Los Alamos then will ship the targets to TA_48 for isotope processing and recovery via chemical processes.

The new building is a collaborative effort among Los Alamos, Michael S. Rich Contractors, Inc., J.B. Henderson Construction Co. and Merrick and Company. Los Alamos' Design Engineering Group and Accelerator Maintenance and Development Group designed the special beam line and target handling equipment for the IPF, in collaboration with experts inside and outside the Laboratory.

Richard Heaton of Los Alamos' Nuclear and Radiochemistry Group is the IPF project manager, and Armando Cordova of Los Alamos' Project Management Division is the engineering and construction project leader.

{<http://www.lanl.gov>} Los Alamos National Laboratory is operated by the University of California for the U.S. Department of Energy.

{<http://ext.lanl.gov/worldview/news/releases/lansce.shtml>} More news releases </underline> <color> <param>0100,0100,0100</param> from the Los Alamos Neutron Science Center (LANSCE)

<http://www.lanl.gov/worldview/news/releases/>} News releases

<http://www.lanl.gov/orgs/pa/>} Public

Response to Commentor No. 2636

**Commentor No. 3462: Edward Deutsch
University of Missouri Research Reactor**

Page 1 of 3

Crockett, Tamara R.

From: Edward Deutsch [eddeutsch@earthlink.net]
Sent: Monday, September 18, 2000 8:59 PM
To: www.Nuclear.Infrastructure-PEIS@hq.doe.gov
Cc: Butler, Ralph; Tamara Crockett; Crockett, Tamara R.
Subject: FFTF Statement

STATEMENT

Dr. Edward Deutsch

Director

University of Missouri Research Reactor

Columbia, Missouri

September 18, 2000

I am pleased to present the following statement regarding the programmatic environmental impact statement for the Fast Flux Test Facility. To provide context for my comments, I will first briefly describe my own background. I have extensive experience in the research, development and clinical use of medical isotopes. Prior to joining MURR as Director in 1997, I spent nearly nine years in the nuclear medicine and isotope industry as a Vice President for Research at a major U.S. radiopharmaceutical company. Prior to that, I spent more than twenty years in academic institutions where I and my students conducted research on isotopes of medical benefit. I personally know very well the medical isotope marketplace, including how isotopes are used for both diagnosing and treating human diseases.

9/19/00

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REACTOR FRONT OFFICE

SEP-19-2000 10:31

Response to Commentor No. 3462

3462-1: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

The United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. Although other manufacturers produce medical isotopes, DOE remains the key provider for a large number of isotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially experimental, these isotopes are not generally purchased in large-enough quantities to make their production financially attractive to private industry. However, supplies of many research isotopes are not readily available from existing domestic or foreign sources, causing a number of medical research programs to be terminated, deferred, or seriously delayed. Under the NI PEIS proposed action and consistent with its mandates under the Atomic Energy Act, DOE would enhance its existing nuclear facility infrastructure to, among other things, more effectively support production of radioisotopes for medical applications and research. DOE's intent is to complement commercial sector capabilities to ensure that a reliable supply of isotopes is available in the U.S. to meet future demand, and to encourage the commercial sector to privatize the production of isotopes that have established applications to a level that would support commercial ventures.

Commentor No. 3462: Edward Deutsch (Cont'd)
University of Missouri Research Reactor

Page 2 of 3

What I do not know, and do not believe anybody to know, is the future of the isotope industry. Prior to the advent of financial reimbursement for positron emission tomography (PET), for example, PET appeared destined to remain a research tool to be used only in the most advanced medical schools. Now, with reimbursement, it is rapidly becoming the tool of choice for diagnosing cancer in community hospitals around the nation. Similarly, several market studies, including one by Frost and Sullivan, forecast a boom in the use of radiopharmaceuticals for cancer therapy and other medical applications. Although some strides have been made in this area, including advances at my own institution, these advances have not had as great an economic or clinical benefit as hoped. The market demand for radioisotopes has simply not met the expectations of some of these studies. I am very skeptical, therefore, of market studies that promise a several hundred percent increase in future isotope sales. I am especially skeptical when these studies are used to justify investments of tens of millions of dollars in infrastructure aimed at isotope production and processing.

From the perspective of an organization that sells in isotopes to both academic and commercial customers, I do not foresee a huge near- or mid-term surge in demand for isotope production and processing for biomedical applications. Furthermore, there already exists substantial domestic capacity to meet any rationally foreseen demand. A relatively small federal investment into existing facilities, rather than a multi-million dollar capital investment, could much better serve the needs of domestic isotope customers.

My own organization, the University of Missouri's Research Reactor (MURR), for example, is a major player in both domestic and international isotope markets. MURR makes approximately 2,000 radioisotope shipments annually and thereby reaps several millions of dollars in sales each year. We supply the bulk of the world's phosphorus-32 and we are developing, either alone or in collaboration with private companies, new cancer therapeutics based on radiopharmaceuticals. MURR has three FDA-approved radiopharmaceuticals currently in the marketplace, and several in development. MURR's entire budget, however, is less than \$10 million annually, of which it receives very little support from the federal sector. MURR could do much more with small infusions of federal resources.

Despite its successes, however, either the marketplace or politics have kept private companies and the federal government from investing in MURR's infrastructure. My bottom line is: if MURR will not be able to make the next large leap in radiopharmaceutical production, processing, and distribution, then federal facilities, in the absence of significant subsidies, also will not be able to make such a jump. This is especially true given that MURR's overhead costs are a fraction of those at federal facilities, and our operating schedule is an enviable 6.5 days per week each and every week of the year.

MURR has safely produced and distributed radioisotopes nationally and internationally for over 30 years. From 1968 to 1983, MURR was a major supplier of technetium-99 for Mallinckrodt, Inc. and Medi-Physics, Inc. when this radioisotope was produced by neutron irradiation of molybdenum. MURR radioisotope production escalated in 1974 when the reactor was upgraded to 10MW. Because of demand for more continuous research capability and radioisotopes supply, the reactor went to an operating schedule of 155 hours/week in 1978. Since that time the reactor has operated at full power over 90% of all clock hours and greater than 100% of scheduled hours.

In addition, MURR is an integral part of the University of Missouri's medical R&D, health care delivery, and science and technology education programs. MURR is a multidisciplinary research center that serves the School of Medicine, College of Veterinary Medicine, College of Agriculture,

3462-1

3462-2

3462-3

Response to Commentor No. 3462

Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions (basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term (less than 5 years). Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

3462-2: DOE acknowledges that while some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the "NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000," it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without disturbing the existing missions of these facilities. As described in Table 2-4 of Volume 1 of the NI PEIS, the research reactor at the University of Missouri lacks sufficient neutron production capacity to support the proposed action without impacting existing missions.

3462-3: DOE notes the commentor's views and the University of Missouri Research Reactor's (MURR's) contributions to domestic isotope production. As described in Volume 1, Section 2.6 of the NI PEIS, DOE considered the use of MURR for supporting the proposed action, but subsequently dismissed it from further consideration. This was based on DOE's understanding that MURR could not likely accomplish reliable, increased production of isotopes at levels necessary to support projected needs without disturbing the existing missions of the facility.

Commentor No. 3462: Edward Deutsch (Cont'd)
University of Missouri Research Reactor

00/6/16 P.24

Page 3 of 3

College of Engineering, and the College of Arts and Science.

Specific to this statement, MURR is instrumental in: 1) developing and producing isotopes for use in cancer research and treatment; 2) developing and producing isotopes for cardiovascular research; and 3) providing a stable supply of radio- and stable-isotopes for biomedical applications. In addition, MURR is active in the commercialization of University technology *via* the creation of public-private partnerships.

MURR is the largest, most powerful university research reactor in the nation. It has an extremely consistent operations record that has provided unparalleled access for national and international researchers. Preparations are underway for renewal of the facility's Nuclear Regulatory Commission operating license. In addition, MURR is in the planning stages for a \$20 million building expansion aimed at providing state-of-the-art biomedical research laboratories. If managed to meet its full potential, MURR could amply provide unique resources and services aimed at radiopharmaceutical research, production and processing.

MURR is exploring collaborative partnerships with several DOE national laboratories in areas of mutual benefit. Coordinating MURR's research reactor capabilities, for example, with Los Alamos National Laboratory's accelerator-produced isotopes program seems to offer obvious benefits. Prior to making substantial, multi-year programmatic commitments, I urge that the Department of Energy consider fully all existing domestic isotope production and processing resources, such as MURR, and potential relationships that would obviate the need for substantial investment of federal resources in facilities such as FFTF.

Thank you.

3462-3
(Cont'd)

Response to Commentor No. 3462

Commentor No. 231: Form Letter A Columbia Riverkeeper

This Hearing is to comment on the draft Environmental Impact Statement on FFTF Restart. Tell USDOE :

- Your **compilations of prior public comment are seriously lacking** and show your failure to listen to the public. You fail to give any numerical breakdown for the 7000 comments received. You only say “Many of the commentors who attended the meetings in Seattle, Portland and Hood River were strongly opposed to the restart of FFTF.” Then you go on to say “Most of the comments received at the Richland meeting were in support of restart.” You need to state the numbers on these comments so Sec. Richardson is clear on where the people of the Northwest stand. You put the numbers in when it is to your advantage and leave them out when they are opposed. You also failed to mention the 5 City Council Resolutions opposing FFTF restart which means you have representatives of entire cities opposing it and their numbers should be included.
- You’ve **failed to demonstrate a compelling need** for the production of 1) plutonium for space, 2) medical or research isotopes or 3) nuclear energy research. Neither is there adequate justification for the **need to produce all of them at one site**. Neither is there justification for the **need to produce them domestically** (other than reference to some DOE policy) which makes no sense when we would continue to buy foreign nuclear fuel to run FFTF.
- You must include the recommendations of your own blue ribbon panel (**Subcommittee for Isotope Research and Production Planning**) that advised **against the use of FFTF for medical isotope production**. Furthermore, EIS Isotope demand projections are outdated and inadequate. They also fail to take into account possible cancer cures like gene therapy that could make medical isotopes unnecessary. In addition, medical isotopes can be adequately produced at other DOE sites if they are a high priority as implied. Current isotope production levels for DOE reactors are misstated in the EIS at near capacity when most are only at around 50%.
- You must **include the current demand estimates from NASA for Plutonium 238** which are considerably lower than your need projections and could easily be met under the current contract with Russia. A discussion of alternatives to plutonium fuel must be included. A renegotiated contract with Russia (at double the current cost) could meet future NASA needs at 1/3 the cost of FFTF restart.
- It is **improper to release the draft EIS for public comment without the critical information** requested by the public in the scoping meetings including:
 - cost analysis of restart and all alternatives with reasonable review time (FFTF will be much more expensive than reasonable alternatives by at least \$2 Billion.)
 - studies on treatment of wastes at all proposed sites and
 - nonproliferation impacts from FFTF and the importation of its necessary radioactive fuel from Europe. (**Violation of the Nonproliferation Agreement by use of Highly Enriched Uranium fuel alone is reason enough to stop restart of FFTF!**)
- You have **failed to adequately characterize environmental impacts from FFTF restart**. An example is the statement, “Environmental impacts associated with the existing inventory of spent fuel at Hanford site are minimal.” To imply that the existing spent nuclear fuel inventory poses no problems is massively incorrect. More than 2100 tons of corroding spent fuel sites in aging water-

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Response to Commentor No. 231

- 231-1:** While all comments received during the scoping periods for both the Plutonium-238 Production EIS and the NI PEIS are part of the Administrative Record for the NI PEIS, Section 1.4 of Volume 1 and Appendix N are intended to provide a summary of the issues and associated trends identified during the scoping process rather than a tabulation of comments by specific issue. It should be noted, however, that NEPA and CEQ regulations do not require an agency to include and respond to each scoping comment as is required for public comments on a Draft EIS. In preparing the NI PEIS, DOE carefully considered scoping comments received from the public. Any perceived discrepancy in the grouping of comments raising any one particular issue or set of issues is attributable to the manner in which they were originally categorized and counted. For example, a number of statements, letters, or resolutions signed by multiple persons, such as city council resolutions mentioned by the commentor, were received by DOE (both for and against FFTF restart) in response to the request for scoping comments. Each such comment document was considered and counted as a single comment in the NI PEIS comment tracking system. The Office of Nuclear Energy, Science and Technology works closely with the Office of the Secretary to keep him informed of the progress on the NI PEIS, including stakeholder input.

For information purposes, approximately 6,900 submittals (written and oral related to the NI PEIS were received by DOE. Of all the comments received by DOE that were specific to FFTF restart, 68 percent were opposed to restarting FFTF and 32 percent were in favor.

At the NI PEIS scoping meetings held in Seattle, Portland, and Hood River, 172 people commented; 77 percent were opposed to restarting FFTF (14 percent were in favor and 9 percent did not express an opinion). At the NI PEIS scoping meeting in Richland, 49 people commented; 16 percent were opposed to FFTF restart (80 percent were in favor and 4 percent did not express an opinion). However, of all the comments received at the scoping meetings, 80 percent of the stakeholders were opposed to restarting FFTF (16 percent were in favor and 3 percent did not express an opinion).

- 231-2:** As discussed in Section 1.1 of Volume 1, consistent with its mandates under the Atomic Energy Act, DOE is proposing this enhancement for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and

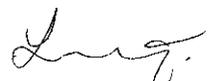
Commentor No. 231: Form Letter A (Cont'd)
Columbia Riverkeeper

filled basins near the Columbia River posing one of the largest problems for cleanup and an expected cost of more than \$1.6 billion. You must address all impacts on waste management and the environment at Hanford not dismiss them with erroneous statements.

- You must **include the cost of FFTF and all companion facilities decontamination and decommissioning in the restart** not just every other alternative. All facilities used in all other alternatives must show the cost of decontamination and decommissioning as well.
- You have **failed to assess all existing contaminant sources at Hanford** and all other sites before adding additional waste. You must assess current waste inventories and then assess the addition of any new waste to existing waste sources.
- You fail to adequately consider use of the Advanced Test Reactor (ATR) in Idaho and the High Flux Isotope Reactor (HFIR) in Oakridge for medical isotopes while acquiring Plutonium 238 from another source. You also fail to **analyze lower cost alternatives such as subsidizing university reactors or buying time from private accelerators or reactors.**
- **The No Action Alternative must include the shutdown of FFTF** not maintaining it on stand-by based on prior commitments of Secretaries O'Leary and Watkins and TPA milestones.
- You **failed to address the conflict of interest of using PNNL's evaluations** when they are a proponent of restart and stands to gain financially.
- You **fail to access the legality of introducing new programs and wastes into the highly contaminated 306 e or 325 buildings at Hanford** that would be used with FFTF.
- You must admit that the **real reasons** to restart FFTF are in a hidden agenda that includes **preserving jobs and starting new weapons research or other classified missions.**
- **The draft EIS must state the preferred alternative for adequate public review.**

USDOE should choose Alternative 5- SHUT DOWN FFTF, or Alternative 2- Produce at existing sites with shutdown of FFTF.

Name: LAURINDA SANLEWICE



Address: 11025 NW THOMPSON RD.
 PORTLAND, OR

Additional Comments:

\$ OR EARTH YOU CHOOSE.
CANCER IS CAUSED BY IGNORANCE AND IS CURED BY AWARENESS.

Sign and return to Columbia Riverkeeper or mail by Sept. 18th to: Colette Brown, NE-50, USDOE, 19901 Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.Infrastructure-PEIS@hq.doe.gov

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 (Cont'd)

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Response to Commentor No. 231

industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Section 1.2 of Volume 1 describes these needs in more detail.

There is no requirement to conduct all of these missions at one site. In the Record of Decision process, DOE could choose to combine components of several alternatives in selecting the most appropriate strategy. For example, DOE could select a low-energy accelerator to produce certain medical, research, and industrial isotopes, and an existing operating reactor to produce plutonium-238 and conduct nuclear research and development. Should FFTF be selected for restart in support of these missions, DOE expects it could utilize a 15-year supply of mixed-oxide fuel that would be available from Germany under favorable economic terms (i.e., no charge for the fuel).

In view of DOE's responsibilities under the Atomic Energy Act of 1954, as amended, domestic production of plutonium-238 would ensure a reliable long-term supply of nuclear material to support NASA's space missions regardless of the international climate (See Section 12.2 of Volume 1). As discussed in Section 2.3.1.1.3 of Volume 1, it is economical to use available mixed-oxide fuel supplies.

231-3: The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian

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Individuals submitting this form letter:

Karen L. Wilson	Tycho Holcomb
Karen & John Murphy-Meindez	Nancy Metrick
Ned Erickson	Curtis S. Powers
Ginger Danz	Nancy Alley
Jonathan Danz	W. Aslyonnsen
Tamara L. Hangslebert	Pat Hazlett
Theresa Sinclair	Daniel Lichtenwald
Darrlik Jones	M. B. Condon
Tracy E. Cawdrey	Tim Young
Debbie Frederick	James Bison
Mike Kitts	Corinne Bison
Troyce A. Mack	Bonnie White
Margaret M. Samsone	Cory M. Day
Lana Rae Breedlore	Dennis White
Mike Schotveld	Ruth Olin
Steven DeRay	Brian Schultz
Renee Cheadle	Chief Johnny Jackson
Derek O. Thompson	Brad Price
Michelle Hoffman	Domminic Puccinelli
Lena Keller	Laurinda Janlewicz
Nicole DeBrulen	Matt Hulstrunk
Derek R. Verby	Sarah J. Buhler
Anthony DePinto	Paul Woolery
Laura Anderson	
Sunshine Deleon	
Thomas G. Penchoen	
Kathy Sneider	
Deandra Valley	
Paul Moyer	
Dagmar Gardner	
Mike Clement	
Jahmir Rath	
Andy Rueston	
Chris Preston	
Bridget Jeter	
Jillian Barker	
Jules Burton	
Carol Hulstrunk	
Susanna Stoddard	
Jason Deach	

applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

DOE has taken the Expert Panel and NERAC report recommendations under consideration in developing the range of alternatives evaluated in the NI PEIS. These reports were made available to the public at the NI PEIS public information centers and on the Internet at www.nuclear.gov.

DOE did not misstate isotope production levels in the Draft NI PEIS. Section 1.2.1 of Volume 1 identifies that "Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions (basic energy sciences or defense)."

- 231-4:** Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. DOE could purchase plutonium-238 from Russia to satisfy its near-term responsibility to supply NASA with plutonium-238 to support

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future space exploration missions. Under the current contract set to expire in 2002, the United States is authorized to purchase up to 40 kilograms of plutonium-238, with the total available for purchase in any one year limited to 10 kilograms. However, DOE does not stockpile large quantities of Russian plutonium-238 long in advance of needs due to budget constraints and the additional processing required to remove decay products that occur following extended storage of the material. To date, DOE has purchased approximately 9 kilograms of plutonium-238 under this contract. The environmental impacts associated with procurement of plutonium-238 from Russia are evaluated as an element of the No Action Alternative. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Under the No Action Alternative, DOE would continue to purchase plutonium-238 to meet the space mission needs for the 35-year evaluation period considered in the NI PEIS. However, DOE recognizes that any purchase beyond what is currently available to the United States through the existing contract would likely require negotiation of a new contract and may require additional NEPA review.

The May 22, 2000, correspondence from NASA to DOE identifies that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, SRTG development efforts were stopped in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires one-third less plutonium-238 as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000, letter to DOE that large RTGs be maintained as backup. Section 1.2.2 of

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Volume 1 was revised to clarify plutonium-238 mission needs. DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

- 231-5:** CEQ (40 CFR 1500 et seq.) and DOE (10 CFR Part 1021) implementation regulations do not require inclusion of cost and nonproliferation studies in an environmental impact statement. The basic purpose of the NI PEIS is to describe the alternatives under consideration for implementation (Section 2.5 of Volume 1) and the environmental impacts that would occur if these alternatives were implemented (Chapter 4 of Volume 1). Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. The associated cost report and nonproliferation report were made available to the public on August 24, 2000 and September 8, 2000, respectively. DOE mailed these documents to approximately 730 interested parties, and these reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in public reading rooms.
- 231-6:** See Response to Comment Number 231-5 above.
- 231-7:** This NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.
- 231-8:** The use of mixed oxide or highly enriched uranium to fuel the FFTF has been rigorously evaluated in the Nuclear Infrastructure Nonproliferation Impact Assessment. This report confirms that the manner in which these fuels would be used, as described in the PEIS, is consistent with

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nonproliferation policy. In the event that a decision is made to restart FFTF, the first six years of operation would use existing onsite mixed oxide (MOX) fuel. DOE expects that an additional 15-year supply of mixed oxide fuel in Europe, owned by Germany, could be available for FFTF.

Further, use of the Hanford MOX fuel would dispose of a significant U.S. stockpile of fresh plutonium fuel by conversion to spent fuel through irradiation in FFTF. This represents a safe, low-cost, high benefit opportunity to reduce U.S. civilian plutonium without chemical or bulk processing. Use of the German MOX fuel represents a similar advantage with respect to the German stockpile of separated civilian plutonium. During the period of MOX fuel use, in support of U.S. nonproliferation policy directives, DOE's Office of Nonproliferation and National Security would undertake a study under Reduced Enrichment for Research and Test Reactors (RERTR) to consider the technical feasibility of using low enriched uranium to fuel the FFTF. Under this nonproliferation protocol, if use of low enriched uranium fuel is found infeasible in FFTF for meeting assigned missions, policy would allow DOE to subsequently procure highly enriched uranium fuel for use in FFTF. Again, this approach is consistent with U.S. nonproliferation policy.

231-9: DOE notes the concern expressed in the comment on the potential health and environmental impacts of FFTF startup. All air emissions and wastewater discharges would be in accordance with applicable permit and regulatory requirements. The releases of air pollutants and contaminated liquid are addressed in Section 4.3 of Volume 1. The release of air pollutants would result in concentrations well below Federal and state air standards (Table 4-13). The release of radioactivity and hazardous chemicals into the atmosphere would have a negligible effect on human health (Tables 4-17 and 4-19, respectively). There would be no discernible impacts to groundwater or surface water quality (Section 4.3.1.1.4). All impacts on ecological resources, including animals and fish, associated with operation of FFTF would be small (Section 4.3.1.1.6).

The discussion in the Summary and Section 4.8.3.5 of Volume 1 on the cumulative impacts for spent nuclear fuel management at Hanford was

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revised to clarify that the management of the existing spent nuclear fuel at Hanford results in a dose of less than 0.1 millirem per year of the maximally exposed member of the public. This dose is well within the DOE limits given in DOE Order 5400.5. As discussed in that Order, the dose limit from airborne emissions is 10 millirem per year, as required by the Clean Air Act; drinking water is 4 millirem per year, as required by the Safe Drinking Water Act; and the dose limit from all pathways combined is 100 millirem per year. DOE has committed to remove the spent nuclear fuel at Hanford for ultimate disposition in a geologic repository.

- 231-10:** Decommissioning of FFTF and all other candidate facilities considered, including associated costs and cleanup, is not within the scope of the NI PEIS. Before decommissioning activities were undertaken, DOE would prepare the appropriate environmental documentation to address the associated environmental impacts. Cost assessments would also be prepared.

Deactivation costs for FFTF are included in the ancillary Cost Report and are properly assigned to support the alternatives as they are defined in Chapter 2, Volume 1 of the PEIS.

DOE remains committed to cleaning up the Hanford Site independent of ultimate decision on FFTF. The amounts of wastes associated with decommissioning FFTF would be small. The schedule for cleaning up these other wastes would not be affected if FFTF were restarted.

- 231-11:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

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The current inventory of wastes managed at the Hanford Site is identified in Volume 1, Section 3.4.11.1 of Volume 1. In addition, the generation rates of wastes associated with the NI PEIS options that use Hanford facilities are compared with the current waste generation rates at the site in Section 4.3 of Volume 1. As stated in Sections 4.3.1.1.13, 4.3.3.1.13, and 4.4.3.1.13, the generation rates of wastes at Hanford associated with the options that utilize either FFTF, FMEF and/or RPL/306-E would be much smaller than the current waste generation rates at the site. These volumes would also be small in comparison to the existing inventory at the site (Section 3.4.11.1). These comparisons were also made for the other options which involved INEEL and ORR facilities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

231-12: Both ATR and HFIR are currently producing medical isotopes and under the No Action Alternative both would continue to do so. Further, under this alternative DOE would not establish a domestic source of plutonium-238 production but could instead continue to purchase it from Russia to meet the needs of future U.S. space missions.

DOE considered the use of irradiation facilities other than those addressed under Alternatives 1 through 4. However, their use was dismissed for a variety of reasons as discussed in Volume 1, Section 2.6.1.

The No Action alternative is required under Council on Environmental Quality regulations (40 CFR 1502.14(d)). It provides a point of comparison for the action alternatives. The No Action Alternative generally represents the status quo; that is, it includes those actions that would normally take place without the proposed action. Since the status quo involves maintaining FFTF in standby and not its deactivation, it is not appropriate to include its deactivation as part of the No Action Alternative. Deactivation of FFTF is included as Alternative 5, Permanently Deactivate FFTF, and as part of Alternative 2, Use Only Existing Operational Facilities, Alternative 3, Construct New Accelerator(s), and Alternative 4, Construct New Research Reactor.

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Columbia Riverkeeper

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231-13: PNNL is not preparing this PEIS, although it has offered technical comments on it. These comments have been evaluated by DOE and the contractor preparing the PEIS. PNNL has also previously provided technical and cost analyses on matters related to the FFTF, which have undergone independent scrutiny, and have helped confirm the need for the environmental review now being independently developed. PNNL's work does not present a conflict of interest. Ultimately, DOE has full control over the contents of the PEIS.

The 300 Area Revitalization Plan (DOE 1999) provides for continued multi-program R&D operations in the 300 Area, including operation of various laboratories, office facilities, and services. It also provides for consolidation (but not complete elimination) of radiological operations, with support for Hanford Site facility transition and environmental restoration efforts. The plan does not require closure of the 325 and 306-E buildings as long as they are needed for active research projects. Operation of these facilities would not violate any existing agreements between DOE and stakeholders or other legal obligations, nor would it affect ongoing or planned environmental restoration and facility transition activities.

The 306-E facility is not contaminated and is being proposed as a location to conduct activities that do not involve radioactive materials. While the 325 Building has a large inventory of radionuclides associated with ongoing activities at the facility, the building is not contaminated in worker accessible areas. Operations at the 325 Building are conducted in accordance with applicable federal and state regulations and appropriate DOE Orders. The need to restart FFTF is described in Chapter One of the Final NI PEIS. In Chapter Four, the socioeconomic impacts of restarting FFTF are described. The economic welfare of Hanford and all DOE sites is important to DOE. However, any economic impact is secondary to the proper expenditure of taxpayer dollars. The expenditure must be connected to the mission of the facility.

DOE has not identified any classified missions or weapons research that will be undertaken at FFTF. If changes are proposed, the public will be informed and the appropriate NEPA documentation will be prepared.

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Columbia Riverkeeper

Response to Commentor No. 231

- 231-14:** At the time the Draft NI PEIS was completed and published, DOE did not have a preferred alternative. DOE used the environmental evaluation in the Draft NI PEIS, and also other reports on cost and nonproliferation impacts, as well as input from the public to develop its preferred alternative. Council on Environmental Quality regulations (40 CFR 1502.14(e)) do not require the inclusion of a preferred alternative in a draft EIS if one has not been identified at that time. However, the regulations do require identification of a preferred alternative in the final document. DOE has identified a preferred alternative in Section 2.8 of the Final NI PEIS.
- 231-15:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, or Alternative 2, Use Only Existing Operational Facilities.

Commentor No. 628: Eileen Gannon

Name: *Eileen Gannon Eileen M Gannon 8-31-00*

Address: *7884 SE 21#4 PHd OR 97202-6200*

Additional Comments: *You dont realize what sick is until you are so!!!
that you cannot take care of yourself.*

THAT IS WHAT HANFORD DOES!!!

Sign and return to Columbia Riverkeeper or mail by Sept. 18th to: Colette Brown, NE-50, USDOE, 19901 Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.Infrastructure-PEIS@hq.doe.gov

*And you were
really made in
Portland.*



P.O. Box 1254
Hood River, Oregon 97031

628-1

Response to Commentor No. 628

628-1: The annual doses to the public from the Hanford site and proposed NI PEIS activities above are very small. The cumulative impact assessment determined that the incremental annual radiation dose to the maximum exposed public individual from the NI-PEIS proposed operations at FFTF and FMEF or RPL would be 0.0054 mrem. This assessment also determined that 0.0045 latent cancer fatalities would be expected to occur among the local population as a result of the NI-PEIS related radiation exposure over the 35 year period.

For perspective, the radiation dose the average American receives from natural sources is about 300 mrem each year. Based on the same 35 year time period used above, approximately 2,000 latent cancer fatalities would be expected among the same population as a result of this natural non-Hanford related) radiation exposure. In that same 35 years, about 19,000 cancer fatalities from all causes (nonradiological causes included) would be expected in the same population.

It is there fore highly unlikely that current or future Hanford operations will impact public health.

Commentor No. 1076: Nate and Andrea Hildebrand

Name: NATE & ANDREA HILDEBRAND

Address: 1317 SE MAIN ST.
PORTLAND OR 97214

Additional Comments:

PLEASE RESPECT THE WISHES OF THE CITIZENS OF
WASHINGTON & OREGON - SHUT DOWN FAST FLUX!

1076-1

Sign and return to Columbia Riverkeeper or mail by Sept. 18th to: Colette Brown, NE-50, USDOE, 19901
Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.infrastructure-PEIS@hq.doe.gov



P.O. Box 1254
Hood River, Oregon 97031

Response to Commentor No. 1076

1076-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 1171: Steve Hanrahan

Name: Steve Hanrahan

Address: 2718 SE Brooklyn St
Portland, OR 97202

Additional Comments:

Clean up Hanford - don't
restart it!Sign and return to Columbia Riverkeeper or mail by Sept. 18th to: Colette Brown, NE-50, USDOE, 19901
Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.infrastructure-PEIS@hq.doe.govP.O. Box 1254
Hood River, Oregon 97031

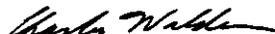
|| 1171-1
|| 1171-2

Response to Commentor No. 1171

- 1171-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 1171-2:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1172: Charles Walden

Name: Charles Walden



Address: 34 Wenonah Ave Oakland, NJ 07436

Additional Comments:

I own property in Hood River and I think that Hanford could adversely affect the value of my land. I lived in the Gorge for 7 1/2 years and did not like seeing the toxic barges traveling up to Hanford. They were sent up in the middle of the night, so the public would not see them. I think Hanford should be cleaned up and shut down. I think it is time that you listen to the people. Do not contaminate the Columbia River any more.

Sign and return to Columbia Riverkeeper or mail by Sept. 18th to: Colette Brown, NE-50, USDOE, 19901 Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.infrastructure-PEIS@hq.doe.gov

1172-1

1172-2

Response to Commentor No. 1172

1172-1: The alternatives considered in the PEIS do not include any actions that should result in the change in property value in the Hood River area.

1172-2: Although not within in the scope of the NI PEIS, DOE notes the commentor's concerns regarding river transportation of waste to the Hanford Site and cleanliness of the Columbia River. In general, hazardous wastes are not shipped to Hanford by barging on the Columbia River. There are two exceptions to this: 1) transport of Trojan Nuclear Reactor components for disposal in a commercial disposal site, and 2) transport of decommissioned submarine reactor compartments for burial at Hanford. Any night transports resulted from scheduling and convenience factors (e.g. arriving at Hanford during daylight hours).

Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Commentor No. 1173: Lynn Hanrahan

Name: *Lynn Hanrahan*
Address: *2718 SE Brooklyn St.
Portland, OR 97202*

Additional Comments:

Clean Up Hanford!
Do Not Restart FFTF! *Lynn Hanrahan*

1173-1

1173-2

Sign and return to Columbia Riverkeeper or mail by Sept. 18th to: Colette Brown, NE-50, USDOE, 19901 Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.Infrastructure-PEIS@hq.doe.gov



P.O. Box 1254
Hood River, Oregon 97031

Response to Commentor No. 1173

- 1173-1:** DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.
- 1173-2:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1531: Paul Crouch

Name: *PAUL Crouch Paul Crouch*

Address: *788 Foxley Rd
Hood River, OR 97031*

Additional Comments: *you should really examine your values. Even considering restarting the Hanford site borders on the insane. What major corporations is the DOE really in the back pocket of? It all comes back to greed!!!*

Sign and return to Columbia Riverkeeper or mail by Sept. 18th to: Colette Brown, NE-50, USDOE, 19901 Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.infrastructure-PEIS@hq.doe.gov

Please allow me to raise my sons (4 & 2) in a safe environment, so clean up the your mess that's here! Paul Crouch

1531-1

1531-2

Response to Commentor No. 1531

- 1531-1:** DOE notes the commentor's opposition to the restart of the FFTF.
- 1531-2:** DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The environmental impacts associated with operation of the FFTF are addressed in detail in Section 4.3 of this NI PEIS. The impacts are shown to be small. These impacts specifically include the risks to human health during normal operations and associated with postulated accidents. Over the 35-year operational period no fatalities would be expected among workers or in the general public in the vicinity of Hanford or at distant locations. For perspective, the radiation dose the average American receives from naturally occurring sources is about 300 mrem each year. Based on the same 35 year time period used above, approximately 2,600 latent cancer fatalities would be expected among the local population as a result of natural (non-Hanford related) radiation exposure.

Commentor No. 1532: Cindy L. Allen**Commentor No. 1533: Maria Roeder**Name: *Cindy L. Allen*Address: *788 Foxley Road, Hood River, OR 97031*

Additional Comments:

*Shut it down & clean up existing mess!
Quit lying to the public.*

Sign and return to Columbia Riverkeeper or mail by Sept. 18th to: Colette Brown, NE-50, USDOE, 19901 Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.Infrastructure-PEIS@hq.doe.gov

Name: *Maria Roeder*Address: *3533 Avalon Drive
Hood River, OR 97031*

Additional Comments:

Close it down and clean it up!

Sign and return to Columbia Riverkeeper or mail by Sept. 18th to: Colette Brown, NE-50, USDOE, 19901 Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.Infrastructure-PEIS@hq.doe.gov

Response to Commentor No. 1532**Response to Commentor No. 1533**

1532-1

1532-1: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

1532-2

1532-2: DOE is committed to discharging its responsibilities in an open and unbiased manner and providing the public with comprehensive environmental reviews of its proposed actions. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the environmental impact analysis of DOE's proposed alternatives for meeting mission requirements. In preparing the Final NI PEIS, DOE carefully considered comments received from the public

1533-1

1533-1: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

Commentor No. 1535: Carol Douglass

Name: *Carol Douglass*

Address: *521 Columbia, Hood River, OR 97031*

Additional Comments: *Clean up! Justify the needs with facts.* || 1535-1

If you are so sure this is good or needed or supported effort - make it more publicly known. || 1535-2

Sign and return to Columbia Riverkeeper or mail by Sept. 18th to: Colette Brown, NE-50, USDOE, 19901 Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.Infrastructure-PEIS@hq.doe.gov

Carol Douglass

Response to Commentor No. 1535

1535-1: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

1535-2: DOE notes the commentor's views including the need for public dialog and education as a prerequisite for informed public participation. It is DOE policy to encourage public input on matters of national and international importance. In doing so, DOE has established reading rooms near DOE sites to provide easy access to information about DOE programs and encourages the use of this source of information. Further, DOE has numerous web sites, including one for NE (<http://www.nuclear.gov>), that provide up-to-date-information complete with fact sheets, news releases, and other materials. DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings.

Commentor No. 1535: Carol Douglass (Cont'd)

Response to Commentor No. 1535

Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Although research to identify other potential fuel sources to support these space exploration missions has been conducted, no viable alternative to using plutonium-238 has been established. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

In January 1997, President Clinton tasked his Committee of Advisors on Science and Technology (PCAST) to evaluate the current national energy research and development portfolio and to provide a strategy that ensures the United States has a program to address the Nation's energy and environmental needs for the next century. In its November 1997 report responding to this request, the PCAST Energy Research and Development Panel determined that restoring a viable nuclear energy option to help meet our future energy needs is important and that a properly focused research and development effort to address the potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) was appropriate. The PCAST panel further recommended that DOE reinvestigate its nuclear energy research and development activities to address these potential barriers. Section 1.2.3 of Volume 1 provides information on the nuclear energy research and development mission.

Commentor No. 1928: Laurel L. Gross

Response to Commentor No. 1928

Commentor No. 1934: Tamme Pearson

Response to Commentor No. 1934

Name: *Laurel Lee Gross*

Address: *PO Box 244
Hudson WA 98623*

Additional Comments:
*Please don't start up the FFTF
for any reason!*

1928-1

1928-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Sign and return to Columbia Riverkeeper or mail by Sept. 18th to: Colette Brown, NE-50, USDOE, 19901 Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.infrastructure-PEIS@hq.doe.gov



P.O. Box 1254
Hood River, Oregon 97031

Name: *Tamme Pearson*

Address: *1300 3rd Ave #71
Mosier, OR 97041*

Additional Comments:
NO RESTART !!!

1934-1

1934-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Sign and return to Columbia Riverkeeper or mail by Sept. 18th to: Colette Brown, NE-50, USDOE, 19901 Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.infrastructure-PEIS@hq.doe.gov

Commentor No. 1937: Mark Simonds

Response to Commentor No. 1937

Commentor No. 1939: Shawn Robarts

Response to Commentor No. 1939

Name: Mark Simonds
Address: 2071 ^{SPRUE} Mosier OR

Additional Comments: - Safety measures are never enough -

|| 1937-1

1937-1: The commentor's position on safety measures is noted.

Sign and return to Columbia Riverkeeper or mail by Sept. 18th to: Colette Brown, NE-50, USDOE, 19901 Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.Infrastructure-PEIS@hq.doe.gov

Name: SHAWN ROBERTS
Address: 1300 3RD AVE #71
MOSIER OREGON 97040.

Additional Comments: Please don't let them restart this mess.

|| 1939-1

1939-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Sign and return to Columbia Riverkeeper or mail by Sept. 18th to: Colette Brown, NE-50, USDOE, 19901 Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.Infrastructure-PEIS@hq.doe.gov

Commentor No. 1944: Kelly Caldwell

Response to Commentor No. 1944

Commentor No. 1945: Martha Aspy

Response to Commentor No. 1945

Name: Kelly Caldwell
Address: 2615 SE 35th Ave, Portland OR 97202

Additional Comments:
FFTF is not consistent with the goals of the people in the region. We do not want this. Clean up the mess & go away.

Sign and return to Columbia Riverkeeper or mail by Sept. 18th to: Colette Brown, NE-50, USDOE/19901 Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.infrastructure-PEIS@hq.doe.gov



P.O. Box 1254
Hood River, Oregon 97031

1944-1

1944-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1944-2

1944-2: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

Name: Martha Aspy
Address: 3675 Fairview Way
West Linn, OR 97068

Additional Comments:
Please listen to the people. We do not want to restart FFTF. Let's clean up the mess we still have. Please.

Sign and return to Columbia Riverkeeper or mail by Sept. 18th to: Colette Brown, NE-50, USDOE, 19901 Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.infrastructure-PEIS@hq.doe.gov



P.O. Box 1254
Hood River, Oregon 97031

1945-1

1945-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

1945-2

1945-2: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

Commentor No. 1946: Peter Sansone**Commentor No. 1953: Moses Jhai**

Name: PETER SANSONE

Address: P.O. Box 38, BEAVER CREEK, OR. 97004
23575 S. Spangler Rd., OREGON CITY, OR.

Additional Comments:

CLEAN UP EXISTING CONTAMINATION AT THE
HANFORD SITE PRIOR TO ANY NEW PROPOSALSSign and return to Columbia Riverkeeper or mail by Sept. 18th to: Colette Brown, NE-50, USDOE, 19901
Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.infrastructure-PEIS@hq.doe.govP.O. Box 1254
Hood River, Oregon 97031

1946-1

1946-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

Name: Moses Jhai (Moses Jhai)

Address: 518 E. 4th ST. HOOD RIVER, OR. 97031

Additional Comments: Please close this place down!

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Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.infrastructure-PEIS@hq.doe.gov

1953-1

1953-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 1955: Paul Woolery

Response to Commentor No. 1955

Commentor No. 1958: Robert S. Hodges

Response to Commentor No. 1958

Name: Paul Woolery

Address: 637 Hwy 141
White Salmon, WA 98672

Additional Comments: The cost of producing more nuclear waste exceeds any benefits that could be realized by restarting FTF.

1955-1

1955-1: DOE notes the commentor's opinion.

Sign and return to Columbia Riverkeeper or mail by Sept. 18th to: Colette Brown, NE-50, USDOE, 19901 Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.infrastructure-PEIS@hq.doe.gov

Name: Robert S. Hodges

Address: 44 Wallace Rd
White Salmon, WA 98672

Additional Comments: Clean it up! Don't start it up!

1958-1

1958-2

1958-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

1958-2: DOE notes the commentor's opposition to Alternative 1, Restart FTF.

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Commentor No. 1962: Catherine Zangar

Commentor No. 1964: David Burns

Name: Catherine Zangar

Address: 721 Pine Ave
Hood River OR 97031 (formerly of Richland, WA)

Additional Comments: Since when are far-reaching decisions left to a small, local group whose jobs depend on the decision. People in the Hanford job market should be excluded from the process!! Do we let loggers decide about old growth harvests? Fishermen re: their harvests? Airforce bombing an island? Also - all other FFTF are closed/shut down - of good reason.

Sign and return to Columbia Riverkeeper or mail by Sept. 18th to: Colette Brown, NE-50, USDOE, 19901 Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.infrastructure-PEIS@hq.doe.gov

I oppose Alternative #1 or any plan to restart the FFTF.

1962-1

1962-2

Response to Commentor No. 1962

Response to Commentor No. 1964

1962-1: It is DOE policy to encourage public input on matters of regional, national and international importance as part of its commitment to facilitate a public participation process that is open and unbiased. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

1962-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF. The commentor should note that there is only 1 FFTF, and it is currently in standby.

1964-1: DOE is committed to discharging its responsibilities in an open and unbiased manner and providing the public with comprehensive environmental reviews of its proposed actions. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the environmental impact analysis of DOE's proposed alternatives for meeting mission requirements. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

1964-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

Name: DAVID BURNS

Address: 2685 Montello Ave
Hood River, OR 97031

Additional Comments:

Stop the madness! We are not fools and understand the Betrayal of public trust

Sign and return to Columbia Riverkeeper or mail by Sept. 18th to: Colette Brown, NE-50, USDOE, 19901 Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.infrastructure-PEIS@hq.doe.gov

Clean it up!!

1964-1

1964-2

Commentor No. 1965: Kennedy Burns

Response to Commentor No. 1965

Commentor No. 1968: Alison Hodges

Response to Commentor No. 1968

Name: Kennedy Burns

Address: 2685 Montello
Hood River, OR 97031

Additional Comments:

I oppose the restart of the Hanford facility for the welfare of the areas residents and millions who

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visit this beautiful area.

1965-1

1965-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Name: Alison Hodges

Address: 44 Wallace Rd
White Salmon, WA 98672

Additional Comments:

I will continue to attend these comment opportunities, ~~in~~ despite of the redundancy. How many times must we say NO?

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1968-1

1968-1: DOE is committed to discharging its responsibilities in an open and unbiased manner and providing the public with comprehensive environmental reviews of its proposed actions. Holding public hearings is an essential and required part of the NEPA process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the environmental impact analysis of DOE's proposed alternatives for meeting mission requirements. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

Individuals submitting Form Letter A (Columbia Riverkeeper) with additional comments.

Commentor No. 1970: George Wieira**Commentor No. 1972: Marie Pfeffer**

Name: *George Wieira*
 Address: *11 Campbell Rd. W. Salmon, Wa.*
 Additional Comments: *Hanford, is already polluted enough, leave it alone.*

Sign and return to Columbia Riverkeeper or mail by Sept. 18th to: Colette Brown, NE-50, USDOE, 19901 Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.infrastructure-PEIS@hq.doe.gov

1970-1

Name: *Marie Pfeffer*
 Address: *755 Country Club Rd. Hood River, OR. 97031*
 Additional Comments:

Get Real. Clean it up - not start it up,

|| 1972-1

|| 1972-2

Sign and return to Columbia Riverkeeper or mail by Sept. 18th to: Colette Brown, NE-50, USDOE, 19901 Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.infrastructure-PEIS@hq.doe.gov

Response to Commentor No. 1970**Response to Commentor No. 1972**

1970-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

1972-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

1972-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 1973: John Pfeiffer

Commentor No. 1975: Jerry Gabay

Name: *John Pfeiffer*

Address: *755 Country Club Rd, Hood River, OR 97031*

Additional Comments: *Tri-Party Agreement (about 8 yrs. ago) - The Mission at Hanford is clean-up. Just a reminder of previous promises - No FTF start up!!! NIS*

Sign and return to Columbia Riverkeeper or mail by Sept. 18th to: Colette Brown, NE-50, USDOE, 19901 Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.Infrastructure-PEIS@hq.doe.gov

1973-1

1973-2

Name: *Jerry Gabay*

Address: *PO Box 151 Molitor OR 97040*

Additional Comments: *The voice of the people of the NW, and of local governments, is abundantly clear. We don't want this. If you are going ahead anyway - stop the charade and get on with it.*

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1975-1

Response to Commentor No. 1973

Response to Commentor No. 1975

1973-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site.

A Tri-Party Agreement change was made to place the milestones for FTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Public meetings were held on this formal milestone change. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

1973-2: DOE notes the commentor's opposition to Alternative 1, Restart FTF.

1975-1: DOE policy encourages effective public participation in its decision making process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public. No final decisions have been made with regard to the facilities and locations evaluated to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238 for NASA space missions, and nuclear research and development. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

Commentor No. 1978: Cosmos Worth

Response to Commentor No. 1978

Commentor No. 1979: Solá Radiance

Response to Commentor No. 1979

Name: *Cosmos Worth*
Address: *PO Box 1527
Hood River, Oregon 97031*

Additional Comments: *Shut Down FFTF AND
CLEAN UP the Messes Now!*

1978-1

Sign and return to Columbia Riverkeeper or mail by Sept. 18th to: Colette Brown, NE-50, USDOE, 19901 Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.Infrastructure-PEIS@hq.doe.gov

1978-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF and concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

Name: *Solá Radiance*
Address: *PO Box 1527
Hood River, OR. 97031*

Additional Comments: *What would "THE CREATOR" (aka GOD) DO? Shut Down Hanford FOREVER - ^{Tri-Party} _{made n}*

1979-1

Sign and return to Columbia Riverkeeper or mail by Sept. 18th to: Colette Brown, NE-50, USDOE, 19901 Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.Infrastructure-PEIS@hq.doe.gov

→ We DON'T NEED MORE plutonium-238 from anywhere!!!

1979-1: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

Commentor No. 1980: Jadriah Rath

Response to Commentor No. 1980

Commentor No. 1981: Robert M. Gosman

Response to Commentor No. 1981

Name: *Jadriah Rath*
Address: *3226 Dee Hwy Hood River Oregon, 97031*

Additional Comments:

I'm 11 years old and I think that all the kids in the world deserve a good

clean future without waste, ~~to be~~

Sign and return to Columbia Riverkeeper or mail by Sept. 18th to: Colette Brown, NE-50, USDOE, 19901 Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.infrastructure-PEIS@hq.doe.gov

1980-1

1980-1: DOE notes the commentor's concern regarding waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Name: *ROBERT M Gosman*
Address: *30 FOREST LN White Salmon WA 98672*

Additional Comments:

We will not go away; and lies will not change the truth. The truth is we have the right to live without "Nukes" and the ensuing hell. We will stand up.

Sign and return to Columbia Riverkeeper or mail by Sept. 18th to: Colette Brown, NE-50, USDOE, 19901 Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.infrastructure-PEIS@hq.doe.gov

1981-1

1981-1: DOE is committed to discharging its responsibilities in an open and unbiased manner and providing the public with comprehensive environmental reviews of its proposed actions. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the environmental impact analysis of DOE's proposed alternatives for meeting mission requirements. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

Commentor No. 1983: Mary Preston

Response to Commentor No. 1983

Commentor No. 1986: Yellow Thunder

Response to Commentor No. 1986

Name: *Mary Preston*
Address: *White Salmon, WA*

Additional Comments: *Please - our only hope is to clean up now - To create more waste is to distinguish hope.*

Sign and return to Columbia Riverkeeper or mail by Sept. 18th to: Colette Brown, NE-50, USDOE, 19901 Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.infrastructure-PEIS@hq.doe.gov

Name: *Yellow Thunder*
Address: *PO Box 522
White Salmon, WA 98672*

Additional Comments: *MUST INCLUDE THESE WERE BROUGHT FORWARD DURING SCOPING BUT IGNORED. Insufficient medical analysis. Did not address other illnesses related to production of products made for use of FFTF and all other processes of FFTF and critical incidents or low level radiations. Also the same must be applied to animals, plants, insects + water. Compare your data with independent data from Physicians such as Caldicott, Physicians for Social Responsibility, tribal medical records, etc.*

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1983-1

1983-2

1986-1

1983-1: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

1983-2: DOE notes the commentor's concern regarding waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

1986-1: DOE gave equal consideration to all comments received as a result of the scoping process and made a number of changes in the Draft NI PEIS in response to these comments (see Section 1.4 of Volume 1). The evaluations presented in Chapter 4 for Alternative 1 options (i.e., 4.3.1 to 4.3.6) address the radiological and chemical impacts on human health and the environment associated with normal FFTF operations and from postulated accidents.

As explained in Appendix H, the radiological impacts assessment (for both normal operations and accidents) considered deposition to soils and uptake and ingestion through foodstuffs as well as direct inhalation and external exposure. Releases were calculated to air only because there

Commentor No. 1986: Yellow Thunder (Cont'd)

Response to Commentor No. 1986

are no radiological effluent liquid pathways to the environment from FFTF. For normal operations, the analyses indicate that impacts on human health would be small (less than 0.1 millirem annually to the maximally exposed member of the public), which is well below the annual limit of 10 millirem for air emissions. In addition, a complete spectrum of accidents was evaluated for FFTF (see Appendix I). All of the accidents evaluated for FFTF resulted in doses of less than 1 rem to the maximally exposed individual, which is below the U.S. EPA's Protective Action Guidelines of 1 to 5 rem. These analyses are subject to independent review by virtue of being published in the NI PEIS. All data used is referenced and publicly available with the methods of analysis based on accepted procedures and documented in the NI PEIS Administrative Record.

For impacts to ecological resources, it should also be noted that human health impacts are generally assumed to be conservative of the impacts to other organisms and therefore protective of ecological resources in general. According to International Atomic Energy Agency guidance, a dose rate of 100 millirem per year to the maximally exposed human will lead to dose rates to plants and animals of less than 0.1 rad per day. The IAEA concluded that a dose rate of 0.1 rad per day or less for animals and 1 rad per day or less for plants would not affect these populations. The largest individual dose for any of the alternatives (inclusive of FFTF normal operations) evaluated is below 0.1 millirem annually, three orders of magnitude less than the IAEA identified threshold level. This is well below the IAEA benchmark. Therefore, all of the proposed alternatives would have no effect on the plants and animals around the proposed sites.

Commentor No. 1989: Michael Mulhall

Name: Michael Mulhall

Address: Hood River, OR

Additional Comments: We can no longer afford to create more nuclear waste. I am against the re opening of the FFTF. I am for Alternative 5, shut down FFTF now. God is watching. *Michael Mulhall*

Sign and return to Columbia Riverkeeper or mail by Sept. 18th to: Colette Brown, NE-50, USDOE, 19901 Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.Infrastructure-PEIS@hq.doe.gov

|| 1989-1

|| 1989-2

|| 1989-3

Response to Commentor No. 1989

- 1989-1:** DOE notes the commentor's concern regarding waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.
- 1989-2:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.
- 1989-3:** See response to comment 1989-2.

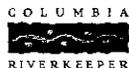
Commentor No. 1996: Art Lewellan

Name: ART LEWELLAN

Address: 3205 SE 8th #9
PORTLAND, OR. 97202

Additional Comments: Restarting FFF is unwise. Medical isotopes can be purchased or manufactured cheaper from other sources. Hanford is a mess. Spend money cleaning it up. Don't spend money jeopardizing the families of employees.

Sign and return to Columbia Riverkeeper or mail by Sept. 18th to: Colette Brown, NE-50, USDOE, 19901 Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.Infrastructure-PEIS@hq.doe.gov



P.O. Box 1254
Hood River, Oregon 97031

|| 1996-1
|| 1996-2
|| 1996-3
|| 1996-4

Response to Commentor No. 1996

1996-1: DOE notes the commentor's opposition to Alternative 1, Restart FFF.

1996-2: DOE acknowledges that other manufacturers can produce certain isotopes that are economically attractive. In fact, the United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements.

Although other manufacturers produce medical radioisotopes, DOE remains the key provider for a large number of radioisotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially experimental, these isotopes are not generally purchased in large-enough quantities to make their production financially attractive to private industry. However, supplies of many research isotopes are not readily available from existing domestic or foreign sources, causing a number of medical research programs to be terminated, deferred, or seriously delayed. Under the NI PEIS proposed action and consistent with its mandates under the Atomic Energy Act, DOE would enhance its existing nuclear facility infrastructure to, among other things, more effectively support production of radioisotopes for medical applications and research. DOE's intent is to complement commercial sector capabilities to ensure that a reliable supply of isotopes is available in the U.S. to meet future demand, and to encourage the commercial sector to privatize the production of isotopes that have established applications to a level that would support commercial ventures. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

1996-3: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency,

Commentor No. 1996: Art Lewellan (Cont'd)

Response to Commentor No. 1996

and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Hanford cleanup is funded by DOE's Office of the Assistant Secretary for Environmental Management (EM). FFTF funding is provided through the Office of Nuclear Energy, Science & Technology (NE). Further, two different congressional subcommittees oversee the appropriations for these activities. No monies have been or will be taken from any EM projects at Hanford to support the FFTF. Restart of FFTF would not impact current cleanup schedules.

- 1996-4:** This NI PEIS provides an estimate of the potential human health impacts associated with a range of reasonable alternatives for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Commentor No. 1999: Zachary L. Post

Response to Commentor No. 1999

Commentor No. 2001: Jean Gritter

Response to Commentor No. 2001

Name: ZACHARY L. POST
Address: 1303 NE ~~1303~~ Roselawn, PDX, OR 97211

Additional Comments:
More nuclear waste is not a cure
for cancer.

Sign and return to Columbia Riverkeeper or mail by Sept. 18th to: Colette Brown, NE-50, USDOE, 19901 Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.Infrastructure-PEIS@hq.doe.gov



P.O. Box 1254
Hood River, Oregon 97031

1999-1

1999-1: DOE notes the commentor's concern regarding waste generation. This NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Name: Jean Gritter
Address: 4920 NE 22nd
Portland, OR 97211

Additional Comments:
we must focus on cleaning up the mess
we already have.

Sign and return to Columbia Riverkeeper or mail by Sept. 18th to: Colette Brown, NE-50, USDOE, 19901 Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.Infrastructure-PEIS@hq.doe.gov



P.O. Box 1254
Hood River, Oregon 97031

2001-1

2001-1: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The DOE missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

Commentor No. 2010: Bart Vervloet

existing sites with shutdown of FFTF.

Name: *BART VERVLOET* 

Address: *720 Pine St
Hood River, OR 97031*

Additional Comments:
*Shut down FFTF
\$ For cleanup now,*

Sign and return to Columbia Riverkeeper or mail by Sept. 18th to: Colette Brown, NE-50, USDOE, 19901 Germantown Rd., Germantown, MD 20874 / e-mail: nuclear.infrastructure-PEIS@hq.doc.gov

|| 2010-1

Response to Commentor No. 2010

2010-1: The commentor's opposition to Alternative 1, Restart FFTF, and support for cleanup at the Hanford Site are noted. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

**Commentor No. 70: Form Letter B
Varsity Construction**

August 17, 2000

Colette Brown
NE-50
US Dept. of Energy
19901 Germantown Rd.
Germantown, MD 20874

Dear Ms. Brown:

I would like to add my voice for the restart of the FFTF facility. This state-of-the-art facility can produce medical isotopes for the diagnoses and treatment of cancer and it sits dormant.

In 1999 over half a million Americans died from cancer. In 2000 over a million new cases will be diagnosed. I realize that dying of cancer is not the most politically correct form death, but most of us have a friend or a relative who has been affected by cancer and we know its devastating effect.

I wonder how many more lives will be lost if the research and development of these life saving medical isotopes is not fully exploited. If someone you loved life could be saved by using these one medical isotopes, don't you hope that they would be available.

Millions of patients already benefit from the improved diagnoses with medical isotopes. In fact, more than 40,000 such procedures are performed each day in the United States. We have this exciting new technology in our back yard. Let's use it.

In a time of budget surpluses, let us invest in our future health and that of our children and see that the FFTF reactor is restarted again for the production of medical isotopes.

Respectfully,



Ed Deen
1519 South Union Court
Kennewick, WA 99338

Response to Commentor No. 70

70-1

70-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Form Letter B (Cont'd)

Individuals submitting this form letter:

- Ed Deen
- Jim Sims
- Don Gangl
- Grace Galbraith
- Suane Burton
- Gene Stott
- Steve Rhoten
- David Story
- Barbara Sims
- Todd Rhoten
- Burt Jones
- Jerry Sims
- Andrea Sims
- Rick Van Sickle
- Jolene Bibe
- Janice Amundson

Commentor No. 2333: Form Letter C
No Nuclear Power for Space Missions

Secretary, The

To: Secretary, The
Subject: No Nuclear Power for Space Missions

Dear Mr. Richardson:

I am opposed to the use of nuclear devices in space for energy generation in any space craft, to any destination, for any purpose.

The dangers of nuclear accidents and nuclear pollution are too real to ignore. Not only should we not endanger life on earth with nuclear accidents, we should not send nuclear-powered craft into space where they might cause unforeseeable dangers.

I urge you, Secretary Richardson, to order the National Aeronautics and Space Administration and all other space-oriented agencies to develop non-nuclear power sources for space craft.

Sincerely,

2333-1

Response to Commentor No. 2333

2333-1: DOE notes the commentor's opposition to NASA's use of nuclear materials for space missions and support for development of alternative energy sources. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch.

Form Letter C (Cont'd)

Individuals submitting this form letter:

- Mika Scott
- Michelle Agans
- Jessie Ortiz
- Jennifer Clayton
- Jeffery O. G. Ogbar
- Jeanie Keltner
- Jean Patterson
- Gerard Hansen
- Jared Ball
- Janet Minshall
- Jamie Pehling
- James Pratt
- Jackie Disalvo
- J. Simon Cornette
- Interhemispheric Resource Center
- Imre Bard
- Hugh Ryan
- Howard Pellett
- Helen Callbeck
- Gwen Perkins
- Helen P. Flanigan
- Greg Rupert
- Gina Ratkovic
- Gerry Tenney

Commentor No. 145: Postcard Campaign A
We support the restart of FFTF Reactor Facility...

PACE LOCAL 8-369
AFL-CIO, CLC
P.O. Box 524
RICHLAND, WA 99352



19:46 08/23/00 PASCO WA 99301

Ms. Colette E. Brown
NE-50 - Office of Nuclear Science,
Energy & Technology
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

Attn: NE PEIS

7 6



Nuclear Infrastructure EIS

We support the restart of the FFTF Reactor Facility at Hanford to meet the national needs for medical isotopes and other peaceful nuclear materials. The FFTF is the most economical, safe, and environmental friendly method available to meet these needs

Very truly yours,

Bob A. Johnston
504 BIRCH AVE.
RICHLAND, WA 99352



Response to Commentor No. 145

145-1

145-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Postcard Campaign A (Cont'd)

Individuals submitting this postcard:

John W. Biglin	Matthew J. Millbauer	R. Shawn Wilson	Harold A. Huttling	Kathy M. Cawley	Linda L. Bartlett	James P. Millbauer	Sidney N. Perry
Lindsay Dale	Robert T. Evans	David E. Wight	Thomas M. Peterson	Robert D. Brotherton	Amy Denning	E. M. Reed	John E. Rowbe
Karen Bowman	Jerry E. Ferson	Connie Gillespie	Linda S. Schaffer	Frederick M. Hopkins	Scott W. Wallace	Debra Laymens	Marilyn Lapp
John Arfamendole	Pam Miller	June Swanson	Dane Curry	J. C. Nelson	D. Woodford	Mary M. Bennett	Kristie McKine
Brett Meyer	Don Twitty	Michael Keizer	Larry G. Johnston	Brent Anderson	Dorrie Upchurch	Michael A. Johnson	Betty E. White
Justin Richardson	Thomas R. Gregory	Domingo Ramirez	Stephen J. Wallace	James P. Mitchell	James Tidwell	Penney M. Johnson	Bronyn B. Bardessono
Helen Richardson	Jack D. Varnado	James Murphy	R. L. Barrick	Gary Bills	Ruth Burtsfield	A. M. Albrecht	Bruce A. Gradisher
Diana Glesener	Scott W. Harder	Larry Taylor	Lorraine McEllery	Jesse B. Zavala	Jan Billingsley	Richard N. Budgeck	Michael Wallace
Frank W. Powell	Robert R. Beach	F. D. Day	Richard Layman	Barbara S. Chase	Victor L. T. Howard	Ariva L. Parker	A. Orvis
Jim Currens	Ronald A. Simkins	Donald H. Buskey	Mel Clark	Dustin Funderlurg	Paul M. Srubek	Jeff Rosson	Bonnie A. Orvis
Victoria Silvemil	Neal E. G.	Mike A. Stone	Rod J. Berry	Holly Funderlurg	Lou Ann Bunce	Rex Gillispie	Russell Barnes
Eliz B. Destons	James Skinnais	Ken Werst	Robert A. Gerds	Felicia A. Pasley	Kevin Russell	Gordon McCleary	David L. Romine
Tricia Callahan	Tom C. McPeck	M. L. Sylvester	Debbie Hendrick	Duane Sorbel	William E. Hamilton	Vicki Bergstrom	R. A. Quimby
B. R. Dumas	Dan Pitts	James R. Bateman	Daniel J. Sparks	John F. Covey	A. D. Schell	Terry Ostrand	Elaine Hawkins
John Conatore	Harold L. Whitworth	Douglas Caruth	Greg Julian	Bruce D. Pittner	Darrell G. Reng	Patricia Deckard	Mark C. Tews
Joe C. D	Lenore Armstrong	Ray Wilson	M. F. Duffy	Steve Maiuri	Kenny Robinson	Kathleen Homme	Rod R. Gadd
K. Lange	Russell K. Hulvey	Bobby Parks	Steve Burger	D. Ollero	W. J. Wheatley	James E. Baker	Gerald F. Saskowsky
Darlene Lange	Calvin N. Holbrook	C. E. Bergstrom, Jr.	Gary M. Buckley	Roger M. Whitis	David Floyd	Donald P. Cinvovich	Judy W. Clem
Michael B. Finn	Paul Fiskum	Michelle L. Millbauer	Paul Schtolman	Michelle Tidwell	Brian D. Skeels	Patricia Packer	Greg L. Bennett
Laurel Finn	Tim Van Rom	Jerome L. Aspevig	B. J. Davenkauer	Jane Gover	Vi Parish	Danny M. Harnett	Gary Maxwell
Kalen Finn	Frank Blume	Gary Wold	Robert W. Grant	Jimmy L. Butts	Amy C. Retteren	John D. Schuor	Doug A. Daye
Norm McLadeline	Michael E. Dawsen	Walt Harmala	Ron Green	Jacob A. Millbauer	Gene A. Schneebeck	Gregory D. Lanson	Nancy A. Bateman
R. D. Urquhart	Tom Schaffer	Gerald L. Massengale	Shad Smith	Molly J. Millbauer	James J. Allen	Violet L. Bricker	Lester Myers
George N. Ruge	J. W. Finnigan	Russell D. Nathan	Kirk Wood	Shafik H. Rifaei	Kelly Humble	William H. Cawley	Scott Angerman
Mike Guthrie	Dean Bushey	Deborah A. Kane	D. E. Kammenzind	Mike Jungers	Steve Ingram	Bill Robinson	Tomi J. Ott
W. R. Church	Levon Ackerman	Karen McGinnis	Ben L. Brickor	Rene Lemor	Larry Robinson	W. J. Schudknecht	Roger Olson
Cheryl Edwards	Wright Beach	William Sanduskey	M. R. Lahtinen	Jeff Oliver	Tom Vanderburg	Sherri Johnson	Sally Lamson
M. A. Rollison	Ronald O. Paynes	Patrick R. Goble	William D. Edwards	Renaë Romesburz	Jerry F. Pasey, Sr.	Brad Johnson	Dave Carrier
Dwight Hardy	Harold J. Clifton	Keith A. Smithton	Guy Wilson	Mary K. Hubbard	Chance Fricke	Ru Ann Johnson	Rebecca S. Kates
Lee McFadden	Donna Daffield	Canda Lynn Meador	Michael R. Galvin	Robert Wininger	David Locke	Eva M. Quinn	Kim W. Lampson
Greg McFadden	Pam Davan	Darrel W. Henry	D. E. Molnan	Dale A. Smith	Robert M. Gillette	Joe C. Quinn	Rusty Knight
Antonio L. Judkins	Michael Young	J. D. Bateman	James P. Taus	John Swanson	Bobby Joe Nicholson, Jr.	Karen L. Quinn	Rudy Higgins
Kerry L. Watts	Terri Mooney	Karen S. Eggers	Rick Lint	Buck Swanson	Steve Arcanin	Ira C. Tompson	John Dyer
Ben D. Corder	Eldon L. Pomerinke	C. H. Schmidt-Caruth	Billy M. Simons	Samuel L. Carney, Jr.	Dan Stephens	Marianne Kallio	Trent Mooney
J. W. Baker	John Ammerman	Faye Wiggins	Tammy Hastings	P. L. Hanson	Thomas W. Morris	Eileen Davis	O. W. Zuch
Lori J. Hunter	Dayna Turner	Tammi Lee	Pat Henderson	Chuck Baul	Glenn E. Hickman, Jr.	Judy Banaszynski	Tom Seeley
Bea Baker	Dell Molnau	W. B. Collins	Tracy H. Daines	John J. Joskey, Jr.	Linda R. Clemensen	Roy Duffield	Janis K. Loper
J. S. Dale	R. E. Jinnurish	Merle D. Jackson	Leonard R. Carlisle	Jim Hendry	Brett L. Yancey	Lary D. Spurbeck	Susan Barnard
Paul W. Tunnell	Lary C. Powers	Barbara Hisaw	Carla DeVoir	Ernst L. Ryld	Ed Boetteher	M. Crockett	Shakir Zaman
Dorothy L. Stewart	Kelly Dyer	Ronald L. Bricker	Amanda Sewell	Tony Sanchez, Jr.	Paul Brice	Thomas W. Bar	Walter F. Nicaise
Robert Wayne Meisinger	Adam Dyer	Danette Dyers	Brian G. Bergcin	Adan Garza	Kenneth Gray	Denise M. Taylor	Wayne A. Snyder
Ellis L. Pritchett	Bruce K. Tank	Donald W. McComb	Beverly A. Finney	Thomas H. Coyne	Rory C. Aerginson	Tim Yearout	Khudajai Oudwai
William A. Martin	Ron McMurphy	Kathleen Wilson	Jack W. Meyer	Jaci Burk	Fred McClure	Richard B. D.	Buzz Hammer

Postcard Campaign A (Cont'd)

Individuals submitting this postcard:

Julie Bowman	Barry Blondheim	Penny L. Ruben	J. A. Kane	Pauline Heid	Jerry M. Kunkel	Tom Schildknecht	Earl R. Palmer
Robert Versteeg	Loren L. Taylor	Quin Ronenoft	William C. Skinner	Dawn Springer	C. C. Aldridge	Eric Hudspeth	S. Myers
Alice Versteeg	Russell Edunnos	C. L. Lumpkin	B. E. Seymour	Randy Hickman	Wayne R. Cook	Verne Farley	Kurt Lawing
L. Walkup	Laura Nelson	James E. John, Jr.	Charlotte French	Kurk E. Watts	Ken O. Artz	Maurice Rosen	H. J. Summerville
Kevin Pfeifer	Richard Wokal	Abbie Thornton	J. N. French	Shawn Bigliu	Lynn L. Gates	Billy G. Bangs	Sean P. Pena
Tracy Pfeifer	Lisa Berneski	Ed Flores	Ronald A. Walz	M. Frank	M. D. Aldridge	David A. Wilz	Brian Gardner
Kathleen Higgins	Kenneth W. Banks	John Hendry	Jean Cook	Jim Piper	Donald L. Cravens	John J. Kirby	T. R. Law
B. L. Loper	Johnny S. Howard	Mark Bradley	Betty Olsen	Bruce Bentley	Frank Bennington	C. P. Charlston	Amy Hay
D. E. Noonan	Eugene C. Koschik	Lary Mercer	Idell M. Tong	Jackie M. Knighten	Vicki C. Carter	David Patrick	Keith Eliason
Jenny Albrecht	C. D. McGurdy	Ed Aguilar	George W. Herod	Kevin Grant	Wendy Thompson	Alan Frazier	R. Sierra
Patti Thompson	Cheryl Clancy	Ken Nipper	Breece B. Peterson	Jerry L. Allen	Russell Whitney	Henry J. Sauer	Dale M. Anderson
Jeff Thompson	Robert E. Manis	Randolf J. Alvin	Dean & Sandra Strawn	D. and A. Duranceau	Lori Calen	Wilbur Rees	John S. Henn
Dennis R. Whitney	Dale Halgren	Marie Caulge	Richard Hoglen	C. R. Coffman	Diana McCollum	Nancy Sauer	Jerry Perales
Susan Whitney	Kathleen J. Johnson	Joanne H. McCarty	M. J. Blair	G. F. Gilmour	Dauna L. Eddy	Willard B. Avedovech	A. R. Hollings, Sr.
Lauren Shane Loper	Nancy Thomas	Gene Birdwell	D. Johns	Bret Akers	Edward C. Carter	Fran Avedovech	Virginia L. Kidder
Kristin Loper	Steve Frevina, Jr.	Barbara Raney	Don Campbell	C. Jones	Gary McCollum	Matt Reid	Ronald J. Kidder
Earl J. Wyeth	Les Hernandez	Jody Schug	Pamela J. Edmonds	Bill Schneider	Michael J. Dennis	Curtis A. Kooiker	Jim Buchanan
Paul White	David H. Watson, Jr.	Joe A. Garcia	Rebecca L. Romine	Terry L. Allen	Debbie Carey	David Iceberg	K. E. Hatfield
J. S. Walsh	Kay J. Roberts	Don Jordan	Dennis G. Palmer	James C. Bennett	Vernon Madson	T. L. Talbert	S. E. Michel
M. D. Miller	Lary Oclewitt	Lisa Herres	Tawnya Krewson	Dewey L. Mahoney	Russ Meichenheimer	Susanne L. Kooiker	R. L. Southan
Zane E. Lane	Connie & Shawn Carr	Harry Rice	Mary L. Rumbab	Violet Greenough	Mark Weiss	Alicia Hogg	Charles Hampton
Ron Walser	George D. Morse	Terry V. Clouse	John J. Ursic	Walter & Doris O'Neil	Delbert V. Troxell	Sheila Godfrey	Patty Hall
Orrel Walser	Warren Hyland	J. G. Chandler	Pam Newell	Martin W. Huleny	Martha M. Troxell	Justin Weaver	K. G. McGehee
Chris Mertens	Greg T. Detloff	Sally Lamson	Evelyn Campbell	M. Karlene Keyes	M. G. Martinez	Kayla Welch	C. J. Gilchrist
Kenneth H. Brutzman	Dana Braden	G. Aldrich	Cindy Bentley	Kenneth Heid	Carla G. Moore	Carol Pedersen	D. Bryant
Dean Strawn	Becky A. Detloff	Bob Fersman	Judy L. Wheeler	Edward C. Springer	Daniel E. Cawley	Patrick E. Stanly	D. Bullock
Chance L. Mokler	C. McLeod	Terry E. Yebl	Angie Vantuyl	Kelley Mahoney	Gary Jackson	Karen Flannery	Richard Freeland
Bertram James Mokler	Douglas Gantt	Ed L. Youngblood	Michelle Aldridge	August T. Mathes	Laurie Tufford	C. Doug Curtis	Hipolito Hernandez
Gary L. Puckett	Abe Garza	David F. Cole	Donald J. Brown	C. G. Naugiar	Stacey Fitzsimmons	Cleo Roberson	Alvin H. Rick
Vernon V. Denniston	A. Phillipson	J. L. Gwan	Don L. Allen	Susan A. Krueger	Marianne J. Judd	Jonathan Puckett	Mike Terry
Eddae L. Denniston	Pat Carson	J. M. Heg	M. Marie Turner	L. M. Knudsen	Tomi Chalk	L. G. Wickstrand	Jack Guin
Dale S. Kintzley	Warren E. Kropf, Jr.	Jane Bublich	Jean V. Jones	Brandon Whitney	Gene Mercer	Bruce Kasey	J. Sherry
Erin L. Kimball	Darell Goeckner	Helen E. Klos	J. K. Haberstok	William Wertz	John L. Deichmans	Robert Bace	Von Greiff
Zandia Taylor	Kenneth J. Zubka	Joe Romwall	Charlotte Payne	Gorge DeMoss	Vicki Alexander	Linda Russell	M. B. Geffel
Frank D. Wah	Janet DeCoursey	Edna Smith	Don Shelton	Cory McGee	Nancy Potello	Linda Knowles	K. A. Shollenbergen
Shana Robledo	Phyllis J. Elmendorf	Dorothy Kanning	John L. Butcher, Jr.	Margarita Eder	James E. Parker	E. Campos	Richard L. Harris
A. K. Martinez	Joseph Wright	Helen E. Klos	Michael B. Linn	Marie N. Whitney	Rick Ullrich	Larry D. Benton	Steve H. Robinson
Judy Bettendorf	George Boyd	M. C. Loves, Jr.	Phillip Sheely	Terry Vantuyl	D. E. Lunciford	R. Radliff	Phillip S. Katz
Thomas O. Woodrich	Anna M. Ketchum	Edwards Cewantens	Patricia Aldridge	Martha Jane Shelton	Kenneth R. Gale	R. Ramirez	R. Crow
P. S. Nipper	Robert Norman	Jodie Norman	Wanda Oxford	G. Stephens	Cheryl R. Gale	Jason R. Dandridge	Douglas Peterson
Dave Carpenter	A. P. Wegner	Katie Norman	Joanne Duda	William B. Higgins	Julie K. Gale	Jerry S. Norr	R. K. Wilmoth
J. Gravenslund	Rene Norman	Patricia E. Myers	Rey Jamison	Roger W. Baden	Laurence E. Newquist	W. E. Boling	Charles Todd
Robert T. Gurth	George Evans	Steven C. Cantell	Barbara Wolski	Cheri McGee	Armando Trent	R. E. Chuller	Roger M. Wicker

Postcard Campaign A (Cont'd)

Individuals submitting this postcard:

Marsha Knare	Steve Wuerl	Ricky L. Wheatley	M. A. & Ed Christopherson	Anthony Mitzel
Roland Harvey	Rachel Mensinger	Jackie Burke	Tina Renz	Barbara Kontin
Aune Harvey	Stella Parker	R. Krothus	William G. Hopfritz	Keszler Family
Judy White	Bryan Huff	James M. Morley	Daniel Dengate	Daniel Erickson
Donna J. Powers	Mike Mensinger	Kevin Sanders	T. E. Perry	E. Y. McPherson
Robert Graves	Jean Mensinger	J. L. Williams	Cecilia Davidson	Margaret McPherson
Susanne L. Kooiker	Dave Lucoff	Terry L. Nygaard	Ron Hall	Lunzi Lee
Marc and Janet Sickles	Jan Lucoff	Blake Escudier	Opal Kuhl	Sarah Hoob
Carmen Graves	Patricia Mensinger	Steven MacArthur	Rose Rothwell	Susan Lukes
Karen Duffield	Thomas C. Knutzen	Charles M. Towne	John Elsen	D. L. DeCoursey
Ann M. Bailey	Don Brown	Robert Coffland	Larry Goodenow	Leslie Jensen
Kris Houston	Howard Rief	M. L. Delahunt	Stephen R. Halterman	
Randy Reed	Bob A. Johnston	Toni & David Nelsen	Vincent Drago	
Tracy Berger	Pam Kalinowski	John J. Ursic	Mitra Turner	
D. Munden	Randall Knowles	Trina Witt	Sharlyn Berger	
Kathleen Barton	Cecil Youngs	Mark F. Schwartz	Michael E. Leaverton	
Lary Pelleph	John B. Benton	B. J. Dabbling	Alvin E. Andor	
Beth Bremmer Brown	Karen Alexander	Donald K. Smith	Gary W. Cooper	
Kenneth R. Brown	S. A. Alton	Tim Paulsell	Charles D. Skogley	
Myron Lasseter	Don & Kathy Caldwell	C. L. Tucker	Mark Bowman	
Danny R. Golden	Daniel Stark	George Cortez	Don Flyckt	
Joan Eyre	Mike & Paula Yencopal	Michael D. Miller	Son Willett	
Diane and Keith Romwall	Harold Heacock	Terry A. Jobe	Jan Swanson	
Fran Yandow	C. R. Gonzalez	Ken Rinear	Roger A. Wahlquist	
Pam & Chuck Suszko	Sean Stockard	Thomas Nadler	Violet J. Greenough	
Nancy Sorensen	Kalle H. Hyrkas	D. J. Bruinekool	Tim Gosney	
Helen Yeh	Charity Schweiger	Douglas D. Edwards	Fidel T. Rivera	
Eli Aguirre	Eliazar Guajardo	John Castaneda	Todd Ferguson	
Walter Zahn	Kenneth A. Williams	John E. Rush	Patrick I. Linn	
Rodney Romwall	Sheryl Williams	Joyce Cowgill	Bruce E. Godfrey	
Michael Klos	Vicki Miller	Faye Braschler	Mike & Janelle Cain	
Patricia F. Klos	Rod Gillespie	P. A. Thompson	Joretta G. Pritchett	
J. T. Myers	Robert O. Barnet	Karen L. Noble	Barry Wilson	
Sharon Holman	Cheryl Sanders	James G. Saunders	Delores C. Watrous	
Mary Albeyta	Kristina Berg	Lee Schooley	Robert R. Rupp	
Rick Abeyta	D. Deri III	Denise A. Ward	Michelle Huff	
Peter Bono	M. Helloma	Ginger Boom	Christopher Huff	
Dolores Conrad	Eldon P. Beck	Barbara O'Brien	R. K. Newhouse	
Bill Conrad	John W. Reynolds	Beverly Knight	Sharon Alexander	
Debbie Mensinger	Eric Benson	Sheri M. McLand	W. B. Avedovech, II	
Lauri McLaughlin	Jerry Klemus	Kelly Nobley	Cindy Norberg	
Ed McLaughlin	Jane Foreman	Steven M. Hexum	Bruce E. Scott	
K. R. Mensinger	Michael Young	Jason & Mika Fortier	K. Tiggs	

**Commentor No. 661: Joretta G. Pritchett
Postcard Campaign A**

1015 Perkins
Richland WA
99352



Ms. Colette E. Brown
NE-50 - Office of Nuclear Science,
Energy & Technology
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

Attn: NE PEIS



Nuclear Infrastructure EIS

We support the restart of the FFTF Reactor Facility at Hanford to meet the national needs for medical isotopes and other peaceful nuclear materials. The FFTF is the most economical, safe, and environmental friendly method available to meet these needs.

Rename the facility to make away up care factor something like "Cancer Medical isotope production"

Very truly yours,

Joretta G. Pritchett
1015 Perkins
Richland WA 99352

661-1

Response to Commentor No. 661

661-1: DOE acknowledges the commentor's support for Alternative 1, Restart FFTF, and their desire to rename the FFTF. The purpose of this NI PEIS is to evaluate the environmental impacts of reasonable alternatives to fulfill the requirements of the proposed missions, which include the production of medical and industrial isotopes, the production of plutonium-238, and nuclear research and development. The Record of Decision for the PEIS will be based on a number of factors including environmental impacts, costs, nonproliferation issues, schedules, technical assurance, policy, and program objectives.

**Commentor No. 1812: Bill Zinn
Postcard Campaign A**

Bill Zinn
610 Patricia Ct.
Richland 99352



21-26 09/13/00 PASCO WA 99301

Ms. Colette E. Brown
NE-50 - Office of Nuclear Science,
Energy & Technology
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

Attn: NE PEIS
76



Nuclear Infrastructure EIS

We support the restart of the FFTF Reactor Facility at Hanford to meet the national needs for medical isotopes and other peaceful nuclear materials. The FFTF is the most economical, safe, and environmental friendly method available to meet these needs.

Colette:
FFTF's opponents
hate anything Nuclear
including medicine
to save lives. Please decide based on
science, not emotion + rhetoric Thanks

Very truly yours,
Bill Zinn

Response to Commentor No. 1812

1812-1

1812-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

1812-2

1812-2: DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

**Commentor No. 2327: E. U. McPherson
Postcard Campaign A**

Mr. & Mrs. E. U. McPherson
2304 Raven Court
West Richland, WA
99353



18:48 09/15/00 PASCO WA 99301

Ms. Colette E. Brown
NE-50 - Office of Nuclear Science,
Energy & Technology
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

Attn: NE PEIS

76



Nuclear Infrastructure EIS

We support the restart of the FFTF Reactor Facility at Hanford to meet the national needs for medical isotopes and other peaceful nuclear materials. The FFTF is the most economical, safe, and environmental friendly method available to meet these needs.

*THIS EXCELLENT FACILITY
OFFERS A FUTURE TO CANCER
VICTIMS THAT SHOULD NOT BE
DENIED DUE TO POLITICAL WHIMS.
THE MORAL HIGH GROUND IS
CLEAR.*

EM

Very truly yours,

E. U. McPherson
2304 RAVEN COURT
WEST RICHLAND, WA.
99352

2327-1

Response to Commentor No. 2327

2327-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

**Commentor No. 2328: Margaret McPherson
Postcard Campaign A**

Mr. & Mrs. E. U. McPherson
2304 Raven Court
West Richland, WA
99353



Ms. Colette E. Brown
NE-50 - Office of Nuclear Science,
Energy & Technology
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

Attn: NE PEIS

76



Nuclear Infrastructure EIS

We support the restart of the FFTF Reactor Facility at Hanford to meet the national needs for medical isotopes and other peaceful nuclear materials. The FFTF is the most economical, safe, and environmental friendly method available to meet these needs.

This is a national resource that should not be wasted. We need to have medical isotopes produced in the U.S.

Very truly yours,

Margaret McPherson
2304 Raven Court
West Richland, WA
99353

2328-1

Response to Commentor No. 2328

2328-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

**Commentor No. 1701: Sam Volpentest, TRIDEC
Postcard Campaign B**



TRI-CITY INDUSTRIAL DEVELOPMENT COUNCIL

901 N. Colorado, Kennewick, WA 99336-7685 USA 1-800-TRI-CITY 509-735-1000 509-733-6609 fax tridec@tridec.org www.tridec.org

September 18, 2000

Colette E. Brown, NE-50
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

DRAFT PROGRAMMATIC ENVIRONMENTAL STATEMENT
FOR
ACCOMPLISHING EXPANDED CIVILIAN NUCLEAR
ENERGY RESEARCH AND DEVELOPMENT AND
ISOTOPE PRODUCTION MISSIONS IN THE UNITED STATES
INCLUDING THE ROLE OF THE FAST FLUX TEST FACILITY (NI PEIS)

Dear Ms. Brown:

On September 13, we forwarded to your office, 433 signature cards supporting the selection of the FFTF restart option as the preferred method of meeting future requirements for nuclear isotope production and nuclear infrastructure research and development. Enclosed is an additional 386 signature cards in support of the FFTF.

These signature cards continue to show the support that exists in the Tri-Cities area and in other parts of Oregon and Washington for the restart of the FFTF to meet national program needs.

These signature cards are separate from and in addition to a number of similar postcards, which have been mailed directly to your office.

Please include these additional statements of support for the FFTF in the record of the NI-EIS public hearing record.

Very truly yours,


Sam Volpentest
Executive Vice President

Response to Commentor No. 1701

1701-1

1701-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Postcard Campaign B (Cont'd)

Individuals submitting this postcard:

K. M. McDonald	Jack Piery	Terrie Weizet	Brad and Melissa Doran	Jane Roberts	Ronald B. Melton	Patricia C. Miller	Robert McLaughlin
Brenda Baker	Summer Chavez	Gary Purser	Mary Sue Davis	Paul Roberts	Maurice C. Peterson	Les & Kelley Evans	DeAnna Ratens
Richard M. Vaughn	Frank T. Ferreirn	Kevin Hamblton	Andrew M. Sutherland	Ellen Bowman-Fairbank	Robert B. McCord	Jerome Delvin	Mrs. Wesley R. Door
Vivian L. Vaughn	Jo Butler	Marty R. Meyer	Cliff Stevenson	Alma Bowman	Steve Murray	Danica Marie Brooks	William M. Bryan, Jr.
Jerry Hennings	Maclane Rodman	Juanita Keltch	Blake Bert	Ben Matheson	Scott Lemburg	Jack Meyer	Cyndi Woodrum
Dave Whitemarsh	Jill Ruymann	Karen Heaston	Virginia H. Neuller	Kathy Basche	Janice L. Bishop	Marily Meyer	Keith Brutzman
John Cornett	Daniel Morgan	Elizabeth Heaston	Richard J. Miller	Pat Basche	Julie Bishop	Brenda Bender	Jim Penel
Susan E. Morgan	Donna Whitehead	Suzanne Heaston	Steve & Carol Wuerl	Sandi Strawn	James L. Martin	Thayne Stone	John Fouts
Marlin Schultz, Jr.	Paul R. Miller	Dale Heaston	Kathy Arntzen	Dean Strawn	David Lemak	John B. Hughlett	John Dabney
John Hughlett	Dave S. Whitehead	Phil Blakney	R. M. Naccarsto	E. T. Albee	Ross Montienth	Elaine Mathes	Pam Jett
Scott Hunt	Jannette Zaro	Richard Lathim	Frank Pentarold	Dennis Leitch	Joseph E. Pauly	Terrie Zeigler	Sandra L. Day
Tina Randles	Michael Attenberry	Stephanie Wyatt	Donna Sutherland	Tom O. Morris	Judy Pauly	Scott Bogart	Ron Claghorn
Matt Smith	Kurt Freund	R. S. Spencer	Nancy Darby	James A. Hyde	Max Conner	James Houston	Patricia Snyder
Kenneth E. Heikens	Marva Freund	Mary J. Wilson	Roger Marshall	Tom Kay	Laurie McDonald	Ricky J. Kitchen	Paul & Mary Whitemarsh
Sharon L. Heikens	James A. Kleit	Darnell T. Wyatt	Martin Arnten	Gayle Kay	Frank J. Vargas	Catherine O'Connell	John Pace
Barbara J. Perry	Keith Ramsay	Erin E. Irby	Clifford Floyd	Al Bailey	Bruce Combs	Stuart Jones	Michae Cent
Brian Von Bargaen	Marcia Turner	Patricia D. Sitz	Jim & Pattie Lilly	Victor Morris	Mary Withers	Barbara F. Sherer	Cyndy C. Rosenkraz
Elizabeth Von Bargaen	James Larsen	Ryan Thiessen	Pete Squires	Sharon C. Mitchell	Floyd E. Johnson	Millard R. Edwards	Paula Kalyer Hansen
Karen Estes	Armon Philip	Tamia Thiessen	Cheri Ellingsworth	James B. Mitchell	Larry D. Taylor	Monte Benham	Terry D. Richards
Richard Strain	Sandra Votaw	Gloria V. George	Robert Shillingstad	Terry Flores	Linda Pratt	John Howell	Floyd Gomez
Jan Strain	Helen E. Wyer	Fern Ryan	Todd Brow	Kathleen A. Rogers	Dixie Stephens	Nancy R. Berry	Dave Pullington
Wendy Hancock	L. W. Meissner	John M. Keltch	Teresa Frazier	Madge Hill	Bart Whitby	John W. Bey	Deanne Evans
Tim Hancock	Peter Hunsaker	P. Johnstone	Vincent Shawer	Chuck Windisch	Wayne Livingston	Craig Patterson	Frank Beaudehy
T. Schaeff	Jeannie Hansen	Susan Parker	Valjeanne B. Meadows	Harold Hughes	Terry Sanders	Byron J. Pugh	Paul Ellis
Gene Wioth	Janece Wood	Bill Carpenter	Eric J. Smith	Jeff Cole	R. Estelle Jackson	Todd Hart	Jo Ellis
Ray Isaacson	C. Denise	Colleen McPheron	Daleen J. Criswell	John Clark	Tom Nirider	K. Cornett	Judith R. Schur
Evelyn Isaacson	Karen DeChant	James S. Wetzel	Jane Shillingstad	J. Lema	Shawn Pomeroy	Kelly Mattocks	John A. Schur
Bud Isaacson	David Rodgers	Linda Buthea	Marilyn Van Hallebeke	Charlie Smith	Darren Bateman	Cynthia W. Muse	Sara G. Nelson
Juanita Kays	Frank Volan	Lance Pauer	Arnold Van Hallebeke	Tisha March	Patty Cowen	Clara R. Watkins	Jeff Nelson
Ben Burdett	Michael Eller	Michael Mercer	Dynna Schultz	Kellie Bishop	Lois Mitchel	Ed Epperson	Gene D. Kinsey
Thomas Ardamica	Robert Burn	Wayne Gebhardt	Phil McConnell	Mike March	Kelly Cancer	Dale K. Osgood	David R. Pratt
Karen Ardamica	Jean Keaveney	Robert R. Campbell	The Smithsons	Troy L. Bacon	Erin G. Parker	A. Reisenauer	Sharon L. Pratt
Michael D. Pheripp	John P. Keaveney	Victoria Campbell	A. E. Aughey	Arlene Massey	Jim N. Desulence	Irwin Finck	Mary Fisher
Dan Osborn	David Kennell	Nancy Spahr	I. J. Patrick Mckay	Dion Ivey	Cody Mahler	Stan Stave	John Zullo
Carol J. Aulo	Tawnya Krewson	Donald Wallin	Karl Bowen	Charles W. Fletcher	Teresa Hall	Daniel E. Slagle	James N. French
Timm Taff	John W. Parker	Stephen Greenough	Ray L. Aughey	Eileen Trescott	Michael G. Warner	Doug Slagle	Kay French
Bernadine Pherigo	Tammy Baker	Brenda J. Greenough	Gertrude Patello	Lori Prutt	Mike Tappeh	Dennis Shannon	Todd DeZellem
Donna Duffield	David Wootan	B. Clare Cranston	M. Patello	Mike Prutt	Sherrey Hankins	F. L. DeFever	Leonard R. Phisher
Pamela Dunfee	Jack L. Pierce, Sr.	Ella Childers	Larry Bateman	Denise Conner	Patricia M. Crum	David Derby	Martha Matthews
Ross B. Dunfee	Joseph M. Hall	Steve Kniveton	W. J. Leonard	Virgil Warren	L. Alexander	Nan C. Finck	Linda DeZellem
H. Marlene Quackenbush	Florine Hall	Bill Battershell	Kimberlee Jo Leonard	Rita L. Warren	Jarod V. Arm	Wesley R. Door	Sonja L. Torres

Postcard Campaign B (Cont'd)

Individuals submitting this postcard:

Julie J. Bon	Altha M. Perry	Edie Toothaker	Leticia B. Mortring	Katherine J. Ely	Crystal Eberle	Irene Hopkins	Gene Henke
Adrian Cahoon	Simin Zhang	Betty A. Sinner	J. Leo Aranda	Tom Larsen	Wendy Nelson	C. R. Shombu	Jean Peterron
Michele Cahoon	Vivian L. Blair	L. Brad Stut	Joe Garcia	Darrell LaMastus	Ray & Lenora Killian	Kerry Campeau	Tim Steenblock
Deanne L. St. George	Sherry Ebbert	Renee Bellack	D. Efrain	Julia A. Dreckner	Ellen Rangel	Gina & Steve McNiven	Tracy DeCoursey
Tammy Watkins	Gloria Slipp	Barbara Blakney	K. McColgun	Jesse Gibbs	Kurt Guhr	David Myles	Todd Wholl
Ann Conrad	Carol Mink	Del Ballard	Rick Mounke	Sol Guttenberg	Barbie Milliman	Greg & Terry Shipman	Tom Lewis
Becky Blanc	Janus N. Fisher	Shirley L. Pelbaugh	Yvonne Margullis	Shawn & Bruce Bond	R. Jensen	Roszeita Karl	Benny Villeail
Milly Mischke	Lew Mewke	Sheldon Blank	Ben Roberts	Cheryl R. G. Adamsen	Judy K. Schorzman	Jim Jennings	Viola M. Hiltwein
Margaret Miller	Elizabeth Houston	James C. Warden	Gary Robinson	Jeffrey L. Coloman	Rick Tobin	Janice Long	Lori K. Miller
Chris Montuih	J. L. Kip	Theresa Postor	Darci Tucher	Dany Adolf	Justin Merriman	Leonard S.	Sharadee Hess
Steven Killoy	Dan Blasdel	Karah L. Soveran	Richard Thomas	Stephen Allen	Melinda Phillips	Jodi Jones	Jane Olinger
Joe Daniels	Frank Ochoa	Chelsea Deitch	Larry Fitzgerald	Denine Houchins	Angie Scherer	Dell Zofrankosy	Louise Begas
Dorothy Hoffman	G. D. Kaas	Jordon Juebron	Mindy Smith	Robert Boles	David G. Keaemi	Virginia Duarte	Vickie Mounce
David A. Hagaduvin	Linda Morigeau	Valorie Claphan	Kathy Wertman	Tammy Boles	Sue Flaten	Jeff Short	Ellen Berg
Jason Frisby	Daron Miller	Charles Wilson	Becky Wedberg	Bonnie LaPierre	Scott Pearson	Stephanie Wood	Kellie Hays
Rand St. George	Michael J. Maller	Sally Ann Kelly	Bob Wedberg	Amy Schultz	Brady J. Peterson	Joseph Mendoza	Diau Patlersan
Glen Nakamura	Mike Rowley	Joel Spatta	Paul Julson	Kelly O'Brien	Billi Peterson	A. Taylor	Michael G. Scherr
Doug DuVon	Carolyn Brochner	Miche Althers	Dan Jones	H. C. Scheel	Tyson Phillips	Rick & Denise Estes	Mike Birge
R. C. Chiak	Burton E. Hill	Cheryl Stone	R. Rodinsky	Janet Scheel	Jolynne Merriman	Dean Wolf	Julie Wood
Danielle DuBois	Anna Leonard	Jackie Slonecker	April Brice	George Valdez	Kevin Clevekind	Jerry P.	Cecelia Wellenbrock
Jaclyn Nelson	Gavin Duncan	Holly Kelly	Derek Brice	Shanna Abbott	Paula Heller	Gavin Duncan	Karyn Ellenberger
Alison M. Nostreat	Darlin L. Johnson	Todd & Dawna Andrews	Jenefer Stinsen	Lary Abbott	Mark Peterson	Steve Lowe	Allen Frott
Stan Forhatins	Shauna DeCeria	E. F. Poiker	Jeri Rodinsky	Teresa Wilhelm	Sally Rexus	Kathy Latham	Jill Osborn
Aujmah Pante	Mary Guay	Lorna Hayden	Brian Highbarger	Wynona Harvill	Carol J. Glier	Grace L. Gemini	Pete Waller
Myra Oakes	Dan Donel	Barb & John O'Brien	Crystal McCallum	Debi Johnson	Dee Hanson	Kevin Walthers	Andy Mix
Paula L. Fallon	Herb Brayton	Stephany Roberts	Arland S. Robertson	Yvune W. Raynvort	Claire Schneck	Larry Schneider	Don Hamilton
Loren C. Oakes	Joshua L. McCall	Larry Schenmerhorn	Herb Luaders	Brian Nordquist	Jubal Helms	Christina Feldman	Dane Peterson
Sandra Porter	Jennifer Brayton	Sharon Grunst	Glennup Lyon	Richard A. Eckroth	Cynthia Deranleau	Harold Hedge	Pat Peterson
Melissa C. Lark Bratvord	Wyatt Peck	Fred J. Grunst	Mike Herman	Sharon Morasch	Susan C. Schwartz	Pat Lamberson	Joe Schmidt
Suzzenne Hansen-Fackas	Judy Bettendorf	Kipp Schmidt	Andith O'Banion	Mary Morgan	Judy Chaing	Tim Lamberson	Kathy Rutle
Andrew Hansen	Jon & Susie Lindberg	K. D. Hayden	Althea Duthenberg	Maura Zimmerschied	Javier G. Oherz	Blake Scherer	Eddie Radford
JoLynn Hansen	Lori E. Morgan	Emma Acton	John J. Wick, Jr.	Bob Leiby	C. Calextis	Alma E. Jones	Chris Hedge
Scott Lynch	Robert D. Dietrich	Phillip C. Talbot	Joyce L. Wick	Franklin D. Myers	Jodi Balmer	Paul Mail	Lori Morden
Debbie Watkins	Athena Pellaf	Mike Finn	Matt Stevens	Joyeux Stock	Patti Helms	JoAnn Bund	Ken Williams
Caroline Lynch	Leonard E. Horville	Robert Eades	Larry Chafin	Max Melvin	Sheril Sokey	William E. &	Beth Brown
Todd Beasell	Lynn J. Farn	Perry Allen	Kathy Keelieu	Betty E. King	Debbie L. Rogers	Kathryn W. Green	Tom Brown
Rosie Wageman	Loren E. Rogers	Harry F. Emerson	Henry Kidwell	Tracy McFall	Amande L. Hedges	Jack & Lenore Sandwig	Jessie Jaymes
Wendy Lacey	James Dupoquin	Dave & Patty Hubbard	Betty Roberston	Robert Fluor	David Booth	Kevin D. Meigs	Melissa Herron
Darcie M. Long	Brian DeCoursey	D. D. Keftch	Rick Towne	Mattlya M. Knight	Nathan M. Bogar	Earl W. Fordham	James G. McQuown, III
Sonja Hansen	Nancy Harville	Casey Vernelst	Jeanette R. Wynn	Ona Archer	Bill White	Julie Bussell	K. Cochran
Dennis Simmelink	Stephanie C. Seger	A. White	Earleen Eskildsen	Cris Eberle	Helen Shontell		Rory Stewart

Postcard Campaign B (Cont'd)

Individuals submitting this postcard:

Michael Hennessey	Melanie Holland	Pam Myers	Linda Padilla
Leonard Korenkiewicz	Berta L. Phillips	Gail K. Johnson	Rod Kelly
Stephen L. KewRiez	Greg McMurphy	Mary Ketchersid	Regina Twedt
Carol Babel	Deven Feldman	Colleen Samuelson	Jeremy L. Morgan
Cynthia Wynn	Twyla J. Gentle	Gina Taggart	Denise Brooks
Mark J. Owens	Vicky Birkland	Joh Fulner	Emily Morgan
P. L. Courson	Jack R. Lippold	Kathryn Lewis	Patty Mansfield
Ed Shenk	Mary E. Lippold	E. Gonsalves	T. Clary
Kelly Green	Cyndi Murray	Kristina Weikum	Melissa Vantiger
John Weed	Judy Denney	Ines Martinez	Shylee Douglas
Rose Shenk	Vickie Elkins	Sheri Norton	Barbara Cunningham
Kinny Harris	J. R. Bunch	Joy Williamson	Shawn McFaddon
Cynthia Bergman	Diane Smith	Clark Gregg	Dolores J. Conrad
Charlene McCormick	Allen Smith	Estella Mundjer	Jennifer Staley
Joseph Beck	John Birkland	Loretta Atrevno	Hoju Moon
Susan Norten	Ernest Ransier	Curt Fulnyler	Lloyd A. Knopp
Susan Carlson	Mary Perkins	Noma Edens	Guy Creore
Nellie K. Morris	Georgene Ransier	Maryann Cannon	C. B. Bryan
Dick Marberg	Marie Carder	Sheree Schweiger	W. E. Bryan
Tom Reynolds	Carolyn Chapman	Barbara E. Moser	S. M. Loika
Jerry Rits	Cheryl Coughren	E. Jill Bennett	Mike Bussell
Bob McBain	Nancy J. Carr	Madeleine Brown	Earl S. Gasaert
Rob Phillips	Dorothy Schoek	Sharon Burns w/ r/ f	Bill Conrad
Verdine Drois	Larry Bunch	Lowell Hill	E. R. Samson
S. Magid	Tracie Regislerk	David M. Smith	Clifton Maggan
Don Norris	R. Houchins	Judy Hill	Trevor Ferby
Pat Lowrance	Sandy Briggs	Linda K. Smith	Michell Brockmier
R. Burgen	Pat Fleming	Jennifer Schroder	Peter Chainor
Robert Janear	Walter Barraya	Mike Lauman	Linda J. Davis
Barb Marshall	Albert I. Davis	Brad Schroder	Jesse C. Brockmier
Rachel Davis	Molallay Betov	Penny Buettner	Robert M. Bore
Sam Marshall	Alan Hopko	Kevin Ockerman	Donna Johnstone
K.H.L.	Ann Hyatt	John Michaud	Leo M. Bowman
Dawnise Tildmar	V. Hyatt	K. Zbaranshas	Dawn Ramsey
Cindy Hernandez	P. A. Emerson	Karin Kelly	G.J. Idles
Janes J. Feldman	Lloyd Kellogg	Sandra Burrington	Don T.
Nigel Feldman	Scott Foster	Michael Vosk	Richard McDonald
Wayne O'Banion	Dean Johnson	Ann Reed	Pam Claren
Shawn Grendall	Helen Rossi	Charlotte Blair	Y. Atman
Jim Wickman	Robert Grimes	Sue Davis	D. Leiteh
Karen Churchill	Dollyanna Grimes	Margaret M. Owens	Ruth J.

Commentor No. 2078: Amber Waldref
Heart of America Northwest



Heart of America Northwest

"Advancing our region's quality of life."

Ms. Colette Brown
Office of Space and Defense Power Systems
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874

Dear Ms. Brown:

Please find enclosed comments made by citizens throughout the Pacific Northwest regarding the Draft Nuclear Infrastructure PEIS on the FFTF Nuclear Reactor. I have included three sets of comments, with the originals being sent to Sec. Bill Richardson. The first set of comments is postcards addressed to Sec. Richardson which I have copied eight to a page. I have also included letters to the Secretary. Finally, citizens wrote their comments on a piece of butcher paper before and after giving their public testimony at the Seattle hearing. I have sent copies of some of these comments.

I ask you to include these comments in the official record for the Pu-238/FFTF Environmental Impact Statement and also, to respond to the concerns voiced by the citizens of the Pacific Northwest. We hope that you will share these written comments and all those spoken at the public hearings with Sec. Richardson so that he can make a well-informed decision on FFTF at the end of the year. It is extremely important that he is briefed on the needs and desires of the people of this region --an essential part of the public involvement process.

Sincerely,


Amber Waldref
Field Organizer
Heart of America Northwest

2078-1

Response to Commentor No. 2078

2078-1:

DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and to providing ample opportunity for public comment on those actions. DOE takes this participation seriously. Further, DOE, and the Secretary of Energy in particular, are aware that there is a considerable difference of public opinion regarding the alternatives evaluated in this NI PEIS to accomplish the missions, including direct support as well as opposition to Alternative 1, Restart FFTF. In preparing the Final NI PEIS, DOE has carefully considered and responded to all comments received from the public during the comment period, regardless of how or where they were received. DOE's responses are contained in the NI PEIS Comment Response Document, and all comments received during the public comment period have been entered into the Administrative Record for this NI PEIS. All pertinent information and public input will be provided to the Secretary so that he may make an informed and unbiased decision with respect to the alternatives presented in this NI PEIS.

Comments received as enclosures to this submittal are individually considered as numbers 2079 through 2322.

305 Fourth Avenue • Suite 208
Seattle WA 98101

206/382-1014 • fax 206/382-1148 • e-mail: office@heartofamericanorthwest.org
www.heartofamericanorthwest.org
Gerard M. Pollet, JD, Executive

eclosed:coor

Commentor No. 2079: Betty Shakal

220 10TH St S
La Crosse, WI
Aug 28, 2000

Bill Richardson, Sec of Energy
Hanford Public Interest Network
1305 Fourth Avenue #208
Seattle WA 98101

Dear Mr. Richardson:

Friends of mine live in the south central Washington state area, near the city of Richland. They tell us about the discussions taking place regarding the restarting of the FFTF Nuclear Reactor in order to produce plutonium. In July your department released a report called PEIS supporting plutonium production in restarting the FFTF Nuclear Reactor. A FFTF restart violates the clean-up agreement of 1989, and will instead add more liquid radioactive waste to Hanford's already leaking and explosive high level nuclear waste tanks.

Before the restarting of this reactor, some very serious questions need to be addressed: Is restart safe? Does it harm clean up? Is there any legitimate reason to restart the reactor? Has the Department of Energy properly and thoroughly studied the need for restart, as well as the impacts of restart?

Please, for the benefit of my friends and all others who live in the area, **do not allow the FFTF Nuclear Reactor to restart. Do not** allow production of Plutonium. **Ban adding** more waste to Hanford's already high level nuclear waste system. **Demand** that Hanford take the responsibility to clean up their waste system.

Sincerely,



Betty Shakal, Science teacher

Response to Commentor No. 2079

2079-1: As discussed in Section 1.2 of Volume 1, plutonium-238 would be produced to support NASA's deep space missions. Plutonium-238 is not used to produce nuclear weapons. All missions considered in the NI PEIS are for civilian purposes.

DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. That proposed TPA milestone change was the subject of previous public meetings.

2079-2: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. High-level radioactive waste would not be generated from merely operating FFTF. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

2079-3: FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1,

Commentor No. 2079: Betty Shakal (Cont'd)

Response to Commentor No. 2079

including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Complete safety and operational readiness reviews would be performed prior to the restart. The FFTF Safety Analysis Report is routinely reassessed and updated when required to address any changes in plant configuration due to physical modifications or changes in plant operation procedures. The analyses presented in this NI PEIS reflect the proposed changes to the reactor core (including fuel and irradiation targets) to perform the DOE missions.

2079-4: See response 2079-1 and 2079-2.

As discussed throughout Section 4.3 of Volume 1, none of the proposed alternatives would add waste to the high-level waste tanks at Hanford.

2079-5: Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. The NI PEIS evaluates a range of reasonable alternatives for accomplishing the proposed action, one of which includes use of FFTF. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

2079-6: The environmental impacts associated with operation of the FFTF and support facilities at Hanford during normal operations and from postulated accidents are presented and discussed in Section 4.3 of the NI PEIS. All impacts to human health and to ecological resources would be small both in the immediate area of the Hanford site and at all distant locations.

2079-7: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 2080: Fred E. Schilling

Seattle, WA
06 September, 2000

Office of the Vice President
Albert Gore, Jr.
The White House
1600 Pennsylvania Ave.
Washington, D.C. 20500

Dear Vice President Gore:

Plans to restart the FFTF Nuclear Reactor at Hanford Washington continue to be at odds with the mission of cleaning up that radioactive waste dump.

How many years ago was it we were assured everything was: 1) under control; 2) even if it wasn't, it would be soon; 3) because the Congress had budgeted money for a clean-up?

We didn't mark it on the calendar, or write it down, or save the clippings, because there it was - the government was finally putting dollars where it's mouth was, and, surely, dollars would finally bring us peace of mind and security from accidents.

How many years, sir? Why should we remember when the promise was that the increasing threat of radioactive pollution was going to be dealt with. Why should we have to record this promise? Why should we have to rally again and again, write letters again and again, leave messages with answering machines again and again. Waste our time and yours, again, over a problem that should have been handled.

How could we have been so naive? How, after the years, (or is it now decades?), of scandal about the incompetent and careless storing of deadly waste so near the great river we share with Oregon could we believe our worries were over?

What is the administration waiting for - a message from God? If divine intervention is all that is going to save us, hadn't we better spend the next billion on prayer halls!

I don't know about you, but I for one feel the need for a head start.

Cheers,


Fred E. Schilling
8307 54th Ave. S.
Seattle, WA 98118

2080-1

Response to Commentor No. 2080

2080-1:

DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Steady and consistent progress in restoring the Hanford Site is documented in annual reports. These are available at www.hanford.gov.

Commentor No. 2081: Arundel B. Pritchett

602 Boyer Ave., #11
Walla Walla, WA 99362

August 21, 2000

Secretary Richardson
Department of Energy

Dear Secretary Richardson:

I am writing to express my concerns about the proposed restart of the FFTF nuclear reactor at the Hanford Reserve in Washington State. Due to leakage and potential explosion, Hanford's tanks already severely threaten the Columbia River. Restarting the FFTF nuclear reactor would create more high-level nuclear waste, thereby increasing the already present dangers. I ask you to please honor the Clean-up Agreement and shut down the FFTF nuclear reactor.

Sincerely,



Arundel B. Pritchett

|| 2081-1
|| 2081-2
|| 2081-1 || 2081-3

Response to Commentor No. 2081

2081-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford and protection of the Columbia River. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

As discussed throughout Section 4.3 of Volume 1, none of the proposed alternatives would add waste to the high-level waste tanks at Hanford.

2081-2: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. High-level radioactive waste would not be generated from merely operating FFTF. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

2081-3: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2082: Russell W. Pritchett

870 Democrat Street
Bellingham, WA 98226

August 21, 2000

Secretary Richardson
Department of Energy

Dear Secretary Richardson:

I am writing to express my concerns about the proposed restart of the FFTF nuclear reactor at the Hanford Reserve in Washington State. Due to leakage and potential explosion, Hanford's tanks already severely threaten the Columbia River. Restarting the FFTF nuclear reactor would create more high-level nuclear waste, thereby increasing the already present dangers. I ask you to please honor the Clean-up Agreement and shut down the FFTF nuclear reactor.

Sincerely,



Russell W. Pritchett

|| 2082-1
|| 2082-2
|| 2082-1 || 2082-3

Response to Commentor No. 2082

2082-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford and protection of the Columbia River. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

As discussed throughout Section 4.3 of Volume 1, none of the proposed alternatives would add waste to the high-level waste tanks at Hanford.

2082-2: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. High-level radioactive waste would not be generated from merely operating FFTF. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at

Commentor No. 2082: Russell W. Pritchett (Cont'd)

Response to Commentor No. 2082

each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

2082-3: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2083: Meg J. Jacobson

870 Democrat Street
Bellingham, WA 98226

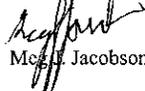
August 21, 2000

Secretary Richardson
Department of Energy

Dear Secretary Richardson:

I am writing to express my concerns about the proposed restart of the FFTF nuclear reactor at the Hanford Reserve in Washington State. Due to leakage and potential explosion, Hanford's tanks already severely threaten the Columbia River. Restarting the FFTF nuclear reactor would create more high-level nuclear waste, thereby increasing the already present dangers. I ask you to please honor the Clean-up Agreement and shut down the FFTF nuclear reactor.

Sincerely,



Meg J. Jacobson

|| 2083-1
|| 2083-2
|| 2083-1 || 2083-3

Response to Commentor No. 2083

2082-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford and protection of the Columbia River. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

As discussed throughout Section 4.3 of Volume 1, none of the proposed alternatives would add waste to the high-level waste tanks at Hanford.

2082-2: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. High-level radioactive waste would not be generated from merely operating FFTF. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at

Commentor No. 2083: Meg J. Jacobson (Cont'd)

Response to Commentor No. 2083

each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

2082-3: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2084: Anna Ruhl

Mrs Anna Ruhl
 W8735 Pine Ln
 Shell Lake WI 54871-8813

8/29/00

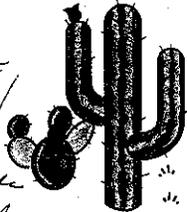
Mr. Bill Richardson

Is restart of the reactor safe? Does it harm clean up? Is there any legitimate reason to restart the reactor?

Has the Department of Energy properly & thoroughly studied the need to restart, as well as the impacts of restart?

Do Not Allow the FFTF Nuclear Reactor to restart!!!

Concerned Citizen
 Anna Ruhl



2084-1

2084-2

2084-3

2084-4

2084-5

Response to Commentor No. 2084

2084-1: FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Complete safety and operational readiness reviews would be performed prior to the restart. The FFTF Safety Analysis Report is routinely reassessed and updated when required to address any changes in plant configuration due to physical modifications or changes in plant operation procedures. The analyses presented in this NI PEIS reflect the proposed changes to the reactor core (including fuel and irradiation targets) to perform the DOE missions.

2084-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

2084-3: Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs:

Commentor No. 2084: Anna Ruhl (Cont'd)

Response to Commentor No. 2084

- 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;
- 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and
- 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. The NI PEIS evaluates a range of reasonable alternatives for accomplishing the proposed action, one of which includes use of FFTF. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

2084-4: The environmental impacts associated with operation of the FFTF and support facilities at Hanford during normal operations and from postulated accidents are presented and discussed in Section 4.3 of the NI PEIS. All impacts to human health and to ecological resources would be small both in the immediate area of the Hanford site and at all distant locations.

2084-5: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 2085: Rita Griffith

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

Restarting the reactor will
 delay clean-up at Hanford and
 create unacceptable risk of
 contamination and destruction
 of the Columbia River and the
 Pacific NW.

Sincerely,

Name Rita Griffith Address 2423 E. McGraw
 City Seattle State WA ZIP 98112

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2085-1 || 2085-2

2085-1

Response to Commentor No. 2085

- 2085-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford and the risk of contamination to the Columbia River. DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram funds designated for Hanford cleanup, regardless of the alternative(s) selected.
- FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.
- 2085-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2086: Mary L. Woods/Harry A. Warne

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: *Yes*

and challenge our scientists to find a way to neutralize plutonium or stabilize it in solid & insoluble forms. No more Nukes. Harness solar energy for electric power. The time has come to positively end use of Nuclear Reactors. Solar for private homes, for bldgs, etc.

Sincerely,

Mary L. Woods

Name Harry A. Warne Address 816 S. 216 St. #502

City Des Moines, WA State WA ZIP 98198-6395

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2086-1 || 2086-2

2086-3

Response to Commentor No. 2086

- 2086-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2086-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2086-3:** DOE notes the commentor's interest in plutonium disposition methods and alternative energy sources. The DOE missions to be addressed in this EIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies.

Commentor No. 2087: Marianne Trangen

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

We cannot afford the risk of accidents. The Columbia River is a precious resource to our region. Please protect it. Make sure that the Hanford Clean-Up is completed ASAP!

Sincerely,

Marianne Trangen

Name Marianne Trangen Address 3210 NW 58th St
City Seattle State WA ZIP 98107

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2087-1 || 2087-2

2087-3

2087-1

Response to Commentor No. 2087

- 2087-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.
- FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.
- 2087-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2087-3:** FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Commentor No. 2088: Jack Gordon

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2088-1 || 2088-2

Sincerely,

Name Jack Gordon Address 6514 44TH PL. NE
City Seattle State Wash. ZIP 98115

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2088

2088-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2088-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2089: Edward G. Payne

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

No more mindless, reckless decisions!
What has the Department done to
clean up the present wastes - what
we already have seeping into our
lives ?? Into your children's
lives ???

Sincerely,

Name Edward G. Payne Address 2535-102nd Ave. NE
 City Bellvue State WA ZIP 98004-2236

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2089-1 || 2089-2

2089-1

Response to Commentor No. 2089

- 2089-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2089-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2090: Allan Panitch

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

The medical isotope need is an attempt to get the gov't. to subsidize a need, which if it really exists, should be privately funded. Please shut down the FFTF as agreed.

Sincerely,

Allan Panitch

Name _____



Mr. Allan Panitch
PO Box 99387
Seattle, WA 98199

City _____

State _____

ZIP _____

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2090-1 || 2090-2

2090-3

2090-2

Response to Commentor No. 2090

- 2090-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2090-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2090-3:** The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. Although other manufacturers produce medical radioisotopes, DOE remains the key provider for a large number of radioisotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially experimental, these isotopes are not generally purchased in large-enough quantities to make their production financially attractive to private industry. However, supplies of many research isotopes are not readily available from existing domestic or foreign sources, causing a number of medical research programs to be terminated, deferred, or seriously delayed. Under the Ni PEIS proposed action and consistent with its mandates under the Atomic Energy Act, DOE would enhance its existing nuclear facility infrastructure to, among other things, more effectively support production of radioisotopes for medical applications and research. DOE's intent is to complement commercial sector capabilities to ensure that a reliable supply of isotopes is available in the U.S. to meet future demand, and to encourage the commercial sector to privatize the production of isotopes that have established applications to a level that would support commercial ventures. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

Commentor No. 2091: Betty Marsh

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

As an intelligent leader of this great country, I cannot understand how you could delay the Hanford-Clean-Up and actually even consider restarting the FFTF Nuclear Reactor! Please reconsider and think of the possible consequences you wouldn't want a catastrophe on your conscience!

Sincerely,

Name Betty Marsh Address 11549 15th Ave. N.E.
City Seattle State WA ZIP 98135

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2091-1 || 2091-2

2091-1

2091-3

Response to Commentor No. 2091

- 2091-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.
- 2091-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2091-3:** FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Commentor No. 2092: Mike Keary

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

RESTART WOULD BE UNCONSCIONABLE IN THE
FACE OF THE FAILURE TO CLEAN UP HANFORD.
THE THREAT TO THE COLUMBIA RIVER, THE
RIVER OF THE WEST AND THE SOUL OF
THE NORTHWEST IS SOMETHING WE CANNOT
TOLERATE. CLEAN IT UP!

Sincerely, *M Keary*

Name MIKE KEARY Address 2522 MOURDE CT NE
City RENTON State WA ZIP 98056

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2092-1 || 2092-2

2092-1

Response to Commentor No. 2092

2092-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford and protection of the Columbia River. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

2092-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2093: Kurt Munnich

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

The world already has too much Plutonium. We should be spending our energy and money immobilizing radioactive stuff and cleaning up or isolating radioactive wastes, like at Hanford. We have already contaminated our land and some of our people. We need to clean up the mess we have made, not create more of it!

Sincerely,

Kurt Munnich 8-19-08
 Name Kurt Munnich Address 4704 W. Glenhaven Dr
 City Everett State WA ZIP 98203-1735

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. ~~Also, please respond to my comments and concerns.~~

|| 2093-1 || 2093-2

|| 2093-3

|| 2093-1

Response to Commentor No. 2093

2093-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram funds designated for Hanford cleanup, regardless of the alternative(s) selected.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

2093-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2093-3: The purpose of the NI PEIS is to evaluate the environmental impacts of a range of reasonable alternatives to fulfill the proposed actions, one of which is the domestic production of plutonium-238. Plutonium-238, used to support NASA space missions, is not weapons-grade plutonium (i.e., plutonium-239). Whereas the United States is currently planning for the disposition of tons of surplus plutonium-239 that is not needed to support the U.S. nuclear weapons stockpile, there are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems and the plutonium-238 that fuels them for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in

Commentor No. 2093: Kurt Munnich (Cont'd)

Response to Commentor No. 2093

September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, DOE anticipates that the existing plutonium-238 inventory will be exhausted by approximately 2005. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for re-establishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Commentor No. 2094: Aleta Woodruff

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2094-1 || 2094-2

Enough already!
 Enough plutonium!
 Enough Nuclear Waste!
 Enough delays in Clean-up!

Sincerely,

Name Aleta Woodruff Address 2143 NE 95th Ave
 City Portland State Oregon ZIP 97220

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2094

- 2094-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2094-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2095: Carol Hebert

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

I beg you not to allow the FFTF to be restarted. Statistics show that the probability of a sodium-cooled fast reactor operating reliably is about 50%. And the danger is simply too high - both in terms of the danger of accidents and also in the creation of yet more high-level nuclear waste in an area which is yet to contain and dispose of previously created waste. Please help. Sincerely, Carol Hebert

Name Carol Hebert Address PO Box 433
 City Gambell State OR ZIP 97148

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2095-1 || 2095-2
 || 2095-3
 || 2095-4
 || 2095-5
 || 2095-6

Response to Commentor No. 2095

- 2095-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). DOE is fully committed to honoring this agreement. This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site.
- 2095-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.
- 2095-3:** See response to comment 2095-2.
- 2095-4:** FFTF is a 400 MW(t) fast reactor cooled by sodium. The reactor achieved initial criticality in February 1980, and full-power operation in December of that year. During the ensuing operational period until shutdown in 1992, FFTF performance, as a test reactor was appropriately measured by operational efficiency (i.e., a measure of how well the plant performed its planned research activities compared to the planned schedules). FFTF often achieved operational efficiencies approaching 100 percent. When sustained operation at power was the goal, FFTF achieved capacity factors in excess of 75 percent.
- 2095-5:** FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.
- 2095-6:** As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. High-level radioactive waste would not be generated from merely operating FFTF. It is DOE's policy

Commentor No. 2095: Carol Hebert (Cont'd)

Response to Commentor No. 2095

that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

DOE worker and public health and safety are of paramount and primary importance to DOE. There have been no serious safety related accidents causing significant injury or harm to workers, or posing any threat or harm to the offsite public at FFTF during its lifetime. The environmental impacts associated with operation of the FFTF are addressed in detail in Section 4.3 of Volume 1. The impacts are shown to be small. These impacts specifically include the risks to human health during normal operations and associated with postulated accidents. Over the 35-year operational period no fatalities would be expected among workers or in the general public in the vicinity of Hanford or at distant locations.

Commentor No. 2096: Peter A. Giese

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*Where will the waste
be stored? The present
facilities do not work!*

Sincerely, *Pete Giese*
Name *Pete Giese* Address *Captain Peter A. Giese
P.O. Box 16303
Seattle, Washington 98116*
City _____ State _____ ZIP _____

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2096-1 || 2096-2

|| 2096-3

Response to Commentor No. 2096

- 2096-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2096-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2096-3:** Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g. see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

Commentor No. 2097: Elise Kloter

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

once & for all, let's get this time bomb
for disaster out of our backyard.
We fought hard & won a clean-up
agreement. What do we teach
our kids about honoring our
agreements? Do it now!

Sincerely,

Name Elise Kloter Address 6212 SW Spokane St
City Scappoose State WA ZIP 98116

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2097-1 || 2097-2

2097-1

Response to Commentor No. 2097

- 2097-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2097-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2098: Susan R. Thompson

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

There is no reason to re-start this facility, enough plutonium is being made elsewhere. This is just PORK.

|| 2098-1 || 2098-2

2098-3

Sincerely,

Name Susan R. Thompson Address 3012 NW 58th
City Seattle State WA ZIP 98107

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2098

- 2098-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2098-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2098-3:** The purpose of the NI PEIS is to evaluate the environmental impacts of reasonable alternatives to fulfill DOE's missions, one of which is the domestic production of plutonium-238. Plutonium-238, used to support NASA space missions, is not weapons-grade plutonium (i.e., plutonium 239). Whereas the United States is currently planning for the disposition of tons of surplus plutonium-239 that is not needed to support the U.S. nuclear weapons stockpile, there are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems and the plutonium-238 that fuels them for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, DOE anticipates that the existing plutonium-238 inventory will be exhausted by approximately 2005. Section 1.2.2 of Volume 1 has been revised to clarify DOE's plutonium-238 production role.

Commentor No. 2099: Lois Fund

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

Please reconsider your position - we do not need any more nuclear waste on our planet.

Sincerely,

Name Lois Fund Address 1801 Kulm
City Port Townsend State Wa ZIP 98368

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2099-1 || 2099-2

2099-3

Response to Commentor No. 2099

- 2099-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2099-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2099-3:** DOE notes the commentor's concern regarding waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 2100: Cecilia Corr

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

Do not allow any more High-Level nuclear waste to be added to the explosive and leaking tanks that already threaten the beautiful Columbia River. Please stop the plutonium production at Hanford now. The future of the Northwest must be considered always. For our Health, Our Children and grandchildren, our Environment.

Sincerely,

Name Cecilia Corr Address 512-33d Ave. So.
 City Seattle State WA ZIP 98144

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2100-1 || 2100-2

2100-3

Response to Commentor No. 2100

- 2100-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2100-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2100-3:** As discussed throughout Section 4.3 of Volume 1, none of the proposed alternatives would add waste to the high-level waste tanks at Hanford. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 2101: Gen Kortez

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

Sincerely,

Name GEN KORTES Address 10215 NE 41st Ave
 City Vancouver State WA ZIP 98686

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Dear Secretary Richardson,

|| 2101-1 || 2101-2

Response to Commentor No. 2101

- 2101-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2101-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2102: Barbara Maripuum

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

I have attended hearings on this
over the past year or longer
and can not believe this
issue continues to exist. We
do not want a nuclear reactor in
the Columbia River area or near
Sincerely, Portland,

Name Barbara Maripuum Address 4820 SW Barbours
City Portland State OR ZIP 97201

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2102-1 || 2102-2

2102-2

Response to Commentor No. 2102

- 2102-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2102-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2103: Jeanette R. Egger

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2103-1 || 2103-2

*Unfair to Subject Pacific W/lat Residents
to dangerous waste - Hanford you a
commitment to clean up the waste
imposed? Safety removal and people!
Health & safety are being compromised
seriously! You can't control risk, please, but
you should achieve this!*

2103-1

2103-3

Sincerely,

Jeanette R. Egger

Name Jeanette R. Egger Address _____
City 1800 Ridgecrest Drive State _____ ZIP _____
Lake Oswego, OR 97034

→ Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2103

2103-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2103-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2103-3: The commentor's opposition to the restart of FFTF is noted. This PEIS has provided an estimate of the incremental potential human health impacts associated with a reasonable range of alternatives (including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

The NI PEIS identifies (in Chapter 3 of Volume 1) endangered species that live on or near all of the candidate sites, as well as aquatic and wetlands areas that may be impacted by operations at candidate locations. According to an International Atomic Energy Agency (IAEA) publication (IAEA Technical Report Series No. 332, Effects of Ionizing

Commentor No. 2103: Jeanette R. Egger (Cont'd)

Response to Commentor No. 2103

Radiation on Plants and Animals at Levels Implied by Current Radiation Protection Standards), a dose rate of 100 millirem per year to the most exposed human will lead to dose rates to plants and animals of less than 0.1 rad per day. The IAEA concluded that a dose rate of 0.1 rad per day or less for animals and 1 rad per day or less for plants would not affect these populations. The largest individual dose for any of the nuclear infrastructures alternatives under normal operations would be less than 0.1 millirem, which is three orders of magnitude less than the IAEA threshold for adverse effects. Therefore, implementation of any of the range of reasonable nuclear infrastructure alternatives analyzed would not be expected to result in adverse impacts on plants and animals living in potentially affected areas around the candidate sites.

Commentor No. 2104: W. Ashmenal

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2104-1 || 2104-2

*Please respect our LIVES
now & in the
FUTURE*

2104-2

Sincerely, *W. Ashmenal*

Name _____ Address _____
City _____ State _____ ZIP _____

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2104

- 2104-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2104-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2105: Michael S. Vlooses

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

Currently, clean up of Hanford's nuclear waste is extremely important, as we again have been reminded by the release of radioactive material into the environment in recent wildfire. Please stop the foolish plan to generate more waste under the guise of medical supplies and stop contamination making the air, land, and water of the US.

Sincerely,
Name Michael S. Vlooses Address 224 W. Euclid
City Spokane State WA ZIP 99205

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2105-1 || 2105-2

2105-1

Response to Commentor No. 2105

2105-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Regarding the Hanford wildfire of 2000, the DOE Richland Operations Office, the State of Washington Department of Health, and the U.S. Environmental Protection Agency performed environmental monitoring on and around the Hanford site to assess any potential radiological impacts. The wildfire did not cause a release of radioactive materials from any Hanford facilities, but did result in the resuspension of radioactive materials which were already present in the environment. The very low levels of radioactive materials that were resuspended were only slightly above natural background levels and required several days of analysis to quantify. Information on this event has been made available to the public and can be accessed at <http://www.Hanford.gov/envmon/index.html>. This site provides a link to information on the independent offsite air monitoring that was conducted by the U.S. Environmental Protection Agency.

As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. High-level radioactive waste would not be generated from merely operating FFTF. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 2105: Michael S. Vlooses (Cont'd)

Response to Commentor No. 2105

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

All air emissions and wastewater discharges would be in accordance with applicable permit and regulatory requirements. The releases of air pollutants and contaminated liquid are addressed in Section 4.3 of the draft NI PEIS. The release of air pollutants would result in concentrations well below Federal and state air standards (Table 4-13). The release of radioactivity and hazardous chemicals into the atmosphere would have a negligible effect on human health (Tables 4-17 and 4-19, respectively). There would be no discernible impacts to groundwater or surface water quality (Section 4.3.1.1.4). All impacts on ecological resources, including animals and fish, associated with operation of the FFTF would be small (Section 4.3.1.1.6). It is concluded that operation of the FFTF would have small adverse effects on the environment.

2105-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2106: Rosemary E. Brodie

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

The FFTF is a dinosaur that is too expensive to keep on standby indefinitely. It is too expensive to use for making materials we don't need and if we did, they can be made more cheaply & safely with existing plants elsewhere.

Sincerely,

Name ROSEMARY E. BRODIE Address 3842 NE 90th St
 City Seattle, WA ZIP 98115

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2106-1 || 2106-2

2106-3

2106-4

Response to Commentor No. 2106

- 2106-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2106-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2106-3:** DOE notes the commentor's opinion. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.
- 2106-4:** DOE notes the commentor's opposition to restarting FFTF for medical isotope production. DOE acknowledges that other manufacturers can produce certain isotopes that are economically attractive. In fact, the United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

Commentor No. 2107: Mason S. Taylor

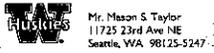
Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

My father was stationed at the Tri Cities during WW II in the NAVY. He later developed cancer which killed him. He also had heart disease. I was born in Pasco, developed Anemia, and later Type 1 Diabetes. Nuclear Power is dangerous, too dangerous. Shut it down!

Sincerely, *Mason S Taylor*

Name _____ S _____
City _____ ZIP _____



Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

2107-1 2107-2

2107-2

Response to Commentor No. 2107

- 2107-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2107-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2108: Mayme Hartl

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2108-1 || 2108-2

*Washington State is the most beautiful
State in the Union. Now I hear we
excepted Radioactive waste from Spain.
My God 'STOP' making Washington a
Radioactive dump. Or we will
lose this beautiful state.*

2108-3

Sincerely,

Name Mayme Hartl Address 6216 Douglas
City Wenatchee State WA ZIP 98801

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2108

- 2108-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NIPEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2108-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2108-3:** The referenced waste from the country of Spain was disposed at the U.S Ecology Site. This site disposes of commercial radioactive waste under a Washington State Department of Health license. The waste did not belong to DOE and DOE has no responsibility or authority over that waste.

Commentor No. 2109: Merle Ann McVay

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

The health and well-being of this, future generations, and the environment are primary. Let's develop safe and clean alternative energy sources.

Sincerely,

Merle Ann McVay
 Name *Merle Ann McVay* Address *4635 N.E. 33rd Ave.*
 City *Portland* State *OR* ZIP *97211*

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

2109-1 || 2109-2

2109-2

2109-3

Response to Commentor No. 2109

- 2109-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2109-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. Included in the NI PEIS are the results of analyses that show the risks associated with operating the FFTF are very small.
- 2109-3:** DOE notes the commentor's interest in alternative energy sources, although issues of research and development of alternative energy sources are beyond the scope of this Nuclear Infrastructure PEIS. The DOE missions to be addressed in this EIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies.

Commentor No. 2110: Maxine R. Wilkins

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

Hanford never should have been placed on a large and wonderful place as the Columbia River. The cleanup needs to be completed and follow through on the commitment to shut down the FFTF.

Sincerely, *Maxine R. Wilkins*

Name *Maxine Wilkins* Address *13703 S.E. Clay St*
City *Portland* State *OR* ZIP *97233*

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2110-1 || 2110-2

2110-1

Response to Commentor No. 2110

2110-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Public meetings were held on this formal milestone change. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

2110-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2111: Donna Joy and Dennis Neuzil

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2111-1 || 2111-2

Please do not restart Hanford's

FFTF Nuclear Reactor. We do not want more liquid high-level nuclear wastes to further threaten the Columbia River

Sincerely,

Donna Joy Neuzil
Dennis R. Neuzil

Name _____ Address _____
City _____  Donna Joy & Dennis Neuzil
2307 94th Ave NE
Bellevue, WA 98004 ZIP _____

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

2111-3

2111-4

Response to Commentor No. 2111

- 2111-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2111-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.
- 2111-3:** See response to comment 2111-2.
- 2111-4:** As discussed throughout Section 4.3 of Volume 1, none of the proposed alternatives would add waste to the high-level waste tanks at Hanford. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 2112: Paul B. Holden

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2112-1 || 2112-2

*state should
remove all fuel
waste and products
permanently*

2112-1

Sincerely, *P. B. Holden*

Name:  Paul B Holden
6254 25th Ave NE
Seattle WA 98115-7106
Address: _____
City: _____ state _____ ZIP _____

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2112

- 2112-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.
- 2112-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2113: Davis Wilkins

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

No one wants this project in their own back yard - and this particular back yard is truly a sensitive ecological area - one that holds much life - human and otherwise. Please - take the 15% initiative seriously (Ben Cohen) - we do not need this reactor. Let's clean it up safely.

Name DAVIS WILKINS Address 3856 NE 88th St.
City SEATTLE State WA ZIP 98115

Univ of Washington School of Medicine

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2113-1 || 2113-2

|| 2113-3
|| 2113-4
|| 2113-1

Response to Commentor No. 2113

- 2113-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2113-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2113-3:** DOE notes the commentor's opinion that the 15 percent initiative be adopted.
- 2113-4:** Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs:
- 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;
 - 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and
 - 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. The NI PEIS evaluates a range of reasonable alternatives for accomplishing the proposed action, one of which includes use of FFTF. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

Commentor No. 2114: Bill Hlavacek

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

|| 2114-1 || 2114-2

THERE ENOUGH PROBLEMS WITH
CLEANING UP HANFORD WITHOUT
RUNNING THE FFTF REACTOR
AND CREATING MORE NUCLEAR
WASTE.

2114-2

Sincerely,

Name BILL HLAVACEK Address 4350 SW TRENTHAM ST
City SEATTLE State WA ZIP 98136

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2114

2114-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2114-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposal) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

Commentor No. 2115: S. Penkman

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*Given the existing enormous problems of
cleaning - or even containment - of dangerous wastes
at Hanford, it makes no sense to consider
producing more. And there is no credible
justification for more plutonium production.*

Sincerely,

Name S. Penkman Address 123 Madison Ave. N.
City Bainbridge Island State WA ZIP 98110

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2115-1 || 2115-2

2115-1

2115-3

Response to Commentor No. 2115

- 2115-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2115-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2115-3:** The purpose of the NI PEIS is to evaluate the environmental impacts of a range of reasonable alternatives to fulfill the proposed actions, one of which is the domestic production of plutonium-238. Plutonium-238, used to support NASA space missions, is not weapons-grade plutonium (i.e., plutonium-239). Whereas the United States is currently planning for the disposition of tons of surplus plutonium-239 that is not needed to support the U.S. nuclear weapons stockpile, there are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems and the plutonium-238 that fuels them for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, DOE anticipates that the existing plutonium 238 inventory will be exhausted by approximately 2005. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Commentor No. 2116: Aina Doczi

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2116-1 || 2116-2

It is insidious to propose to add to the danger of the clean-up while at the same time stressing its importance. please shut down the FFTF nuclear reactor

2116-2

Sincerely, *Aina Doczi*

Name Aina Doczi Address 6837 - 47th Ave NE
City Seattle State WA ZIP 98115

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2116

2116-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2116-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposal) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

Commentor No. 2117: Mark Wahl

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*We can't play with our children's futures
by polluting the Columbia with deadly toxins
— and sending fish from these (irrigated farm
vegetables also) to all over the country.
Please be sensitive to this issue and don't
pit short term wargames against our children's future.*

Sincerely,

Name Mark Wahl Address 416 4th St.
City Langley State WA ZIP 98260

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2117-1 || 2117-2

2117-3

2117-4

Response to Commentor No. 2117

2117-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2117-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2117-3: The commentor's opposition to the restart of FFTF is noted. This PEIS has provided an estimate of the incremental potential human health impacts associated with a reasonable range of alternatives (including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

The NI PEIS identifies (in Chapter 3 of Volume 1) endangered species that live on or near all of the candidate sites, as well as aquatic and wetlands areas that may be impacted by operations at candidate locations. According to an International Atomic Energy Agency (IAEA)

Commentor No. 2117: Mark Wahl (Cont'd)

Response to Commentor No. 2117

publication (IAEA Technical Report Series No. 332, Effects of Ionizing Radiation on Plants and Animals at Levels Implied by Current Radiation Protection Standards), a dose rate of 100 millirem per year to the most exposed human will lead to dose rates to plants and animals of less than 0.1 rad per day. The IAEA concluded that a dose rate of 0.1 rad per day or less for animals and 1 rad per day or less for plants would not affect these populations. The largest individual dose for any of the nuclear infrastructures alternatives under normal operations would be less than 0.1 millirem, which is three orders of magnitude less than the IAEA threshold for adverse effects. Therefore, implementation of any of the range of reasonable nuclear infrastructure alternatives analyzed would not be expected to result in adverse impacts on plants and animals living in potentially affected areas around the candidate sites.

- 2117-4:** DOE notes the commentor's views. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs:
- 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;
 - 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and
 - 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. However, no component of the proposed action is for the purpose of supporting any defense or weapons-related mission. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

Commentor No. 2118: Maye Thompson

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

I know there is a need for the medical products to be made by the fast flux reactor, but we absolutely must clean up the current mess before we make more nuclear waste

Sincerely,

Name Maye Thompson, RN Address 734 SE 47th Ave
City Portland State OR ZIP 97215

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2118-1 || 2118-2

2118-1

Response to Commentor No. 2118

- 2118-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2118-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2119: Daphne Hyde

Dear Secretary, Washington,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

|| 2119-1 || 2119-2

I am extremely concerned regarding the
leaching of Nuclear waste towards the pristine
Columbia River. — We do NOT want
further Nuclear Waste deposited at this site
which is a peril as it is, at present! We
do not want the Reactor activated causing
further Nuclear Waste & pollutants.

2119-1

2119-3

Sincerely,

Name Daphne Hyde Address P.O. Box 5485
 City Kent State WA ZIP 98064

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns. ✓

Response to Commentor No. 2119

- 2119-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.
- FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.
- 2119-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.
- 2119-3:** See response 2119-2.

Commentor No. 2120: Lyndra Saunders

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

Because of deregulation, NRC downsided staff, which means less tests... NOT including aging. (OPB radia, 8/18/00) We must not allow the dangerous FFTF Nuclear Reactor to restart. Our water, fish, + quality of life will suffer. Nuclear industry must be monitored ^{more} carefully.

Sincerely,

Name LYNDRA SAUNDERS Address 13790 S.W. KNAUS Rd.
City LAKE OSWEGO State OR ZIP 97034

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2120-1 || 2120-2

2120-3

2120-4

2120-5

Response to Commentor No. 2120

- 2120-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2120-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.
- 2120-3:** See response to comment 2120-2.
- 2120-4:** All air emissions and wastewater discharges would be in accordance with applicable permit and regulatory requirements. The releases of air pollutants and contaminated liquid are addressed in Section 4.3 of the draft NI PEIS. The release of air pollutants would result in concentrations well below Federal and state air standards (Table 4-13). The release of radioactivity and hazardous chemicals into the atmosphere would have a negligible effect on human health (Tables 4-17 and 4-19, respectively). There would be no discernible impacts to groundwater or surface water quality (Section 4.3.1.1.4). All impacts on ecological resources, including animals and fish, associated with operation of the FFTF would be small (Section 4.3.1.1.6). It is concluded that operation of the FFTF would have small adverse effects on the environment.
- 2120-5:** DOE notes the commentor's concern over safety of the nuclear industry, although this general issue is beyond the scope of this Nuclear Infrastructure PEIS. The health and safety of workers and the public is a priority of the nuclear infrastructure program, regardless of which approach is chosen. Operation of the facilities would comply with applicable Federal, State, and local laws and regulations governing radiological and hazardous chemical releases.

Commentor No. 2121: Michael R. Maine

Dear Secretary NICHOLSON,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*You have a schedule and a "Plan" Let Schedule
To go / speed things up and get the CLEANUP
DONE!!*

*Also, until you clean-up what's there now, it
makes no sense to "Make" more.*

Sincerely, *Michael R. Maine*

Name *Michael R. Maine* Address *3001 So. 288th #165*

City *Federal Way* State *WA* ZIP *98003*

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2121-1 || 2121-2

2121-1

Response to Commentor No. 2121

2121-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposal) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

2121-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2122: Bruce Howard

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

NO GOOD, HOWEVER MEASURED, JUSTIFIES THE
MANY THOUSANDS OF YEARS OF RISK ^{FROM} THE
NUCLEAR PROGRAM WASTE. IF YOU BELIEVE
IT IS SAFE TO CONTINUE, TAKE ONE CORE
URANIUM FUEL ROD HOME WITH YOU
THEN SHOWE IT UP YOUR ASS.

Sincerely, ANOTHER STUPID HUMAN,

Name BRUCE HOWARD Address 1615 TAYLOR
 City HOOD RIVER State OR ZIP 97031

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2122-1 || 2122-2

2122-3

Response to Commentor No. 2122

- 2122-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2122-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2122-3:** The commentor's positions on nuclear programs and spent nuclear fuel disposition are noted. DOE policy regarding the risk associated with the storage of nuclear waste has been developed on the basis of extensive review and analysis of data, as well as development of waste management technologies. The PEIS is premised on and consistent with such DOE policy, and confirms small additional risks associated with proposed actions.

Commentor No. 2123: Linda Malan

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*Please focus on the clean-up
and do not add more waste
to an already dangerous sit-
uation. Please do not restart
the FFTF reactor*

Sincerely,

Linda Malan

Name LINDA MALAN Address 830 OLYMPIC AVE
City EDMONDS State WA ZIP 98020

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2123-1 || 2123-2

2123-1

2123-3

Response to Commentor No. 2123

2123-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposal) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

2123-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.

2123-3: See response to comment 2123-2.

Commentor No. 2124: Don Pennell

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2124-1 || 2124-2

*We join with Oregon in
trying to protect the
Columbia River!
And why are we burying
NEW waste there?*

2124-1

Sincerely,

Name M/M DON PENNELL Address 9029 NE 36TH ST.
City BELLEVUE State WA ZIP 98004-1201

(Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.)

Response to Commentor No. 2124

2124-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

The Hanford Site has both commercial and DOE waste disposal sites permitted by the State of Washington. The permit conditions ensure hazardous wastes are treated, stored, and disposed in a safe manner.

2124-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2125: Nancy Hannah

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

It is difficult for me to understand why you would even be considering a move to restart the FFTF nuclear reactor. The danger seems overwhelming. We need to take care of the mess we have already created - Please do not start this reactor up again.

Sincerely,

Name Nancy Hannah Address 7526 27th Ave NE
City Seattle, State WA ZIP 98115

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Secretary Richardson,

|| 2125-1 || 2125-2

2125-3

Response to Commentor No. 2125

- 2125-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2125-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2125-3:** DOE notes commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 2126: Jacquet Weisen

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

Restarting the nuclear reactor will increase the danger of accidents + further contamination in the Northwest. Don't do it. Shut it down as quickly. Prevention of Columbia River contamination is vital for all human concerns. We want much more high level nuclear waste production. Honor your clean up plan!

Sincerely,

Jacquet Weisenbach

Name Jacquet Weisenbach Address 67A 56th Ave. So
 City Seattle State WA ZIP 98118

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2126-1 || 2126-2

2126-3

2126-1

2126-4

2126-1

Response to Commentor No. 2126

2126-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford and the protection of the Columbia River. DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram funds designated for Hanford cleanup, regardless of the alternative(s) selected.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

2126-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2126-3: FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

2126-4: DOE notes the commentor's concern regarding high-level radioactive waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed.

Commentor No. 2126: Jacquinet Weisen (Cont'd)

Response to Commentor No. 2126

These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 2127: Kathy Lobry

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

We are having a hard enough time trying to clean up and contain the waste that is already there. Why would we want to create more waste and start all over again???

We need to clean up the waste. It is already too close to a major water source. Please do not create more problems!!

Sincerely,

*Kathy Lobry*Name *Kathy Lobry* Address *8519 N.E. 19th Ave.*City *Vancouver,* State *WA,* ZIP *98665*

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2127-1 || 2127-2

2127-1

Response to Commentor No. 2127

2127-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford and the protection of the Columbia River. DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram funds designated for Hanford cleanup, regardless of the alternative(s) selected.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

2127-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2128: Gene Derig

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2128-1 || 2128-2

I've written to you before on this
subject so I'll be briefer this time:
- Shut down the FFTF Reactor.
- Stop violating the clean-up agreement
- Footdragging is causing delays that
only add to the chances of disaster.

2128-2

2128-1

Sincerely,

[Signature]
Name GENE DERIG Address 1302 K. AVE (P.O. Box 34)
City Anacortes State WA ZIP 98221

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2128

- 2128-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2128-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2129: Anonymous

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

Is DOE saying the DEIS of Hanford's
FFTF is NONsignificant by their
Determination? --WRONG!!!

Please Mr. Richardson, speak the
Truth about this travesty of justice.

Jerome + JoAnn Klacsan

Sincerely,

Name _____ Address POB 533
City North Bend State WA ZIP 98045

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2129-1 || 2129-2

2129-3

Response to Commentor No. 2129

- 2129-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2129-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2129-3:** It is not suggested that there are no environmental impacts associated with restart and operation of the FFTF. However, the impacts to the biosphere would indeed be small as demonstrated by the results of the detailed assessments performed for the NI PEIS. All air emissions and wastewater discharges to the environment would be in accordance with applicable permit and regulatory requirements. The releases of air pollutants and contaminated liquids associated with FFTF operations are addressed in detail in Section 4.3 of the draft NI PEIS. The release of criteria air pollutants would result in concentrations well below Federal and state air standards (Table 4-13); the releases of radioactivity and hazardous chemicals into the atmosphere would have a negligible effect on human health (Tables 4-17 and 4-19, respectively); and no discernible impacts to groundwater or surface water quality would result from water discharges (Section 4.3.1.1.4).

Commentor No. 2130: Florence B. Wager

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*It would appear that citizens down
river from Hanford have more to fear about
a nuclear threat from their own country
than from a foreign foe. No more
nuclear waste should be added to the
leaking tanks existing. Clean it up!*

Sincerely,

Name Florence B Wager Address 7100 Topika In
City Unconville State WA ZIP 98664

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2130-1 || 2130-2

2130-3

2130-4

Response to Commentor No. 2130

- 2130-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2130-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2130-3:** The commentors's opposition to the restart of FFTF is noted. This PEIS has provided an estimate of the incremental potential human health impacts associated with a reasonable range of alternatives (including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

The NI PEIS identifies (in Chapter 3 of Volume 1) endangered species that live on or near all of the candidate sites, as well as aquatic and wetlands areas that may be impacted by operations at candidate locations

Commentor No. 2130: Florence B. Wager (Cont'd)

Response to Commentor No. 2130

According to an International Atomic Energy Agency (IAEA) publication (IAEA Technical Report Series No. 332, Effects of Ionizing Radiation on Plants and Animals at Levels Implied by Current Radiation Protection Standards), a dose rate of 100 millirem per year to the most exposed human will lead to dose rates to plants and animals of less than 0.1 rad per day. The IAEA concluded that a dose rate of 0.1 rad per day or less for animals and 1 rad per day or less for plants would not affect these populations. The largest individual dose for any of the nuclear infrastructures alternatives under normal operations would be less than 0.1 millirem, which is three orders of magnitude less than the IAEA threshold for adverse effects. Therefore, implementation of any of the range of reasonable nuclear infrastructure alternatives analyzed would not be expected to result in adverse impacts on plants and animals living in potentially affected areas around the candidate sites.

2130-4: As discussed throughout Section 4.3 of Volume 1, none of the proposed alternatives would add waste to the high-level waste tanks at Hanford. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 2131: Evelyn Swann

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2131-1 || 2131-2

We already have despoiled our land
and water by so-called nuclear "defense",
plus powerplants, to add to our
suicidal evolution. THE FFTF will only
serve to hasten the day. Please come
to your senses!

Sincerely,

Name Evelyn Swann Address 1016 Key St.
City Bellingham State WA. ZIP 98225
Evelyn Swann SAME

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

2131-2

Response to Commentor No. 2131

- 2131-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2131-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF; however, it should be noted that FFTF would not have any defense missions under the proposed action.

Commentor No. 2132: Marjorie Worthington

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

Once again, I find myself shocked & saddened that rather than attempt to have changed the DOE's agenda, to shut down the FFTF Reactor, with its devastating potential to add more toxic waste to the most polluted area imaginable, cleanup of which has met delay after delay over many years since the Tri-Party Agreement. Why are the citizens of this area - those most affected by the mess of toxic waste being ignored by a government agency with that much capability to ensure, to continue to assert power that denies the rights of citizens in this area to Sincerely live in a safe environment. This agenda is clearly not in the public interest!

Name Marjorie Worthington Address 1947 Clovercrest St.
City Enumclaw State WA ZIP 98022

* I have attended many public hearings over the last few years and sent letters of protest, but please honor the cleanup agreement & shut down the FFTF Reactor or shut it down!
Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

2132-1 2132-2

2132-1

2131-3

2131-4

2131-3

Response to Commentor No. 2132

2132-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposal) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

2132-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2132-3: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S.

Commentor No. 2132: Marjorie Worthington (Cont'd)

Response to Commentor No. 2132

Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2132-4: The purpose of this NI PEIS is to evaluate the environmental impacts of a range of reasonable alternatives to fulfill the requirements of the stated missions, which include the production of medical and industrial isotopes, the production of plutonium-238 for future NASA missions, and civilian nuclear research and development.

DOE policy encourages effective public participation in its decision making process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

Commentor No. 2133: Carol Gordon

DATE: _____ / _____ / _____

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

It has been proven that the leaking tanks are a danger to our Columbia River. Nothing has been done to remedy this problem and now the DOE wants to restart the FFTF. What is to become of our natural resources? Shame on the DOE.

Sincerely,

Name Carol Gordon Address 9021 26th Ave S.
City Lakewood State WA ZIP 98499

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2133-1 || 2133-2

2133-1

Response to Commentor No. 2133

2133-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposal) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

2133-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2134: David Austin

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

We haven't figured out how to safely store
the high level waste already present -
I don't think we should ask to it.

Sincerely,

Name David Austin Address 2107 N. 62nd
City Seattle State WA ZIP 98103

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2134-1 || 2134-2

2134-1

Response to Commentor No. 2134

- 2134-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As discussed throughout Section 4.3 of Volume 1, none of the proposed alternatives would add waste to the high-level waste tanks at Hanford.
- 2134-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2135: Suesanne Feather

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

We have been advised by a friend who is a chemical engineer at the US W NEVER to eat fish coming from the hook area of the Columbia River. The river is already seriously compromised - please help future generations.

Sincerely,

Name Suesanne Feather Address 104 Driftwood Shores Rd.
City Camano Island State Wa. ZIP 98282

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2135-1 || 2135-2

2135-1

Response to Commentor No. 2135

2135-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NIPeIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

No food or water restrictions are in place outside the Hanford Reservation as a result of Hanford activities.

2135-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2136: Howard Pellett

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

|| 2136-1 || 2136-2

*It is disgraceful that we are still talking about clean-up
of the Hanford site after all the taxpayers' money that
has been spent and all the hearings and all of the public
testimony. We will not tolerate more danger, more waste,
and more plutonium production at Hanford. It's time to
listen to the public!*

2136-1

Sincerely,

Name Howard Pellett Address 5293 SUMNER ISLAND RD
City ANACORTES State WA ZIP 98221-9841

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2136

2136-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposal) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

2136-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2137: Irene Kelly

Please honor the Clean-up Agreement and

we shall not tolerate
more danger, waste
and plutonium production
at Hanford.

Sincerely,

Irene R. Kelly
Name Irene Kelly Address 361 Sudbury Rd
City Walla Walla State WA ZIP 99362

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2137-1 || 2137-2

2137-1

Response to Commentor No. 2137

2137-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposal) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

2137-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2138: Kathryn Rolery

Dear Secretary (Kernaruski),

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*I am very concerned about the move
of restocking the FFTF. Money needs to be
spent in clean up + CANCER prevention
programs - not in destruction. When
are we going to shut building - not
destroying life! SAY NO to ALL!*

Sincerely,
Name Kathryn Rolery Address 722 W. Allen
City Walla Walla State WA ZIP 99362

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2138-1 || 2138-2

2138-3

2138-4

Response to Commentor No. 2138

- 2138-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2138-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2138-3: As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram funds designated for Hanford cleanup, regardless of the alternative(s) selected.

There is no relationship between monies appropriated by Congress for DOE and those set aside for cancer prevention programs; thus, there will be no impact on funding for cancer research whether or not Alternative 1 is selected as a record of Decision.
- 2138-4: The NI PEIS provides an estimate of the incremental potential human health impacts associated with each of the alternatives proposed for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 through 4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from implementation of a range of reasonable alternative, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with implementation of any of the analyzed alternatives would be small.

Commentor No. 2139: Susan Hamilton

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

It is of utmost concern that we take measures to contain and hopefully eliminate the highly explosive ~~contaminants~~ contaminants and toxic wastes that are stored and seeping inches away from the Columbia River. This is a global concern. we have to do something we can no longer wait.

Sincerely,
Name Susan Hamilton Address 443 Washington St.
City Walla Walla State WA ZIP 99362

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact

|| 2139-1 || 2139-2

2139-1

Response to Commentor No. 2139

2139-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

2139-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2140: Fred E. Schilling

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

Since WWII we have been waiting
in vain for some bright person to
solve the problem of nuclear waste
No luck! It's about time we face it.
Best we can do is start trying to clean
up the mess we have - not make more.

Sincerely,

Name Fred E. Schilling Address 8307 54th Ave. S.
City Seattle State WA ZIP 98118

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2140-1 || 2140-2

|| 2140-1

Response to Commentor No. 2140

- 2140-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.
- 2140-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2141: Edith Fairhall

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

This is important - do
not add to our nuclear
waste. It is already a
public menace.

Sincerely,

Edith Fairhall

Name EDITH FAIRHALL Address 933 N. Northlake # 7

City Seattle State WA ZIP 98103

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2141-1 || 2141-2

2141-1

Response to Commentor No. 2141

- 2141-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.
- 2141-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2142: Stephen J. Curley

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

After reviewing the EIS on the start up
of the FFTF there is no way you
can justify starting up FFTF - do
not start up FFTF and clean up the mess
you have already created

Sincerely,

Name Stephen J. Curley Address PO Box 511
City Nood Noo State OR ZIP 97031

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2142-1 || 2142-2
|| 2142-3
|| 2142-4
|| 2142-1

Response to Commentor No. 2142

- 2142-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2142-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.
- 2142-3: Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs:
 - 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;
 - 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and
 - 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. The NI PEIS evaluates a range of reasonable alternatives for accomplishing the proposed action, one of which includes use of FFTF. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.
- 2142-4: See response to comment 2142-2.

Commentor No. 2143: Roy G. Farrell

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

WE DO NOT NEED MEDICAL ISOTOPE
PRODUCTION FROM THE FFTF, NOR
DO WE NEED ANY MORE WASTE
PRODUCTION AT HANFORD. PLEASE
FOCUS ALL ACTIVITY & ATTENTION ON
CLEAN UP.

Sincerely,

Name ROY G. FARRELL, MD Address ROY G. FARRELL, MD
1403 McGILVRA BLVD. E.
SEATTLE, WA 98112

City _____ State _____ ZIP _____

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2143-1 || 2143-2

2143-3

2143-1

Response to Commentor No. 2143

- 2143-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NIEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.
- 2143-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2143-3:** DOE notes the commentor's opposition to restarting FFTF for medical isotope production. Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions (basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term (less than 5 years). Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

Commentor No. 2144: Michaela M. Buchanan

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

Sincerely, Michaela M. Buchanan

Name Michaela Buchanan Address 2414 NE Rebecca Ln
City Poulsbo State WA ZIP 98370

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2144

|| 2144-1 || 2144-2

2144-1:

DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2144-2:

DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2145: Dawn Marie Dancey

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

I am strongly opposed to the restart of the FFTF AT Hanford. My concerns are those of safety both physically and environmentally for this generation and future. This would also delay or stop the already indefinite clean up plan of Hanford

Sincerely, Dawn Marie Dancey

Name DAWN MARIE DANCEY Address 2123 NE 53RD
City PORTLAND State OR ZIP 97213

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2145-1 || 2145-2

|| 2145-3

|| 2145-4

|| 2145-1

Response to Commentor No. 2145

- 2145-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.
- 2145-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.
- 2145-3:** See response to comment 2145-2.
- 2145-4:** This EIS has provided an estimate of the potential human health impacts associated with a range of reasonable alternatives for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Sections 4.3 through 4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from implementation of a range of reasonable alternatives (Alternative 1 includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with any of the analyzed alternatives and with restarting FFTF would be small.
- Chapter 4 of the PEIS provides a comprehensive assessment of the environmental consequences of each of a range of reasonable alternatives. (The results of these assessments are also summarized in Chapter 2.) These analyses include assessments of the impacts on land resources, water resources, air quality, geology and soils (in addition to the human health impacts discussed in the preceding paragraph). For all alternatives that consider the use of facilities at Hanford, the environmental impact on all of these resources is small. The NI PEIS identifies (in Chapter 3 of Volume 1) endangered species that live on or

Commentor No. 2145: Dawn Marie Dancey (Cont'd)

Response to Commentor No. 2145

near all of the candidate sites, as well as aquatic and wetlands areas that may be impacted by operations at candidate locations. According to an International Atomic Energy Agency (IAEA) publication (IAEA Technical Report Series No. 332, Effects of Ionizing Radiation on Plants and Animals at Levels Implied by Current Radiation Protection Standards, a dose rate of 100 millirem per year to the most exposed human will lead to dose rates to plants and animals of less than 0.1 rad per day. The IAEA concluded that a dose rate of 0.1 rad per day or less for animals and 1 rad per day or less for plants would not affect these populations. The largest individual dose for any of the nuclear infrastructures alternatives under normal operations would be less than 0.1 millirem, which is three orders of magnitude less than the IAEA threshold for adverse effects. Therefore, implementation of any of the analyzed nuclear infrastructure alternatives would not be expected to result in adverse impacts on plants and animals.

Commentor No. 2146: Marilyn D. Ream

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2146-1 || 2146-2

We have no coherent plan for coping with the nuclear waste already threatening the Columbia River. The FFTF Nuclear Reactor is in no way needed to produce medical isotopes.

2146-1

2146-3

Sincerely,

Restarting the FFTF
 Marilyn D. Ream M. D.
 Name Marilyn D. Ream MD Address 324 W. Gibbs Rd
 City Spokane State WA ZIP 99224

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2146

- 2146-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.
- 2146-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2146-3:** DOE notes the commentor's opposition to restarting FFTF for medical isotope production. Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions (basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term (less than 5 years). Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

Commentor No. 2147: William C. Burns

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2147-1 || 2147-2

Since I live in the area and like my drinking water sans the nuclear waste, I can understand in difference you don't live here. But what would you do if you did? It's not your family but what if yours? Would you want your mother, grand mother threatened by this accident waiting to happen? me either!!!!

Sincerely,

Name William C. Burns Address 2905 NE 13th
City GRESHAM State OR ZIP 97030

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

2147-1

Response to Commentor No. 2147

- 2147-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2147-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2148: D. Bullington

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

BASING RESTART UPON IRRADIATION OF
HIGHLY ENRICHED METALLIC URANIUM FUEL
THAT WAS FOUND BY ARGONNE NATIONAL
LABORATORY TO BE DIMENSIONALLY UNSTABLE
UNDER IRRADIATION APPEARS TO ME TO
BE IRRESPONSIBLE.

Sincerely,

Name D BULLINGTON Address 610 S. MILROY ST
 City OLYMPIA State WA ZIP 98502 5126

Please include my comments in the official record for the Pu-239/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2148-1 || 2148-2

2148-3

Response to Commentor No. 2148

- 2148-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2148-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2148-3:** Metallic uranium nuclear fuel has been successfully used in power and research nuclear reactors worldwide for over 40 years. The nuclear fuel which is planned to be used at FFTF is oxide fuel and not metallic uranium fuel.

Commentor No. 2149: James Leeman

Dear secretary richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

We cannot handle more radioactivity or pollution than is already seeping into the Columbia River and soil. And as a quaker - our churches stand for no war & less money on missiles and destroying our environment.

Sincerely,
Name James Leeman Address 11717 S.E Beckman
City Milwaukie State OR ZIP 97222

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2149-1 || 2149-2

2149-1

2149-3

Response to Commentor No. 2149

2149-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

2149-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2149-3: DOE notes the commentor's views on defense and preservation of the environment. As discussed in Section 1.2 of Volume 1, the nuclear infrastructure missions are concerned with civilian applications and research only. They are unrelated to national defense. Environmental effects that would result from implementation of the nuclear infrastructure alternatives are described in Chapter 4 of Volume 1.

Commentor No. 2150: Holly G. Graham

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

It is appalling that all these years after we shut down Hanford's DIRTY operations, you even consider this disastrous, hazardous, & blatantly unnecessary act a cover-up for US's increased ARMS industry, Star Wars, TMD, etc. WE SAY NO! NO!!!

Sincerely,

Name Holly Quinn Graham Address 5900 B Penner NW
City Olympia State WA ZIP 98502

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2150-1 || 2150-2

2150-3

Response to Commentor No. 2150

- 2150-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2150-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2150-3:** DOE notes the commentor's views. The NI PEIS evaluates a range of reasonable alternatives for expanding DOE's existing nuclear facility infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. However, no component of the proposed action is for the purpose of supporting any defense or weapons related mission.

Commentor No. 2151: Lucile Wyers

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

I have stated my conviction that this is the correct course of action many times. I was disappointed to learn that you Sir have not been hearing what our Mid-Columbia area have been saying. Please No

Sincerely, *Lucile A. Wyers* *Don't start on FFTF*

Name *Lucile Wyers* Address *2320 Windswept*
City *HOOD RIVER* State *OR* ZIP *97031*

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2151-1 || 2151-2

2151-3

2151-4

Response to Commentor No. 2151

- 2151-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2151-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.
- 2151-3:** DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and to providing ample opportunity for public comment on those actions. Further, DOE, and the Secretary of Energy in particular, is aware that there is a considerable difference of public opinion regarding the alternatives evaluated in this NI PEIS to accomplish the DOE missions, including direct support as well as opposition to Alternative 1, Restart FFTF. In preparing the Final NI PEIS, DOE carefully considered comments received from the public. All pertinent information and public input will be provided to the Secretary so that he may make an informed and unbiased decision with respect to the alternatives presented in this NI PEIS. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.
- 2151-4:** See response to comment 2151-2.

Commentor No. 2152: Michelle Samuel

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

Sincerely,

Name Michelle Samuel Address 4124 SE 33rd Ave
 City Portland State OR ZIP 97202

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2152-1 || 2152-2

Response to Commentor No. 2152

- 2152-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2152-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2153: Carol G. Watts

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

|| 2153-1 || 2153-2

We're got enough problems with leaking waste tanks already - leaks that threaten to invade the Columbia River very shortly. Let's not get into activities that will generate more waste, not to mention increasing the danger of accidents. Let's honor the clean-up agreement and focus on cleaning up the existing mess.

2153-1

2153-3

2153-1

Sincerely,
Name CG Watts Address 6247 26th Ave NE
City Carol G. Watts State WA ZIP 98115
Seattle

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2153

2153-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposal) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

As discussed throughout Section 4.3 of Volume 1, none of the proposed alternatives would add waste to the high-level waste tanks at Hanford.

2153-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2153: Carol G. Watts (Cont'd)

Response to Commentor No. 2153

2153-3: FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Commentor No. 2154: Sandra Crespinel

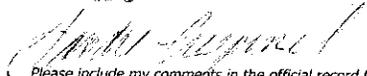
Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2154-1 || 2154-2

We don't need to add more waste to Hanford. already producing waste. It's very important we do not re-activate the Hanford Clean Up Agreement & further pollute the Columbia River. Any benefit would not outweigh the contribution of the people of Washington.

Sincerely,

Name Sandra Crespinel ESS
City 4817 SW Findlay St.
Seattle, WA 98136 ZIP



Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2154

- 2154-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2154-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

**Commentor No. 2155: Margaret L. McCluskey/Kelly
McCluskey**

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

Lets get SOLAR !

Margaret L McCluskey

Capt Kelly McCluskey WWII D.A.V.

Sincerely,
Name KELLY McCLUSKEY Address 20804 CRAWFORD RD

City NEW IRELAND State WA ZIP 98036-8645
Synnwood

Please include my comments in the official record for the Pu-239/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2155-1 || 2155-2
|| 2155-3

Response to Commentor No. 2155

- 2155-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2155-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2155-3:** DOE notes the commentor's interest in alternative energy sources, although issues of research and development of alternative energy sources are beyond the scope of this Nuclear Infrastructure PEIS. The DOE missions to be addressed in this EIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies.

Commentor No. 2156: Debra Morrison

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2156-1 || 2156-2

I am getting really tired of constantly going to hearings to try to convince the DOE to honor the clean up Agreement and stop trying to re-start the FFTF. We don't need anymore waste - let's clean up the mountains of it we have. Sincerely, Are you listening? Enough already!!!

|| 2156-3

|| 2156-1

|| 2156-4

Name Debra Morrison Address 401 N. 46th St.
City Seattle State WA ZIP 98103

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2156

2156-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposal) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

2156-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.

2156-3: See response to comment 2156-2.

2156-4: DOE policy encourages effective public participation in its decision making process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

Commentor No. 2157: Robbie Ferron

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

Sincerely,

Name Robbie Ferron Address 214 Bayville Road

City Bellingham State WA ZIP 98225

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2157

|| 2157-1 || 2157-2

2157-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2157-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2158: Ted Grudowski

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

NASA DOES NOT NEED IT, THE STATE OF
WASHINGTON DOES NOT NEED IT. STOP THIS
INSANITY! THE DAY YOU STORE THE
NUCLEAR WASTE IN YOUR HOME IS THE DAY
YOU CAN RESTART THE REACTOR

Sincerely,

Name TED GRUDOWSKI Address 1409 NE 65TH ST
City SEATTLE State WA ZIP 98115

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2158-1 || 2158-2

2158-3

2158-4

Response to Commentor No. 2158

2158-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2158-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.

2158-3: DOE notes the commentor's opposition to expanding its existing nuclear facility infrastructure. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs:

1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;

2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long term, assured supply; and

3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. The NI PEIS evaluates a range of reasonable alternatives for accomplishing the proposed action, one of which includes use of FFTF. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining

Commentor No. 2158: Ted Grudowski (Cont'd)

Response to Commentor No. 2158

the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Although research to identify other potential fuel sources to support these space exploration missions has been conducted, no viable alternative to using plutonium-238 has been established. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

2158-4: See response to comment 2158-2.

Commentor No. 2159: Rosemary Harris/Howard R. Harris

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2159-1 || 2159-2

Nuclear waste has become the next century's primary problem. We must begin to solve it, not create more. Military waste is the worst. We must eliminate nuclear weapons, not plan to increase them. The idea of restarting the FFTF nuclear reactor alarms us.

2159-3

2159-4

2159-5

Sincerely,
Rosemary Harris

Name *Howard R. Harris* Address *1825 22nd St.*
City *Bellingham* State *WA* ZIP *98225*

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2159

2159-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2159-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.

2159-3: DOE notes the commentor's concern regarding waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The purpose of the NI PEIS is to evaluate the environmental impacts of reasonable alternatives to enhancing DOE's existing nuclear facility infrastructure to support production of isotopes for medical, research, and industrial uses, production of plutonium-238 for use in future NASA space exploration missions, and U.S. nuclear research and development needs for civilian application. No component of the proposed action is for the purpose of supporting any other defense or weapons-related mission.

2159-4: Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs:

1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;

***Commentor No. 2159: Rosemary Harris/Howard R. Harris
(Cont'd)***

Response to Commentor No. 2159

2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and

3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. No component of the proposed action is for the purpose of supporting any defense or weapons-related mission. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

2159-5: See response to comment 2159-2.

Commentor No. 2160: Jill Refschneider

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

|| 2160-1 || 2160-2

I cannot believe that anyone
would dream up a plan to produce
plutonium on a site which currently
threatens our safety and environment.
Clean Up Hanford! Do not create
new High-Level Nuclear Waste!

2160-1

2160-3

Sincerely,

Jill Refschneider

Name Jill Refschneider Address 14846 74th PINE
City Kenmore State WA ZIP 98028

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2160

2160-1: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2160-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2160-3: DOE notes the commentor's concern regarding the generation of high level radioactive waste. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 2161: Judith Alexander

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2161-1 || 2161-2

*There is too much risk
to the Columbia River coast
the environment to all
more liquid High Level Nuclear
Waste at Hanford. Please
shut down the FFTF Reactor*

2161-3

Sincerely,

Name *Judith Alexander* Address *1831 14th St*
City *Seattle* State *WA* ZIP *98145*

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2161

2161-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2161-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2161-3: The commentor's concern about high-level radioactive waste generation at Hanford is noted. As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35 year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. High level radioactive waste would not be generated from merely operating FFTF.

The use of proposed alternative facilities associated with reprocessing of neptunium-237 targets would have no impact on schedules or available funding for high-level radioactive waste programs at either Hanford or the INEEL sites. The higher activity waste would be treated as a solid form via a stand-alone vitrification system, separate from any tank waste treatment system. The existing Hanford high-level radioactive waste facilities would also not be used, and as analyzed in the PEIS, no existing or planned high-level radioactive waste facilities would be used to treat the wastes resulting from processing the irradiated targets.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 2161: Judith Alexander (Cont'd)

Response to Commentor No. 2161

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Commentor No. 2162: Russ and Meg Hamlet

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

PLEASE DON'T ADD TO THE HARM ALREADY
DONE TO OUR ENVIRONMENT AND PUT ALL
OF US IN GREATER DANGER. DO YOU WANT
TO BE REMEMBERED AS A SHORT SIGHTED
INDUSTRY INFLUENCED PERSON OR A HOLISTIC
VISIONARY?

Sincerely,

Name RUSS + MEG HAMLET Address 10501 MANITOU PARK NE
 City B.I. State WA ZIP 98110

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2162-1 || 2162-2

2162-3

Response to Commentor No. 2162

2162-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2162-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2162-3: The commentors's opposition to the restart of FFTF is noted. This PEIS has provided an estimate of the incremental potential human health impacts associated with a reasonable range of alternatives (including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

The NI PEIS identifies (in Chapter 3 of Volume 1) endangered species that live on or near all of the candidate sites, as well as aquatic and wetlands areas that may be impacted by operations at candidate locations. According to an International Atomic Energy Agency (IAEA) publication (IAEA Technical Report Series No. 332, Effects of Ionizing

Commentor No. 2162: Russ and Meg Hamlet (Cont'd)

Response to Commentor No. 2162

Radiation on Plants and Animals at Levels Implied by Current Radiation Protection Standards), a dose rate of 100 millirem per year to the most exposed human will lead to dose rates to plants and animals of less than 0.1 rad per day. The IAEA concluded that a dose rate of 0.1 rad per day or less for animals and 1 rad per day or less for plants would not affect these populations. The largest individual dose for any of the nuclear infrastructures alternatives under normal operations would be less than 0.1 millirem, which is three orders of magnitude less than the IAEA threshold for adverse effects. Therefore, implementation of any of the range of reasonable nuclear infrastructure alternatives analyzed would not be expected to result in adverse impacts on plants and animals living in potentially affected areas around the candidate sites.

Commentor No. 2163: Marge Stamper

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

It is scandalous that DOE would consider restarting FFTF & producing more radioactive materials when they have yet to deal with the serious hazards posed by Hanford's status as the EPA's biggest Superfund site. Contaminants are already leaking into the environment, endangering the public & workers. The recent fire at Hanford is further proof of the

Sincerely,
 Name Marge Stamper Address 5214 S. Brandon St
 City Seattle State WA ZIP 98118

Hazards there to DOE's contempt for public & worker health, exemplified by their denials of radiation release during the fires.

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2163-1 || 2163-2

2163-1

Response to Commentor No. 2163

2163-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposal) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Commentor No. 2163: Marge Stamper (Cont'd)

Response to Commentor No. 2163

In regards to the Hanford wildfire of 2000, the DOE Richland Operations Office, the State of Washington Department of Health, and U.S. Environmental Protection Agency performed environmental monitoring on and around the Site to assess potential radiological impacts. The wildfire did not cause a release of radioactive materials from any Hanford facilities but did result in resuspension of radioactive materials which were already in the environment. The very low levels of radioactive materials that were resuspended were slightly above natural background levels and required several days of analysis to quantify. Information on this event has been made available to the public and can be accessed at <http://www.Hanford.gov/envmon/indes.html>. This site also provides a link to information on the independent offsite air monitoring that was conducted by the U.S. Environmental Protection Agency.

2163-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2164: Alicelia and Robert Warren

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

We already don't know what to do with the nuclear waste we have, & clean-up of what exists is way behind schedule & over budget. We urge you NOT to restart the FFTF nuclear reactor. Please protect the Columbia River & the citizens & wildlife in the Northwest.

Sincerely,

Alicelia & Robert Warren

Name *Alicelia & Robert Warren* Address *2122 Bridgeport Hwy W.*

City *University Place* State *WA* ZIP *98466*

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2164-1 || 2164-2

2164-1

2164-3

2164-1

Response to Commentor No. 2164

2164-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions CCdescribed in Section 1.2 of Volume 1.

2164-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2164-3: See response to comment 2164-2.

Commentor No. 2165: J. Wade Michaelis

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

If we don't ~~stop~~ ^{store} the ~~waste~~ we exploit our natural resources and start using alternate sources of energy such as biomass fuels (hemp) we will end up exterminating ourselves for the sake of our own convenience.

Sincerely,

Name J. Wade Michaelis Address 3815 Woodland Park Ave
City Seattle State WA ZIP 98103

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2165-1 || 2165-2

2165-3

Response to Commentor No. 2165

- 2165-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2165-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2165-3:** DOE notes the commentor's interest in alternative energy sources, although issues of research and development of alternative energy sources are beyond the scope of this Nuclear Infrastructure PEIS. The DOE missions to be addressed in this EIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies.

Commentor No. 2166: Charlene Osman

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

I know the short term benefits of running the reactor may seem to make it worthwhile, but the long term problems negate any gains. To run the reactor is to kill your grandchildren in order to feed your children. There has got to be a better way.

Sincerely, *Charlene M. Osman*

Name Charlene Osman Address 3815 Woodland Pl Ave Nth/04
City Seattle State WA ZIP 98103

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2166-1 || 2166-2

2166-3

Response to Commentor No. 2166

- 2166-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2166-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2166-3:** This PEIS has provided an estimate of the incremental potential human health impacts associated with a range of reasonable alternatives (one of which includes the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of these alternatives, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with each alternative and with restarting FFTF would be small. As stated in Appendix H of the EIS, other human health impacts (non-fatal cancers and genetic mutations) occur with a lower frequency for the same level of exposure to low levels of radiation. Since the most likely impact on the population from all of the alternatives is no additional fatalities, it follows that the expected result for these other health impacts is no additional impact.

Commentor No. 2167: E. L. Ellefron-Bauer

Dear Secretary NICHOLSON,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

DEAR SIRS OR MADAM:
SHUT DOWN THE FFTF
NUCLEAR REACTOR.

Sincerely,

Name E.L. Ellefron-Bauer Address 21919 MAHAN ROAD
City WOODWAY State WA ZIP 98020

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2167

|| 2167-1 || 2167-2

- 2167-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2167-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2168: Gloria Abbenhouse

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*I am a grandmother. Need to
say more.
Can you tell me, for sure, what
the long range effects are?*

Sincerely,

Name GLORIA ABBENHOUSE Address 23431 MARANTHA WAY
City ARLINGTON State WA ZIP 98223

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2168-1 || 2168-2

2168-3

Response to Commentor No. 2168

- 2168-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2168-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2168-3:** The concern expressed in this comment with respect to the possible long range health and environmental effects of FFTF operation, has been noted. The environmental impacts associated with operation of the FFTF and support facilities at Hanford during normal operations and from postulated accidents are presented and discussed in Section 4.3 of the NI PEIS. All impacts to human health and to ecological resources would be small both in the immediate area of the Hanford site and at all distant locations. Long-term adverse health effects, including cancer, are discussed in Chapter 4 (Tables 4-17, 4-19, and 4-22 of the NI PEIS).

Commentor No. 2169: Laurel Dillard

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

do not let the beautiful Columbia River be further destroyed. We must keep the Northwest pristine and protected from further man-provoked destruction.

Sincerely, *Laurel Dillard*

Name Laurel Dillard Address 425 Vine St. # 424
City Seattle State WA ZIP 98121

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

2169-1 | 2169-2
2169-1

Response to Commentor No. 2169

2169-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1

2169-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2170: D. Spring Svart

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

We, my family, constitutes 8
 native Oregonians who WANT
 intensive clean-up operations
 to continue at Hanford with NO
 restart of the Fast-flux test facility
 for ANY reason. Your reply requested
 sincerely, D Spring Svart

Name D. Spring Svart Address 3416 ne 30th Ave.
 City Portland State OR ZIP 97212

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2170-1 || 2170-2

2170-1

2170-3

Response to Commentor No. 2170

- 2170-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2170-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.
- 2170-3:** See response to comment 2170-2.

Commentor No. 2171: M. Shafer

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2171-1 || 2171-2

WE NEED LESS POLLUTION IN THE
STATE OF WASHINGTON, NOT MORE !!

|| 2171-1

Sincerely,

Name M. Shafer Address 1619 2ND AVE. N.
City SEATTLE State WA ZIP 98109-
3113

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2171

2171-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2171-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2172: Donald N. Wheeler

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

I feel strongly on this issue, because I was born and raised in the little town of White Bluffs on the Hanford Reach of the Columbia River. In 1943, my family along with all the other inhabitants was given 30 days to get out, to make room for plutonium production. Let's have Sincerely, no more plutonium! Atom bombs a violation of international law!

Name Donald N. Wheeler Address 10674 Falk Road NE
City Frederick Island State WA ZIP 98110

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2172-1 || 2172-2

2172-3

Response to Commentor No. 2172

- 2172-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2172-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2172-3:** DOE notes the viewpoint expressed by the commentor. As discussed in Section 1.2 of Volume 1, plutonium-238 would be produced to support NASA's deep space missions. Plutonium-238 is not used to produce nuclear weapons. All missions considered in the NI PEIS are for civilian purposes.

Commentor No. 2173: D. Eggers

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

The ill effects of nuclear power have been tolerated long enough. CANCER/Global warming Etc. Its time to follow Germanys lead - Stop this madness
→ FUEL Cells ←

Sincerely,

Name D Eggers Address 3816 Ardilla
City Atascadero State Ca ZIP 93422

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

2173-1 2173-2

2173-3

Response to Commentor No. 2173

- 2173-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2173-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2173-3:** The commentor's positions on nuclear power, cancer, global warming, and fuel cells are noted. As discussed in Chapter 4 of Volume 1 (e.g. 4.3.1.1.9, 4.3.2.1.9, 4.3.3.1.9), implementation of the alternatives described in Section 2.5 would pose no significant radiological risks or adverse impacts on air quality. The missions described in Section 1.2 can be accomplished only with a nuclear reactor or accelerator. Development of alternative energy sources such as fuel cells is outside of the scope of this NI PEIS.

Commentor No. 2174: Henry Perry

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

Sincerely,

Name Henry Perry Address 3215 E. Morley Way
 City Seattle State WA ZIP 98112

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2174-1 || 2174-2

Response to Commentor No. 2174

- 2174-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2174-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2175: Lupito Flores

Secretary, Hanford Site,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

|| 2175-1 || 2175-2

Please spend money cleaning up
the site, not generating more waste
or importing more from other sites.

|| 2175-1

Sincerely,

Name Lupito Flores Address 1518 W. Cedar
City Spokane State WA ZIP 99203

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2175

2175-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

2175-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2176: Erma Norton

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*We do not want nuclear accidents
in the Northwest. We value our
people and our natural blessings too
much to incur any unnecessary
hazards. Thank you for helping to
preserve our land as it is.*

Sincerely, *Erma Norton*

Name Erma Norton Address 437 Westbay Dr NW
City Olympia State WA ZIP 98502

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2176-1 || 2176-2

2176-3

Response to Commentor No. 2176

- 2176-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2176-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2176-3:** FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Commentor No. 2177: Nancy Parrish

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

I have 2 young children and I owe it to them to be responsible and not contribute to more pollution and waste on this planet. Please vote against any Restart of Hanford and vote for cleanup. Enough damage to our environment has already been done.

Sincerely, Nancy H. Parrish

Name Nancy Parrish Address 25512 151 PL SE
City Covington State WA ZIP 98042

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2177-1 || 2177-2

|| 2177-3

|| 2177-1

Response to Commentor No. 2177

- 2177-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2177-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.
- 2177-3:** See response to comment 2177-2.

Commentor No. 2178: Elizabeth Bareheld

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

My family and I are very concerned about
Plutonium production and storage. We
do not support restarting Hanford's
FFTF Nuclear reactor

Sincerely,

Name Elizabeth Bareheld Address 10533 NE 184th St
City Bornheli State WA ZIP 98011

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2178-1 || 2178-2

|| 2178-3

Response to Commentor No. 2178

- 2178-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2178-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.
- 2178-3:** See response to comment 2178-2. The NI PEIS evaluates the risks and environmental impacts of plutonium production and storage at the candidate sites/facilities in Chapter 4 of Volume 1. The plutonium isotope under consideration is plutonium-238 which is not weapons material.

Commentor No. 2179: U. Andrews

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2179-1 || 2179-2

*It is time to get off top service
and onto actions.
Hanford is dangerous! Clean
it up and stop misusing
the appropriated funds!*

2179-1

Sincerely, *U. Andrews*

Name *U. Andrews* Address *5930-2612 NW*
City *Stanwood* State *WA* ZIP *98292*

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2179

2179-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. FFTF restart would not impact the schedule or available funding for existing cleanup activities.

Hanford cleanup is funded by the Office of the Assistant Secretary for Environmental Management (EM). Funding for FFTF is provided through the Office Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted fund designated for Hanford cleanup, regardless of the alternative(s) selected.

2179-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2180: Susan Witt

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

Hanford is unsafe and hazardous to both the environment and humans. Those individuals in charge of the clean-up have failed to ask Congress for enough money to safely handle the current waste. Adding more danger by supporting plutonium production in an unstable area is irresponsible and dangerous.

Name Susan Witt Address 1214 Cascade
City Head River State OR ZIP 97031

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2180-1 || 2180-2

2180-1

2180-3

Response to Commentor No. 2180

2180-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

The NI PEIS evaluated the maximum cumulative radiation exposure to the public from all reasonably foreseeable Hanford Site activities over the 35 year time-frame. As shown in section 4.8, the maximum annual dose to the public would be on the order of 1.9 millirem per year. This dose is well within the dose limits of 10 mrem/year (as required by the EPA Clean Air Act) and 4 mrem/year (as required by the EPA Safe Drinking Water Act), as implemented by DOE Order 5400.5. All environmental parameters (e.g. air, soil, surface water, groundwater, vegetation, animals, etc.) in and around the Hanford Site are monitored on a set frequency. The information is available to the public in annual monitoring reports. No food or water restrictions are currently in place outside the Hanford Reservation as a result of Hanford activities.

More specific the missions proposed in the NI PEIS, the environmental impacts associated with operation of the FFTF and support facilities at Hanford during normal operations and from postulated accidents are presented and discussed in Section 4.3 of the draft NI PEIS. All impacts to human health and to ecological resources are shown to be small in the immediate area of the Hanford Site and negligible at all distant locations.

Commentor No. 2180: Susan Witt (Cont'd)

Response to Commentor No. 2180

- 2180-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2180-3:** This PEIS has provided an estimate of the incremental potential human health impacts associated with a range of reasonable alternatives (one of which includes the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of these alternatives, including normal operations and a spectrum of accidents that included severe accidents. Plutonium is one of many substances that have been considered in the analysis of health and safety impacts for this PEIS. Plutonium is the primary contributor to the health impacts associated with the processing of irradiated neptunium targets at any of the neptunium target processing facilities. The environmental analysis showed that radiological and nonradiological risks associated with each of the analyzed alternative and with restarting FFTF would be small. As stated in Appendix H of the EIS, other human health impacts (non-fatal cancers and genetic mutations) occur with a lower frequency for the same level of exposure to low levels of radiation. Since the most likely impact on the population from all of the alternatives is no additional fatalities, it follows that the expected result for these other health impacts is no additional impact.

Commentor No. 2181: Brandon July

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

You don't know the reason why, then,
create more? Nuclear waste remains
dangerous for millennia - stop this madness
right now! Shut down the reactor and
clean up your messes!

Sincerely,

Name Brandon July Address 4038 90th Ave SE
 City Mercer Island State WA ZIP 98040

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2181-1 || 2181-2

|| 2181-3

|| 2181-2

|| 2181-1

Response to Commentor No. 2181

- 2181-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2181-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2181-3:** DOE notes the commentor's concern regarding waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 2182: Neil McCauley

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

I HAVE NOT YET BEEN GIVEN DATA AND REASON
TO SUPPORT CONTINUING THE REACTOR AND
PROLONGING THE CLEAN-UP. EITHER DO YOUR
JOB - CLOSE THE REACTOR AND CLEAN UP HANFORD,
OR TELL ME WHY NOT.

Sincerely,

Name NEIL MCCAULEY Address 7835 SW 67th AVE., APT. 4
City PORTLAND State OR ZIP 97223

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2182-1 || 2182-2

|| 2182-1

|| 2182-2

|| 2182-1

Response to Commentor No. 2182

2182-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. FFTF restart would not impact the schedule or available funding for existing cleanup activities.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

More specific to the stated mission, section 1.2 of the NI PEIS provides information on the purpose and need for DOE's proposed expansion of the nuclear infrastructure to ensure the availability of isotopes for medical industrial, and research applications; providing plutonium-238 for NASA, and undertaking research and development activities related to development of nuclear power for civilian use.

2182-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2183: Julie Smith

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

440 billion gallons of radioactive waste has been poured into the ground at Hanford. In 1957, 34,000 curies of radiation per day were flushed into the Columbia River. People downwind of Hanford are some of the most irradiated people on earth. Enough is enough! Please end all nuclear activity Sincerely, at Hanford except Clean Up.

Name Julie Smith Address 1816 W 10th Ave #1
 City Spokane State WA ZIP 99804

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2183-1 || 2183-2

2183-1

Response to Commentor No. 2183

2183-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford and the risk of contamination to the Columbia River. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Restoration of the Hanford Site and waste management activities are the primary missions at Hanford. Although prior Hanford Site events are not within the scope of this PEIS, the referenced releases at Hanford were terminated with the shutdown of the last single pass-cooling reactor in 1971.

The proposed actions delineated in the NI PEIS would not have an impact on the Columbia River. FFTF is located approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to the groundwater. Analyses presented in Chapter 4 of the NI PEIS (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4) indicate that there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of the Hanford facilities that would support the proposed actions. Also, no water quality impacts would be expected as a result of permanent deactivation of FFTF (Section 4.4.1.2.4).

2183-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2184: Mary Burki

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2184-1 || 2184-2

Time and again "we" have proceeded ahead with actions that "seemed like a good idea at the time."
Far too often "we" later discover it wasn't such a good idea and the environment and our health suffer as a consequence.

Sincerely, Please get to cleaning up Hanford and do not restart the reactor
Name MARY BURKI Address 4324 Phinney No.
City Seattle, WA State ZIP 98103

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2184

- || 2184-1 || 2184-3
- 2184-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2184-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.
- 2184-3: See response to comment 2184-2.

Commentor No. 2185: Lynn Reer

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

 Please protect our children
 and our environment. Please
 honor agreements with citizens
 of this country.

Sincerely,

 Lynn Reer
 Name LYNN REER Address 3246 NE 54th Ave
 City Portland State OR ZIP 97213

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2185-1 || 2185-2

2185-1

Response to Commentor No. 2185

- 2185-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities to protect human health and the environment are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2185-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2186: G. D. Kerlick

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

There is no compelling public need for this project. It is a corporate boondoggle which will, once more, leave the public holding the bag and make eventual cleanup vastly more expensive

Sincerely,

Name G. D. Kerlick, Ph.D, Physics. Address 6342 34 Ave SW
City Seattle State WA ZIP 98126-3148

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2186-1 || 2186-2

2186-3

Response to Commentor No. 2186

2186-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2186-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2186-3: DOE notes the commentor's opposition to expanding DOE's existing nuclear facility infrastructure. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs:

1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;

2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and

3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

The proposed action would not have an impact on the schedule or available funding for existing cleanup activities at candidate sites. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 2187: Gloria Black

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

|| 2187-1 || 2187-2

*For the benefit of all our future
generations we must do what is responsible
and makes sense for the long term.*

Sincerely,

Name Gloria Black Address 17755 NW Sweet Ln.
City Portland State OR ZIP 97229

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2187

- 2187-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2187-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2188: Aiko E. Low

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2188-1 || 2188-2

Please help save the planet. This is more than just a Pacific NW issue.

|| 2188-3

Sincerely, *Aiko E. Low and family*
Name Aiko E. Low Address PO Box 651
City Stevenson, WA State WA ZIP 98648

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2188

- 2188-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2188-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2188-3: DOE notes the commentor's concern for the global environment.

Commentor No. 2189: Ola Edwards

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

|| 2189-1 || 2189-2

*** No more nuclear waste at Hanford.***** No delay to Hanford Cleanup.***** No more threat to the Columbia R.**

Sincerely,

Ola EdwardsName **OLA EDWARDS** Address **4025 NE 57**City **Seattle** State **WA** ZIP **98105**

2189-1

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Thanks**Response to Commentor No. 2189**

2189-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

2189-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2190: Diane W. Slota

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

While it may be true there is a small need for
medical-grade plutonium, Hanford is currently
such a large mess that more clean-up needs to
be done before beginning any discussion of FFTF
We citizens of Washington state care about restoring
Hanford to safe environmental condition.

Sincerely,

Name Diane W. Slota Address 11001 NE 145th St.
City Kirkland State WA ZIP 98034-4412

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2190-1 || 2190-2

2190-1

Response to Commentor No. 2190

2190-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Plutonium-238 will not be generated for direct medical applications in these DOE missions. This isotope is needed for NASA space exploration missions.

2190-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2191: Leanne Stagsdill

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2191-1 || 2191-2

The time has come for us to take responsibility for what we have already done to our environment, instead of repeating the mistake of our predecessors by handing even more destruction down to our children for our own short-lived immediate gain. The people have a right to know what is going on at Hanford!

Name Leanne Stagsdill Address 137 NE 112th
City Seattle State WA ZIP 98125

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments.

2191-1

Response to Commentor No. 2191

- 2191-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.
- 2191-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2192: R. G. Armajian

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

|| 2192-1 || 2192-2

Its extremely foolish for the powerful of this generation to allow the resources that are absolutely necessary for human survival (clean water, air) etc to be destroyed simply for the sake of greed & personal gain.

2192-3

Sincerely,

Name R. G. Armajian Address 10031 1st Ave NW
City Seattle State WA ZIP 98107

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2192

2192-1: DOE notes the commentor’s concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2192-2: DOE notes the commentor’s support for Alternative 5, Permanently Deactivate FFTF.

2192-3: The concerns expressed in this comment with respect to the impacts of an FFTF restart have been noted.

The impacts that would result from restart of the FFTF are addressed in Section 4.3 of the NI PEIS. Operation of the FFTF would result in releases of materials to the environment via airborne and liquid pathways. However, all air emissions and wastewater discharges would be in accordance with applicable permit and regulatory requirements. The releases of air pollutants and contaminated liquid are addressed in Section 4.3 of the NI PEIS. The release of air pollutants would result in concentrations well below Federal and state air standards (Table 4-13). The release of radioactivity and hazardous chemicals into the atmosphere would have a negligible effect on human health (Tables 4-17 and 4-19, respectively). There would be no discernible impacts to groundwater or surface water quality (Section 4.3.1.1.4). All impacts on ecological resources, including animals and fish, associated with operation of the FFTF would be small (Section 4.3.1.1.6).

The purpose and need for the production of isotopes and support of research and development is addressed in Volume 1, Section 1.2 of the NI PEIS. There is no greed or personal gain involved in DOE’s commitment to supply the necessary irradiation services.

Commentor No. 2193: Cathy Ferbiachi

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*Please live up to your agreements
Please think about "doing the right thing"
Think about the future, beyond your own life.
Do something that may impact your career
unfavorably, but will inspire many by your courage
and let you sleep at night, and die in peace*

Sincerely,

Respectfully,

me Cathy Ferbiachi Address 2500 24th St SE
y Bethell State WA ZIP 98001

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2193-1 || 2193-2

2193-3

Response to Commentor No. 2193

- 2193-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2193-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2193-3:** DOE is committed to discharging its responsibilities in an open and unbiased manner and providing the public with comprehensive environmental reviews of its proposed actions.

Commentor No. 2194: Susan Perkins

Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*I am appalled that you plan to produce yet more
expensive nuclear waste. The money you spend
on operating the FFTF reactor should instead be
spent to clean up the nuclear waste tanks.*

Sincerely,

Susan Perkins
Name Susan Perkins Address 7731 14th Ave NW
Seattle State WA ZIP 98117

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2194-1 || 2194-2

|| 2194-3

|| 2194-1

Response to Commentor No. 2194

2194-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. FFTF restart would not impact the schedule or available funding for existing cleanup activities.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

2194-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2194-3: DOE notes the commentor's concern regarding waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 2195: Chris Fosse

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*We already have enough dangerous waste
at Hanford and the clean up is hopelessly
behind schedule!*

Sincerely,

Name Chris Fosse Address 6531 15th Pl SE
City Belleue State WA ZIP 98006

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2195-1 || 2195-2

|| 2195-1

Response to Commentor No. 2195

- 2195-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2195-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2196: Jeannine Florance

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2196-1 || 2196-2

*until the current clean-up is done it makes
no sense to further jeopardize our
environment & the health of people.
There are too many incidents of cancer today.
A surgeon friend feels there is a strong
link to environmental causes. Please help
prevent such risks.*

Sincerely,
Name Jeannine Florance Address 2417 N. 45th St.
City Seattle State WA ZIP 98103

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

2196-3

Response to Commentor No. 2196

- 2196-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2196-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2196-3:** The commentor's concern regarding the completion of cleanup efforts at Hanford is noted. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Cancers are believed to be caused by a combination of hereditary and environmental factors, including exposure to ionizing radiation and chemical agents. This NI PEIS provides an estimate of the potential human health impacts associated with a range of reasonable alternatives considered for the production of radioisotopes for medical and industrial uses, research and development, and as heat sources for radioisotope power systems (See Sections 1.2 and 2.5 of Volume 1). The methodology used in the analysis of health effects, which is detailed in Appendixes H through J, is based upon our current knowledge of the health impacts that may result from exposure to low doses of ionizing radiation and chemical agents. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Commentor No. 2197: Mary Whittenberger

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*The credibility of official statements
 re Hanford and its environmental/health
 damage is negative, and has been for
 decades.*

*The FFTF Nuclear Reactor is no
 exception.*

Sincerely, *Mary J. Whittenberger*

Name _____ Ms. Mary Whittenberger
 2815 NE 38th Ave.
 City _____  Portland, OR 97212-2853 ZIP _____

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2197-1 || 2197-2

2197-3

Response to Commentor No. 2197

- 2197-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2197-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2197-3:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding official statements on Hanford missions and environmental impacts.

DOE radiological control requirements are designed with the intent to meet the legal requirements of 10 CFR 835, and there are provisions for enforcement actions should the requirements of 10 CFR 835 not be met. In order to meet these requirements, DOE has established the DOE Radiological Health and Safety Policy (DOE P 441.1, April 26 1996). Accuracy of radiological records is among the goals of this policy: the policy states in part "Ensure radiological measurements, analyses, worker monitoring results and estimates of public exposures are accurate and appropriately made."

The human health effects information presented in the NI PEIS is based on data collected at various DOE sites (specifically ORR, INEEL, and Hanford). The data used to quantify offsite consequences is derived from reports (which are available to the public) on the normal operational releases at the facilities being evaluated (for example DOE/RL-99-41 Radiological Air Emissions Report for the Hanford Site Calendar Year 1998). These reports are generated in response to DOE Order 231.1 "Environment, Safety, and Health Reporting" which requires an annual radiation dose summary addressing doses to workers and members of the public.

Commentor No. 2198: Paul Moyer

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2198-1 || 2198-2

The National Research Council's recently released "Study of U.S. Nuclear-Waste Sites Calls DOE's Cleanup Approach Inadequate" (Wall Street Journal, 8/8/6) merely restates what we already know. I strongly urge you to select ALTERNATIVE 5. Let's Clean-up our waste before creating more.

	2198-1	
	2198-2	
	2198-1	

Sincerely,
Paul Moyer, PA-C, RN, MPH.
Name Paul Moyer Address PO Box 930
City White Salmon State WA ZIP 98672

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2198

- 2198-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.
- 2198-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2199: Myrna G. Eden

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2199-1 || 2199-2

We do NOT want to live with
the danger of nuclear accidents and
further contamination in our
beautiful Pacific Northwest.

2199-3

Sincerely, Myrna G. Eden

Name MYRNA G. EDEN Address 2007-Third Ave. N
City Seattle State WA ZIP 98109

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2199

- 2199-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2199-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2199-3:** FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Commentor No. 2200: Victor and Roberta Moore

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

We moved here to tri-cities 3 yrs. ago believing that
the Hanford Mission was no longer production but was
now mission CLEAN-UP!! The FFTF will
put us back into plutonium production & create
MORE waste on top of the mountains of waste
we have already! Let N.Y.C. or Wash.D.C. be the
Sincerely, Victor & Roberta Moore NEXT Nuclear Producti
Center

Name Victor Moore Address 8149 W. Clearwater Pl.
City Hennewick State WA. ZIP 99336

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2200-1 || 2200-2

2200-1

Response to Commentor No. 2200

2200-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposal) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

2200-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2201: Richard Dilian

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

You can't keep burying ~~the~~ radioactive
waste material - some where the insanity
of our actions must stop - please
make it now - Summary alternative
forms of energy could be more fully
developed instead of playing with deadly
radioactive ^{poison}

Sincerely,

Help!

Name Richard Dilian Address 1801 10th Ave E
City Seattle State WA ZIP 98102

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2201-1 || 2201-2

2201-3

2201-4

Response to Commentor No. 2201

- 2201-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2201-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2201-3:** DOE notes the commentor's concern regarding waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.
- 2201-4:** DOE notes the commentor's interest in alternative energy sources, although issues of research and development of alternative energy sources are beyond the scope of this Nuclear Infrastructure PEIS. The DOE missions to be addressed in this EIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies.

Commentor No. 2202: Jim Minick

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*Hanford is Corporate Welfare in Spades
The "Clean-Up" at Hanford is a
joke and a crime. Billions have been
spent and very little has been done.
When they can show they are responsible
about clean up, then consider production*

Sincerely,

James W. Minick

Name  JIM MINICK Address _____
City  5 WILKINS DR State _____ ZIP _____
LYLE, WA 98635

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2202-1 || 2202-2

2202-1

Response to Commentor No. 2202

- 2202-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.
- 2202-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2203: Allugh Bell

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

The Columbia River is an
ecosystem of utmost importance.
We should respect your
environment & appreciate what
we have before things get
worse!

Sincerely,

Name Allugh Bell Address 14126 34th Pl. S.
City Tukwila State WA ZIP 98148-4078

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2203-1 || 2203-2

2203-1

Response to Commentor No. 2203

2203-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford and protection of the Columbia River. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

2203-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2204: Bob Anderson

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

|| 2204-1 || 2204-2

I WOULD LIKE TO KNOW HOW A GROUP OF PEOPLE, WHO WENT TO SCHOOL
AND I'M SURE SEE THEMSELVES AS INTELLIGENT, CAME UP WITH A
JUSTIFICATION TO RESTART THIS NUCLEAR REACTOR AND PRODUCE
MORE PLUTONIUM. THERE ARE PROBLEMS NOW AT HANFORD
THAT COULD BE A REAL THREAT TO ALL LIFE ALONG THIS RIVER FOR
PROBABLY THE NEXT THOUSANDS OF YEARS. ???

2204-3

2204-1

Sincerely,

Name BOB ANDERSON Address 3852 S.W. CONDOR AVE.
City PORTLAND State OR ZIP 97201

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2204

2204-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

No food or water restrictions are currently in place outside the Hanford Reservation as a result of Hanford activities.

2204-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2204-3: Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. The NI PEIS

Commentor No. 2204: Bob Anderson (Cont'd)

Response to Commentor No. 2204

evaluates a range of reasonable alternatives for accomplishing the proposed action, one of which includes use of FFTF. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Although research to identify other potential fuel sources to support these space exploration missions has been conducted, no viable alternative to using plutonium-238 has been established. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Commentor No. 2205: Lisa Kelsey/Bill Kelsey

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

- 1) do not add waste to the Hanford site
- 2) do not create more Plutonium - the world does not need more Plutonium
- 3) do not delay the cleanup of Hanford
- PLEASE, PLEASE, PLEASE

Sincerely,

Lisa Kelsey
Name Bill Kelsey Address 14536 78th Ave NE
City Kenmore State WA ZIP 98028

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2205

- || 2205-1 || 2205-2
- || 2205-3
- || 2205-4
- || 2205-5

- 2205-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2205-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2205-3:** DOE notes the commentor's concern regarding waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.
- 2205-4:** The purpose of the NI PEIS is to evaluate the environmental impacts of a range of reasonable alternatives to fulfill the proposed actions, one of which is the domestic production of plutonium-238. Plutonium-238, used to support NASA space missions, is not weapons-grade plutonium (i.e., plutonium-239). Whereas the United States is currently planning for the disposition of tons of surplus plutonium-239 that is not needed to support the U.S. nuclear weapons stockpile, there are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems and the plutonium-238 that fuels them for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. Based on NASA

Commentor No. 2205: Lisa Kelsey/Bill Kelsey (Cont'd)

Response to Commentor No. 2205

guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, DOE anticipates that the existing plutonium-238 inventory will be exhausted by approximately 2005. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

- 2205-5:** DOE notes the commentor's concerns regarding the possible delay of the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Commentor No. 2206: Paul Behodn

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

Sincerely, *Paul J. Behodn*

Name PAUL BEHODN Address 503 E. HARRISON
City SEATTLE State WA ZIP 98102

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2206-1 || 2206-2

Response to Commentor No. 2206

- 2206-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this Agreement.
- 2206-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2207: Julie A. Hockett

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*We do not want more nuclear waste
at Hanford. We absolutely do not need
plutonium produced from the FFTF. This
is an abomination.
Do not restart this reactor. Enough
is enough.*

Sincerely,

Name Julie A. Hockett Address 222 174th PI NE
City Bellevee State WA ZIP 98008

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

2207-1 2207-2

2207-3

2207-4

2207-5

Response to Commentor No. 2207

- 2207-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Public meetings were held on this formal milestone change. Implementation of the alternatives The missions described in Section 1.2 of Volume 1 would not have an impact on ongoing Hanford cleanup activities
- 2207-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.
- 2207-3:** DOE notes the commentor's concern regarding waste disposal at the Hanford Site. Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.
- 2207-4:** DOE notes the commentor's opposition to restarting FFTF for plutonium 238 production. Through a Memorandum of Understanding with NASA,

Commentor No. 2207: Julie A. Hockett (Cont'd)

Response to Commentor No. 2207

DOE provides radioisotope power systems and the plutonium-238 that fuels them for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, DOE anticipates that the existing plutonium-238 inventory will be exhausted by approximately 2005. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

2207-5: See response to comment 2207-2.

Commentor No. 2208: Kristin Hanson

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2208-1 || 2208-2

IF YOU DON'T KEEP YOUR AGREEMENTS

WHAT WILL YOU KEEP?

Kristin Hanson.

Sincerely,

Name KRISTIN HANSON Address 692 ALDER ST.
City EDMONDS State WA ZIP 98020

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

2208-1

Response to Commentor No. 2208

- 2208-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Prior public meetings were held on this formal milestone change. The alternatives delineated in the NI PEIS would not have an impact on meeting the schedules for the Hanford cleanup activities.
- 2208-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2209: Marion S. Moor

Dear Secretary (interchangeably),

8/13/2000

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

2209-1 2209-2

During the Washington State Democratic State Convention, members of Heart of America held a consultation with you, Mr. Secretary, in an attempt to secure your support of allowing a favorable decision regarding plutonium production from the site of Hanford FFTF nuclear reactor. W. Moors & W. Citizens would not tolerate this

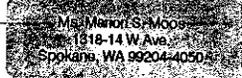
2209-3

Sincerely,

M. Moor

Name M Moor Address _____

City _____ State _____ ZIP _____



Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2209

2209-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

As discussed in Section 4.3 of Volume 1, implementation of Alternative 1, Restart FFTF, would pose no significant risk to human health or safety.

2209-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.

2209-3: See response to comment 2209-2.

Commentor No. 2210: Jean Cypher

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

I understand & sympathize with the need for radioactive isotope production. I also find arguments for this use of a defunct reactor site compelling, economically. However, any productive use of Hanford cannot be viewed separately from its enormous subsurface contamination problems. The environmental, health & therefore economic implications of these are so overwhelming I feel all efforts at Hanford should be devoted exclusively to cleanup.

Name Jean Cypher DVM Address 6900 Hwy 30
City The Dalles State OR ZIP 97058

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2210-1 || 2210-2

2210-1

Response to Commentor No. 2210

2210-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

As discussed in Section 4.3 of Volume 1, implementation of Alternative 1, Restart FFTF, would pose no significant risk to human health or safety.

2210-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2211: John Aruill

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2211-1 || 2211-2

No more production until the waste disposal problem has been dealt with in an environmentally-safe manner

2211-3

Sincerely,

Name John Aruill Address 16270 Gigate Drive Rd
City Bainbridge Island State WA ZIP 98110

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2211

- 2211-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2211-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2211-3: DOE notes the commentor's concern regarding waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 2212: Maryanne Griffin

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor

*until all of the radioactive material
already stored (partly) at Hanford is
taken care of - we should not start
up any more reactors to add to
the problem.*

Sincerely,

Name *Maryanne Griffin* Address *3002 N. Union*
City *Tacoma* State *WA* ZIP *98407*

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2212-1 || 2212-2

2212-3

Response to Commentor No. 2212

- 2212-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2212-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.
- 2212-3: See response to comment 2212-2. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram funds designated for Hanford cleanup, regardless of the alternative(s) selected.

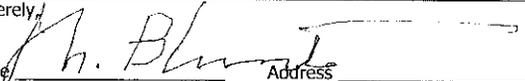
Commentor No. 2213: Marilyn Blunt

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

|| 2213-1 || 2213-2

Sincerely,

Name  Address _____

City  ZIP _____

Marilyn Blunt
8043 42nd Ave NE
Seattle WA 98115-5103

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2213

- 2213-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2213-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2214: Joshua Berger

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

UNTIL A CONCRETE PLAN IS IN PLACE
 TO CLEAN UP THE ALREADY SEVERELY CONTAMINATED
 HANFORD NUCLEAR RESERVATION, I AM 110%
 OPPOSED TO ANY NEW PLUTONIUM PRODUCTION.
 RESTARTING FFTF IS CARELESS, DANGEROUS
 AND VERY VERY IRRESPONSIBLE.

Sincerely,

Name JOSHUA BERGER Address 1123 SE 36TH
 City PORTLAND State OR ZIP 97214

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2214-1 || 2214-2

2214-1

2214-3

Response to Commentor No. 2214

2214-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford and opposition to plutonium-238 production. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The missions described in Section 1.2 of Volume 1 would not have an impact on ongoing Hanford cleanup activities.

As discussed in Section 1.2.2 of Volume 1, plutonium-238 would be produced to support NASA's deep space missions.

2214-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.

2214-3: This PEIS provides estimates of the human health impacts associated with a range of reasonable alternatives (including restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

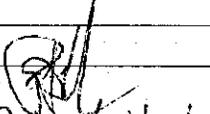
Commentor No. 2215: Roland Hoyt

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

|| 2215-1 || 2215-2

Sincerely,


Name Roland Hoyt Address PO box 23144
City Seattle State WA ZIP 98102

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2215

- 2215-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2215-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2216: Ed Newell

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

Please: First concentrate on cleaning
up the Nuclear Contaminates we already have.
Make your legacy one of cleaning up
rather than contributing to more waste.
Don't start up Hanford's FFTF Nuclear
Reactor

Sincerely,

Name Ed Newell Address 24335 24th Ave S
 City Des Moines State Wa ZIP 98188

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2216-1 || 2216-2

2216-1

2216-3

Response to Commentor No. 2216

- 2216-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The missions described in Section 1.2 of Volume 1 would not have an impact on ongoing Hanford cleanup activities.
- 2216-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.
- 2216-3:** See response to comment 2216-2.

Commentor No. 2217: Sally Jackson

Dear Secretary (Name redacted),

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

We're tired of fighting against nuclear issues here in Washington State, but we'll never quit until anything nuclear is shut down and cleaned up!

Sincerely, Sally Jackson
17th Reg Dist Democratic Chair

Name Sally Jackson Address E 11722-64
City Spokane State Wa ZIP 99226

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2217-1 || 2217-2

Response to Commentor No. 2217

2217-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The missions described in Section 1.2 of Volume 1 would not have an impact on ongoing Hanford cleanup activities

2217-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2218: Elwyer White

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*Hanford is the most polluted area in
the United States, and we certainly do
not need another operating reactor
producing more nuclear waste.
Let's concentrate on cleaning up the
existing mess.*

Sincerely,

Name Elwyer White Address 1300 NE 16th Av
City Portland State OR ZIP 97232

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2218-1 || 2218-2

2218-1

Response to Commentor No. 2218

- 2218-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford and opposition to implementation of Alternative 1 Restart FFTF). Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The missions described in Section 1.2 of Volume 1 would not have an impact on ongoing Hanford cleanup activities.
- 2218-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2219: Gary L. Westerlund

Secretary Michael...

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

No reactors including the FFTF nuclear reactor should be restarted at Hanford before existing nuclear wastes are thoroughly cleaned up at Hanford. No reactors should be restarted until there is a leak proof, totally safe way of dealing with the wastes. I doubt this is possible.

Sincerely,

Gary L Westerlund

Name Gary L Westerlund Address 9623 S 205th Pl

City Kent State WA ZIP 98031

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2219-1 || 2219-2

2219-3

2219-4

Response to Commentor No. 2219

- 2219-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The missions described in Section 1.2 of Volume 1 would not have an impact on ongoing Hanford cleanup activities.
- 2219-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.
- 2219-3:** See response to comment 2219-2. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram funds designated for Hanford cleanup, regardless of the alternative(s) selected.
- 2219-4:** DOE notes the commentor's concern regarding waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 2220: Kathleen M. Tibbet

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2220-1 || 2220-2

We can see the results of pollution all around us. What can the gains possibly be? against the risk of destroying the Columbia River and its area around it. How can you conscientiously further this abomination.

Sincerely,
 Kathleen M. Tibbet
 Name: Kathleen M. Tibbet Address: 12235 SW James
 City: Tigard State: OR ZIP: 97223

2220-3

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2220

- 2220-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford and support for Alternative 5 (Deactivate FFTF with no new missions). Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The missions described in Section 1.2 of Volume 1 would not have an impact on ongoing Hanford cleanup activities.
- 2220-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2220-3:** DOE notes the commentor's concern regarding the potential risk of contaminating the Columbia River. The proposed actions delineated in the NI PEIS would not have an impact on the Columbia River. FFTF is located approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to the groundwater. Analyses presented in Chapter 4 of the NI PEIS (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4) indicate that there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of the Hanford facilities that would support the proposed actions. Also, no water quality impacts would be expected as a result of permanent deactivation of FFTF (Section 4.4.1.2.4).

Although not within the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. Such cleanup would greatly reduce the potential for contaminating the Columbia River. The proposed actions delineated in the NI PEIS would not have an impact on these Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup.

Commentor No. 2221: B. Goodsitt

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

|| 2221-1 || 2221-2

There are too many health risks and dangers to the environment. As a former Washington resident, I implore you to shut down the FFTF nuclear reactor

2221-3

2221-2

Sincerely,
Name B. Goodsitt Address 3247 Bellflower Ct
City Ann Arbor State MI ZIP 48103

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Dear Secretary Richardson:

Response to Commentor No. 2221

2221-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.

2221-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2221-3: The commentor's opposition to the restart of FFTF is noted. This PEIS has provided an estimate of the incremental potential human health impacts associated with a reasonable range of alternatives (including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

The NI PEIS identifies (in Chapter 3 of Volume 1) endangered species that live on or near all of the candidate sites, as well as aquatic and wetlands areas that may be impacted by operations at candidate locations. According to an International Atomic Energy Agency (IAEA) publication (IAEA Technical Report Series No. 332, Effects of Ionizing Radiation on Plants and Animals at Levels Implied by Current Radiation Protection Standards), a dose rate of 100 millirem per year to the most exposed human will lead to dose rates to plants and animals of less than 0.1 rad per day. The IAEA concluded that a dose rate of 0.1 rad per day or less for animals and 1 rad per day or less for plants would not affect these populations. The largest individual dose for any of the nuclear

Response to Commentor No. 2221

infrastructures alternatives under normal operations would be less than 0.1 millirem, which is three orders of magnitude less than the IAEA threshold for adverse effects. Therefore, implementation of any of the range of reasonable nuclear infrastructure alternatives analyzed would not be expected to result in adverse impacts on plants and animals living in potentially affected areas around the candidate sites.

Commentor No. 2221: B. Goodsitt (Cont'd)

Commentor No. 2222: Betty L. Hawkins

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*We do not want more plutonium
production at Hanford. We do
not want to endanger
the Columbia River. Work
should be on clean-up.*

Sincerely,

Name Betty L. Hawkins Address 25801 Stuckey SW
City Washou State WA ZIP 98070

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2222-1 || 2222-2

2222-3

2222-1

Response to Commentor No. 2222

- 2222-1:** DOE notes the commentor’s concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.
- 2222-2:** DOE notes the commentor’s support for Alternative 5, Permanently Deactivate FFTF.
- 2222-3:** DOE notes the commentor’s opposition to plutonium production at Hanford and position concerning impacts to the Columbia River from FFTF restart. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Commentor No. 2223: Sara Moses

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

|| 2223-1 || 2223-2

Feel very strongly. Family
votes based on this issue.

Sincerely,

Name Sara Moses Address POB 5
City Had River State OR ZIP 97031

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2223

- 2223-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.
- 2223-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2224: Gretchen Johnson

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2224-1 || 2224-2

We sure don't want Underground High level Nuclear Waste Tanks - leaking or not.

|| 2224-1

Sincerely,

Name *Gretchen Johnson* Address *1208-8th W*
City *Seattle* State *WA* ZIP *98119*

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2224

- 2224-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities. As discussed throughout Section 4.3 of Volume 1, none of the proposed alternatives would add waste to the high-level waste tanks at Hanford.
- 2224-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2225: Dawn Paymaut

Dear Secretary (Name/Address),

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

There is so much propaganda about the salmon being endangered. Surely the radioactivity leaking into the Columbia River can't be good for the salmon or any other living thing!

Name Dawn Paymaut Address 1541 Olympic View Ln
Silverdale Redmond
City _____ State WA ZIP 98383

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2225-1 || 2225-2

2225-1

Response to Commentor No. 2225

2225-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater, surface water, or aquatic life in the Columbia River from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

2225-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2226: Frank Hull

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

IT IS UNNECESSARY, DANGEROUS IN
THE EXTREME, & I POSITIVELY STRID
TO LEAD THE WORLD BACK INTO ANOTHER
NUCLEAR ARMS RACE. THIS IS A
HIDDEN PART OF THE RIDICULOUS ANTI-
MISSILE CAMPAIGN, I'M AFRAID, NATIONAL
sincerely, DEFENSE WOULD BE WEAKENED, NOT
STRENGTHENED & ONLY THE CONTRACTORS
Name FRANK HULL Address 821 SHOSHONE
City LA CONNER State WA ZIP 98257-9621
WORLD BENEFIT.

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

2226-1 2226-2

2226-3

Response to Commentor No. 2226

- 2226-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.
- 2226-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2226-3:** DOE notes the commentor's views. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. However, no component of the proposed action is for the purpose of supporting any defense or weapons related mission. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

Commentor No. 2227: Therese Gesell

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2227-1 || 2227-2

Nuclear waste is poisonous! Why use it at all! There are other resources available for creating energy, ie wind, water, solar, gas etc., none of those create poison as a product. At this point in your technology, it is very irresponsible to use Nuclear Power.

Sincerely,

Name Therese Gesell Address 11427 40th DR SE
City Everett State WA ZIP 98208

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

2227-3

Response to Commentor No. 2227

- 2227-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.
- 2227-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2227-3:** DOE notes the commentor's interest in alternative energy sources and opposition to the use of nuclear power, although issues of research and development of alternative energy sources are beyond the scope of this Nuclear Infrastructure PEIS. The DOE missions to be addressed in this EIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies.

Commentor No. 2228: David Turnoy

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2228-1 || 2228-2

Please!

Sincerely,

Name David Turnoy Address 811 Wendy Court
City West Linn State OR ZIP 97068

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2228

- 2228-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.
- 2228-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2229: Ron Hsik

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

|| 2229-1 || 2229-2

I, and everyone I talk to, cannot believe you would even consider restarting anything at Hanford. We know you would say, we will make it perfectly clear, No new nuclear work at Hanford; you it up and shut it down!

Sincerely,

Ron Hsik
Name Ron Hsik Address 2216 24th St. N.E.
City Bellevue State WA ZIP 98007

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2229

2229-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.

2229-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2230: Dorothy Kimbill

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

|| 2230-1 || 2230-2

*We must clean up existing waste
and not make more!*

|| 2230-1

*We must shut down the FFTF
reactor*

Sincerely,

Name *Dorothy Kimbill* Address *815-5216 E Apt 316*

City *Des Moines* State *Wa* ZIP *98198*

*Please do all you can to
stop making nuclear waste. Thank you!*

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2230

- 2230-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.
- 2230-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2231: Mary Rivard

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2231-1 || 2231-2

*HANFORD/The World has enough radioactive
WASTE - STOP ALREADY ->*

No MORE PLUTONIUM production

*I bet YOU don't want more
radioactive poison either secretary
Richardson - Please do the right
thing for the WORLD -*

Sincerely,

Name *Mary Rivard* Address *3620 Burke Ave. Nth*
City *Seattle* State *WA* ZIP *98103*

2231-3

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2231

2231-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.

2231-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2231-3: DOE notes the commentor's opposition to additional plutonium production and concern regarding waste generation. The plutonium isotope under consideration, plutonium-238, is not weapons material.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 2232: Barbara J. Zook

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

|| 2232-1 || 2232-2

Please do not let it take an explosion of a leaking nuclear waste tank to make you realize that this is so wrong & legally, morally, and ethically! Clean it up and leave it shut down! You are endangering many lives & futures.

Sincerely,

Name Barbara J Zook Address 1906 - 24th Ave So.
City Seattle State WA ZIP 98144

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

2232-1

Response to Commentor No. 2232

2232-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

As discussed throughout Section 4.3 of Volume 1, no high-level waste would be added to the high-level waste tanks at Hanford. Radiological and non-radiological risks that would result from implementation of Alternative 1 would be small.

The commentor's support for Alternative 5 (Deactivate FFTF with no new missions) is noted.

2232-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2233: Janet F. Warrington

Dear Secretary Nicholson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*I grew up in the Yakima Valley in the 1940's
 & 1950's less than 70 miles from Hanford.
 Certainly the population in the NW has been
 at risk long enough!*

Sincerely,

Name *Janet F. Warrington* Address *2616 NE 26 Ave*
 City *Portland, OR* State *OR* ZIP *97212-4866*

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2233-1 || 2233-2

2233-3

Response to Commentor No. 2233

- 2233-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.
- 2233-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2233-3:** This PEIS has provided an estimate of the incremental potential human health impacts associated with a reasonable range of alternatives including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small. As stated in Appendix H of the EIS, other human health impacts (non fatal cancers and genetic mutations) occur with a lower frequency for the same level of exposure. Since latent cancer fatalities would not be expected among the public, it follows that the expected result for other radiological health impacts would also be small.

Commentor No. 2234: Marian Schwarzenbach

Dear Secretary Richardson,

8/24/00

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor; || 2234-1 || 2234-2

- 1. The Columbia River, a major fish spawning river in the country, a major water source, must not be polluted with radioactive waste. || 2234-3
- 2. The ground water in E WA, a major food producing area, must not be ruined. || 2234-1
- 3. The order to clean up was made, the \$ allocated - What Sincerely, part of "NO" don't you understand?

Name Marian Schwarzenbach Address 5102-46 Ave NE
 City Seattle State WA ZIP 98105
 P.S. And didn't the wild fires of this summer point up the additional dangers? We + everyone downstream were extremely lucky - this time.
 Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2234

2234-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.

As stated in Section N.3.2 of Appendix N, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

With regard to the Hanford wildfire of 2000, the DOE Richland Operations Office, the State of Washington Department of Health, and U.S. Environmental Protection Agency performed environmental monitoring on and around the Site to assess potential radiological impacts. The wildfire did not cause a release of radioactive materials from any Hanford facilities but did result in resuspension of radioactive materials which were already in the environment. The very low levels of radioactive materials that were resuspended were slightly above natural background levels and required several days of analysis to quantify. Information on this event has been made available to the public and can be accessed at <http://www.Hanford.gov/envmon/indes.html>. This site also provides a link to information on the independent offsite air monitoring that was conducted by the U.S. Environmental Protection Agency.

2234-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2234-3: DOE notes the commentor's position regarding impacts to the Columbia River and groundwater from FFTF restart. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Commentor No. 2235: Steven C. Peterson

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

I AM AGAINST ANY EFFORTS TO RESTART
HANFORD'S FFTF NUCLEAR REACTOR. I
HAVE A FAMILY THAT LIVES IN WASHINGTON
AND I AM SHOCKED THAT THE D.O.E.
IS SUPPORTING THE RESTART OF THE FFTF
REACTOR. MY FAMILY AND I ARE AGAINST
ANY FURTHER PRODUCTION OF HIGH
LEVEL WASTE.

Sincerely,

Name STEVEN C. PETERSON Address 15635 20TH AVE SW
 City SEA State WA ZIP 98166

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2235-1 || 2235-2

2235-3

2235-4

Response to Commentor No. 2235

- 2235-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.
- 2235-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2235-3:** See response to comment 2235-2.
- 2235-4:** DOE notes the commentor's concern regarding high-level radioactive waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 2236: Don MacRae

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2236-1 || 2236-2

*We must not allow
more liquid High-Level Nuclear
waste to be added to explosive
and leaking tanks that already
threaten the Columbia River!!!*

2236-3

*We must protect the future of
Sincerely, our health, our children, and our
environment. Don MacRae*
Name DON MACRAE Address 2900 NW ALPINE L
City CAMAS State WA ZIP 98607-93

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2236

- 2236-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.
- 2236-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2236-3:** High-level radioactive waste would not be generated by the activities proposed for any of the alternatives or alternative options. The additional radioactive waste that would be generated from the restart of FFTF (i.e., low-level radioactive waste) would not be stored in the high-level radioactive waste tanks located at Hanford. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 2237: Sally Brown

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

|| 2237-1 || 2237-2

*Hanford shadows me! I was a kid
down wind in Spokane - yes I was
treated for thyroid problems then.
In 1950 I moved to Portland, OR but
returned summers for college work.
Now you want to send the Columbia
Sincerely, to get me. Help!*

Name *Sally Brown* Address *35853 SW Unger Rd*
City *Cornelius* State *OR* ZIP *97113*

*P.S. My first child - a T fistula infant.
Because of Hanford releases ???*

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2237

- 2237-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.
- 2237-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2238: Beth Call

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

How can you propose to spend clean-up funds on restarting FFTF which will add more liquid high-level nuclear waste to explosive and leaking tanks which already threaten the Columbia River? This directly violates the Hanford Cleanup Agreement & threatens the entire Pacific NW with potential accidents & further nuclear contamination. Just last night (Aug. 21) VP Gore pledged to make cleaning up. Sincerely, Hanford a top priority. Don't make a bar out of him.

Name Beth Call Address 102 Otis
City Walla Walla State WA ZIP 99362

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2238-1 || 2238-2

|| 2238-1
|| 2238-3
|| 2238-1
|| 2238-4
|| 2238-1

Response to Commentor No. 2238

2238-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2 of Appendix N, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Public meetings were held on this formal milestone change. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.

2238-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2238-3: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 2238: Beth Call (Cont'd)

Response to Commentor No. 2238

As discussed in Section 4.3 of Volume 1, no high-level radioactive waste would be added to the high-level radioactive waste tanks at Hanford.

- 2238-4:** FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Commentor No. 2239: Martha Reynuzzo

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2239-1 || 2239-2

*In the wake of our children and
our earth and common sense -
nuclear reactors are dangerous
expensive (especially cleanup) and
not needed. We have many
other options!!!!*

2239-3

2239-4

Sincerely,

Martha Reynuzzo
Name MARTHA REYNUZZO Address _____
City Seattle Wa State _____ ZIP 98109

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2239

- 2239-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.
- 2239-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2239-3:** The commentors's opposition to the restart of FFTF is noted. FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. This PEIS has provided an estimate of the incremental potential human health impacts associated with a reasonable range of alternatives (including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 which includes restart of FFTF, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small. As stated in Appendix H of the EIS, other human health impacts (non-fatal cancers and genetic mutations) occur with a lower frequency for the same level of exposure. Since latent cancer fatalities would not be expected among the public, it follows that the expected result for other radiological health impacts would also be small.

The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS. DOE made every effort to obtain, analyze, and disclose all required information to make a decision on expanding nuclear infrastructure. The costs analysis of proposed actions is not required by NEPA and CEQ

Commentor No. 2239: Martha Reynuzzo (Cont'd)

Response to Commentor No. 2239

regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. The report were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms.

- 2239-4:** Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs:
- 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee;
 - 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and
 - 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

Commentor No. 2240: Kyle Allan Cleys

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

It is incomprehensible to me how the Department of Energy can even think of restarting Hanford's FFTF nuclear reactor. The last thing we need is more high-level nuclear waste. Please reject the lunacy and instead focus the Department's resources on cleaning up existing waste.

Sincerely, *Kyle Allan Cleys*

Name Kyle Allan Cleys Address 3954 NE 40th Avenue
City Portland State OR ZIP 97212

Please include

|| 2240-1 || 2240-2

2240-3

2240-4

2240-1

Response to Commentor No. 2240

- 2240-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.
- 2240-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.
- 2240-3: See response to comment 2240-2.
- 2240-4: DOE notes the commentor's concern regarding high-level radioactive waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 2241: D. Vallier

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*I find it hard to believe
that is matter is actually being
discussed. - Please shut down
the FFTF NOW - for good!!!
Clean up is what's needed!!
NOW!!*

Sincerely,

D. Vallier
Name D. Vallier Address 1101 Sherman Ave
City Hood River State OR ZIP 97031

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2241-1 || 2241-2

|| 2241-2

|| 2241-1

Response to Commentor No. 2241

- 2241-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.
- 2241-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2242: Frieda S. Walworth

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

Now that we know that nuclear reactors only make more dangerous waste, and since we should be doing away with nuclear weapons, in order to make the entire globe safer, surely making more is a stupid action! Let's clean up Hanford!

Name *Frieda S. Walworth* Address *2406 Kingfisher Ln.*
City *Kelso* State *WA* ZIP *98626*

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2242-1 || 2242-2

2242-3

|| 2242-1

Response to Commentor No. 2242

- 2242-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.
- 2242-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2242-3: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

Commentor No. 2243: Victoria Trumble-Bert

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2243-1 || 2243-2

Sincerely,

Name Victoria Trumble-Bert Address 15665 SE 43rd St
City Bellevue, State WA ZIP 98006

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2243

- 2243-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.
- 2243-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2244: Diana Schneider

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2244-1 || 2244-2

We have family here - Family which we believe are having health problems due to Hanford. Safety of people should be well above the reactor. Get this clean up done.

2244-1

Sincerely,

Name *Diana Schneider* Address *520 Frontier 2 Drive*
City *Yakima* State *WA* ZIP *98908-9096*

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2244

2244-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.

The commentor's concerns about impacts of the Hanford Site on human health are noted. Health effects studies that have been conducted in the Hanford Area are described in Section 3.4.9.3. Impacts that would result from implementation of Alternative 1, Restart FFTF, are discussed in Section 4.3 of Volume 1. Implementation of Alternative 1 was estimated to pose no significant risk to persons residing in the Hanford Area.

2244-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2245: Krista and Chuck Orider

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

We don't need to create more nuclear waste. Our children need to be safe and all future generations must have the right to protection as well.

Clean up Hanford. Try some of the European standards of water & clean air.

Sincerely,
 Name Krista + Chuck Orider Address 5111 NE 76th St
 City Vancouver State WA ZIP 98661

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2245-1 || 2245-2

2245-1

2245-3

Response to Commentor No. 2245

2245-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.

Impacts that would result from implementation of Alternative 1 (Restart FFTF) are discussed in Section 4.3 of Volume 1. Implementation of Alternative 1 was estimated to pose no significant risk to persons residing in the Hanford Area. Health effects studies that have been conducted in the Hanford Area are described in Section 3.4.9.3.

2245-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2245-3: DOE has evaluated the effects of the various alternatives using the applicable standards as discussed in Chapter 5. European standards for water and air are not applicable to these alternatives.

Commentor No. 2246: Ann Wopat

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*We try to teach our children
to honor our "words" - our agreements.
Why is it suddenly OK to turn
our backs on this commitment to
clean up this waste area? We
owe it to future generations to do the right
thing.*

Sincerely, *Ann Wopat*

Name Ann Wopat Address 7335 34th Ave NE
City Seattle State WA ZIP 98115

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2246-1 || 2246-2

2246-1

Response to Commentor No. 2246

- 2246-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.
- 2246-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2247: Walter Smick

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*In view of existing problems and what
appears to be intended future plans -
Am afraid of what will happen to the
Columbia. Not to mention the potential
devastation awaiting the citizens in the
Hanford vicinity. Please don't hurt the people
By starting up the reactor*

Sincerely,

Walter Smick

Name _____



Walter Smick
4912 NE 114th St.
Vancouver, WA 98686

City _____

ZIP _____

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2247-1 || 2247-2

|| 2247-3

|| 2247-4

Response to Commentor No. 2247

- 2247-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.
- 2247-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2247-3:** DOE notes the commentor's concerns for impacts to the Columbia River from existing contamination at Hanford and from FFTF restart. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.
- 2247-4:** The commentor's opposition to the restart of FFTF is noted. This PEIS has provided an estimate of the incremental potential human health impacts associated with a reasonable range of alternatives (including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation.

Commentor No. 2247: Walter Smick (Cont'd)

Response to Commentor No. 2247

Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Commentor No. 2248: Laila Atallah

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

It is highly distressing to me that we
 are considering restarting the FFTF Reactor.
 The current tanks are leaking toxins
 and our resources would best be used in
 fixing the current hazardous conditions,
 rather than exacerbating them.

Sincerely,

Thank you for your consideration.
Laila Atallah

Name Laila Atallah Address 3130 Woodland PK AVEN,
 City Seattle State WA ZIP 98103 upper

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2248-1 || 2248-2

2248-3

2248-1

Response to Commentor No. 2248

2248-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.

As discussed in Section 4.3 of Volume 1, implementation of Alternative 1, Restart FFTF, none of the proposed alternatives would add waste to the high-level waste tanks at Hanford. As stated in Section N.3.2 of Appendix N, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

2248-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.

2248-3: See response to comment 2248-2.

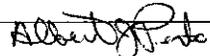
Commentor No. 2249: Albert J. Penta

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

The Time is long past to honor the
Hanford Clean-up Agreement & Stop the
folly of further plutonium production. Please
do not Re-start the dangerous FFTF Nuclear reactor.
Thank you.

Sincerely,



Name Albert J. Penta Address PO Box 1057
City MONROE State WA ZIP 98272

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2249-1 || 2249-2

|| 2249-1

|| 2249-3

Response to Commentor No. 2249

2249-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford and opposition to the production of plutonium-238. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.

As discussed in Section 1.2.2 of Volume 1, plutonium-238 would be produced in support of NASA's deep space missions.

2249-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.

2249-3: See response to comment 2249-2.

Commentor No. 2250: Gordon Ruffiles

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

At 86, I cannot attend the hearing, but I have read the arguments on both sides and believe that the weight of the evidence is that the FFTF should be shut down.

Sincerely,

Gordon Ruffiles
 Name Gordon Ruffiles Address 11318 Riverview Pl NE
 City Seattle State WA ZIP 98125-5960

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2250-1 || 2250-2

2250-2

Response to Commentor No. 2250

- 2250-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.
- 2250-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2251: Dolores Koger

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*Why do we need more
plutonium production? Starting
up the reactor will just
add more waste to an already
overpolluted site contaminated by
the Columbia River*

Sincerely,

Dolores Koger

Name *Dolores Koger* Address *3838 138th Ave NE*

City *Bellevue* State *WA* ZIP *98005*

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2251-1 || 2251-2

|| 2251-3

|| 2251-4

Response to Commentor No. 2251

- 2251-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.
- 2251-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2251-3:** The purpose of the NI PEIS is to evaluate the environmental impacts of a range of reasonable alternatives to fulfill the proposed actions, one of which is the domestic production of plutonium-238. Plutonium-238, used to support NASA space missions, is not weapons-grade plutonium (i.e., plutonium-239). Whereas the United States is currently planning for the disposition of tons of surplus plutonium-239 that is not needed to support the U.S. nuclear weapons stockpile, there are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems and the plutonium-238 that fuels them for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, DOE anticipates that the existing plutonium 238 inventory will be exhausted by approximately 2005. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.
- 2251-4:** As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g.,

Commentor No. 2251: Dolores Koger (Cont'd)

Response to Commentor No. 2251

solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

Commentor No. 2252: Joyce A. Harman

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: !! || 2252-1 || 2252-2

Please
"Think of our Children"

Sincerely, Thank you - Joyce A. Harman

Name _____ Address _____
City _____ State _____ ZIP _____

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2252

- 2252-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.
- 2252-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2253: F. K. Mead

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

|| 2253-1 || 2253-2

*This has gone on for
too long. Please put politics
aside and honor the clean-up
agreement which will help future
generations live free of the dangers
of this reactor.*

Sincerely,

Name F. K. Mead Address 1901 38th Ave E
City Seattle State WA ZIP 98112

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

2253-1

Response to Commentor No. 2253

2253-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.

As discussed in Section 4.3 of Volume 1, implementation of Alternative 1 (Restart of FFTF) would pose little risk to the health and safety of the public.

2253-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2254: Ruth Newland

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

The recent fire at the Hanford Nuclear Site only points up the fact of how dangerous Hanford really is with all its closet skeletons and decaying facilities. We simply do NOT want nuclear work in our area. So do NOT start FFTF

Sincerely, *Nuclear Reactor again & get the site cleaned up*

Name *Ruth Newland, Ph.D* Address *3004 Riverside Road*
City *Yalima* State *WA* ZIP *98901-8540*

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

2254-1 2254-2

2254-1

2254-3

Response to Commentor No. 2254

2254-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.

With regard to the Hanford wildfire of 2000, the DOE Richland Operations Office, the State of Washington Department of Health, and U.S. Environmental Protection Agency performed environmental monitoring on and around the Site to assess potential radiological impacts. The wildfire did not cause a release of radioactive materials from any Hanford facilities but did result in resuspension of radioactive materials which were already in the environment. The low levels of radioactive materials that were resuspended were only slightly above natural background levels and required several days of analysis to quantify. Information on this event has been made available to the public and can be accessed at <http://www.Hanford.gov/envmon/index.html>. This site also provides a link to information on the independent offsite air monitoring that was conducted by the U.S. Environmental Protection Agency. As discussed in Appendix I, an assessment of the risk of a wildfire indicated that, in the worst case, it could lead to a loss of offsite power, which the FFTF, because of its passive cooling capability, could withstand without overheating the core or leading to the release of any radioactivity.

2254-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.

2254-3: See response to comment 2254-2.

Commentor No. 2255: Peter Gay

Dear Secretary (Mr. ...),

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2255-1 || 2255-2

As a downstream Columbia River resident
for almost 40 years, I am especially
concerned about challenges associated
with Hanford "Clean-Up." Re-starting the
FFTF Nuclear Reactor at Hanford seems
like a step in the wrong direction to me

Sincerely,

Name Peter Gay Address 910 E. 15th Place
City The Dalles State OR ZIP 97058

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

2255-1

2255-3

Response to Commentor No. 2255

- 2255-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.
- 2255-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.
- 2255-3:** See response to comment 2255-2.

Commentor No. 2256: Ann Kremer

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

Do not further threaten the life
of the Columbia River.

Do not endanger the lives of our
children by producing more nuclear waste

Ann Kremer
Sincerely,

Name Ann Kremer Address 10041 42 SW
City Seattle State WA ZIP 98146

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2256-1 || 2256-2

|| 2256-3

|| 2256-4

Response to Commentor No. 2256

- 2256-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.
- 2256-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2256-3:** FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.
- 2256-4:** DOE notes the commentor's concern regarding waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 2257: Anne E. Zald

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

|| 2257-1 || 2257-2

Progress on the clean-up is held in check while storage tanks continue to degrade and leak, pollute our groundwater and countryside. Why is the clean-up held hostage to the FFTF and increasing amounts of waste?

Sincerely,

Name ANNE E. ZALD Address 9522 18th AVE NE B1
 City SEATTLE State WA ZIP 98115

2257-1

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2257

2257-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities. Further, none of the mission activities discussed in the NI PEIS would add waste to the high-level waste tanks at Hanford.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2 of Appendix N, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

2257-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2258: Jim Trombald

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*We have a long, complicated
cleanup mission at Hanford, crucial
for disaster prevention!
Any production such as FFTF
disturbs from cleanup mission
plus adds waste stream!*

Sincerely,

Name *Jim Trombald, M.D.* Address *4851 88th Place SE*
City *Mercer Island* State *Wash.* ZIP *98040*

*I will make similar comments in
person 8/30/08. JT.*

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2258-1 || 2258-2

2258-1

Response to Commentor No. 2258

2258-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.

As discussed in Section 4.3 of Volume 1, waste that would be generated under the alternatives described in Section 2.5 would not significantly impact the waste management infrastructure at Hanford.

2258-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2259: Donn Colby

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2259-1 || 2259-2

Hanford is the most contaminated nuclear site in the western world. The main goal for the site is to clean it up. Producing more radioactive waste at Hanford is contrary to that goal. After 8 years on stand-by, it is time to close FFTF and focus on clean-up.

Sincerely,

Don Colby

Name Don Colby, MD Address 318 17th Ave E

City Seattle State WA ZIP 98112

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

2259-1

Response to Commentor No. 2259

2259-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.

As discussed in Section 4.3 of Volume 1, waste that would be generated under the alternatives described in Section 2.5 would not significantly impact the waste management infrastructure at Hanford.

The commentor's support for Alternative 5 (Deactivate FFTF with no new missions) is noted.

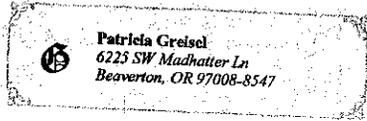
2259-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2260: Patricia Greisel

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2260-1 || 2260-2

Sincerely, *Patricia Greisel*



ZIP _____

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2260

- 2260-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.
- 2260-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

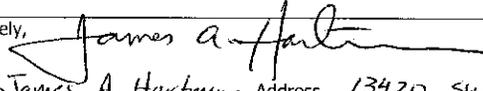
Commentor No. 2261: James A. Hartmann

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*This is an issue that we must
consider with a long-term perspective.
Nuclear waste is essentially forever.
Let's consider sustainable, clean
alternatives such as solar power!*

Sincerely,



Name James A. Hartmann Address 13420 SW Scotts Bridge Dr.

City Tigard State OR ZIP 97223

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2261-1 || 2261-2

|| 2261-3

Response to Commentor No. 2261

- 2261-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.
- 2261-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2261-3:** DOE notes the commentor's interest in alternative energy sources, although issues of research and development of alternative energy sources are beyond the scope of this Nuclear Infrastructure PEIS. The DOE missions to be addressed in this EIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies.

Commentor No. 2262: Emmalee Weibel

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

The American public has made abundantly clear that they do not want additional nuclear industry in the U.S. The only time people go along is when they aren't aware what's being done. Do the responsible thing.

Name *Emmalee Weibel* Address *5020 SW Carmen Dr.*
City *Lake Oswego* State *OR* ZIP *97035-3346*

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2262-1 || 2262-2

2262-3

Response to Commentor No. 2262

- 2262-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.
- 2262-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2262-3:** DOE policy encourages effective public participation in its decision making process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

Commentor No. 2263: Elizabeth B. Bushnell

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

IF THIS DOES NOT HAPPEN - NOT ONLY
WILL THE COLUMBIA RIVER BE THREATENED
BUT LIVES IN THE NORTHWEST WILL BE
AT RISK. DO UNTO OTHERS AS YOU
WOULD HAVE THEM DO TO YOU!

Sincerely,

Elizabeth B. Bushnell

Name ELIZABETH B. BUSHNELL Address 1665 SW FILMORA,
City PORTLAND State OR ZIP 97225-42

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2263-1 || 2263-2

2263-1

Response to Commentor No. 2263

2263-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

2263-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2264: Phyllis Clausen

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

I strongly oppose restart of the FFTF nuclear reactor. Do not add any more nuclear waste. Instead pledge the DOE to cleaning up the leaking tanks already on the site. We deserve cleanup, not the further burden of waste you are proposing.

Sincerely,

Name Phyllis Clausen Address 37 Stoller Rd
City Trent Lake State WA ZIP 98650

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2264-1 || 2264-2

|| 2264-3

|| 2264-4

|| 2264-1

Response to Commentor No. 2264

- 2264-1:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy) This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.
- 2264-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.
- 2264-3:** See response to comment 2264-2.
- 2264-4:** DOE notes the commentor's concern regarding waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 2265: Walter and Jean Walkinshaw

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

+ permit no further storage of nuclear
waste at Hanford

Sincerely,

Name Walter + Jean Walkinshaw Address 1303 E. Lynn
City Seattle State WA ZIP 98002

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2265-1 || 2265-2

|| 2265-3

Response to Commentor No. 2265

- 2265-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2265-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2265-3:** DOE notes the commentor's concern regarding waste generation and storage. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 2266: Jennifer Martin

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

The Hanford Plant is dangerous enough as it is. It needs to be made safer and not less so. I think this summer's fire helped prove that one. Please don't restart the FFTF reactor. It's not worth the risks and the wastes.

Sincerely,

Name Jennifer Martin Address 707 Valencia
City Walla Walla State WA ZIP 99362

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2266-1 || 2266-2

|| 2266-1

|| 2266-3

Response to Commentor No. 2266

2266-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Prior public meetings were held on this formal milestone change. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

With regard to the Hanford wildfire of 2000, the DOE Richland Operations Office, the State of Washington Department of Health, and U.S. Environmental Protection Agency performed environmental monitoring on and around the Site to assess potential radiological impacts. The wildfire did not cause a release of radioactive materials from any Hanford facilities but did result in resuspension of radioactive materials which were already in the environment. The very low levels of radioactive materials that were resuspended were slightly above natural background levels and required several days of analysis to quantify. Information on this event has been made available to the public and can be accessed at <http://www.Hanford.gov/envmon/index.html>. This site also provides a link to information on the independent offsite air monitoring that was conducted by the U.S. Environmental Protection Agency.

2266-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.

2266-3: See response to comment 2266-2.

Commentor No. 2267: Eric Andersen

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

The FFTF Nuclear Reactor should not be
 started on the issue of public safety.
 Respect the wishes of the public and clean
 up the Hanford area.

|| 2267-1 || 2267-2

|| 2267-3

|| 2267-1

Sincerely, Eric Andersen

Name ERIC ANDERSEN Address 73 STATE ST
 City Hood River State OR ZIP 97031

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2267

- 2267-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2267-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2267-3:** The commentor's opposition to the restart of FFTF is noted. FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. This PEIS has provided an estimate of the incremental potential human health impacts associated with a reasonable range of alternatives (including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 which includes restart of FFTF, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Commentor No. 2268: Roy Metcalf

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2268-1 || 2268-2

*no more nuc waste in the
Columbia River,*

|| 2268-3

Sincerely,

Name *Roy Metcalf* Address *2455 Bellevue Ter.*
City *W. Lion* State *OR* ZIP *97068*

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2268

- 2268-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2268-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2268-3:** DOE notes the commentor's position regarding impacts to the Columbia River from FFTF restart. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. Section 3.4.4 of Volume 1 of the NI PEIS describes the current condition of water resources potentially affected by the Hanford Site, with specific discussions of surface water and groundwater resources in the Hanford 400 Area, where FFTF is located, provided in Sections 3.4.4.1.2 and 3.4.4.2.2, respectively. This information indicates that the only impact that 400 Area operations have had on water resources to date is contamination of the unconfined aquifer system with nitrate from sanitary sewage disposal. The source of this contamination has since been removed resulting in nitrate levels diminishing over time. The effects of maintaining FFTF in its current standby mode for 35 years are described in Section 4.2.1.2.4 of Volume 1, and this analysis indicates that the impact on water resources would be negligible. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Commentor No. 2269: Deanna Lynch

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

I have sent in so many of these already - what will it take to make you listen?

Sincerely,

Deanna Lynch
 Name Deanna Lynch Address 22511 NE 99th St
 City Newcower State Wash WA ZIP 981682

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2269-1 || 2269-2

2269-3

Response to Commentor No. 2269

- 2269-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2269-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2269-3:** DOE policy encourages effective public participation in its decision making process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

Commentor No. 2270: Beverly J. Witte

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*The Columbia river is already
threatened by leaking tanks of nuclear
waste so we don't want any more
high level nuclear waste to be added.
We need to protect the future of our
health, the health of our children and our
environment.*

Sincerely,
Mrs. Beverly J. Witte

Name BEVERLY J. WITTE Address 4534 Warren Ave. N.
City Seattle State Wa. ZIP 98109

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

2270-1 2270-2

2270-3

2270-4

Response to Commentor No. 2270

- 2270-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2270-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2270-3:** High-level radioactive waste would not be generated by the activities proposed for any of the alternatives or alternative options. The additional radioactive waste that would be generated from the restart of FFTF (i.e., low-level radioactive waste) would not be stored in the high-level radioactive waste tanks located at Hanford. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.
- 2270-4:** The commentor's opposition to the restart of FFTF is noted. This PEIS has provided an estimate of the incremental potential human health impacts associated with a reasonable range of alternatives (including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal

Commentor No. 2270: Beverly J. Witte (Cont'd)

Response to Commentor No. 2270

operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small. As stated in Appendix H of the EIS, other human health impacts (non-fatal cancers and genetic mutations) occur with a lower frequency for the same level of exposure. Since latent cancer fatalities would not be expected among the public, it follows that the expected result for other radiological health impacts would also be small.

The NI PEIS identifies (in Chapter 3 of Volume 1) endangered species that live on or near all of the candidate sites, as well as aquatic and wetlands areas that may be impacted by operations at candidate locations. According to an International Atomic Energy Agency (IAEA) publication (IAEA Technical Report Series No. 332, Effects of Ionizing Radiation on Plants and Animals at Levels Implied by Current Radiation Protection Standards), a dose rate of 100 millirem per year to the most exposed human will lead to dose rates to plants and animals of less than 0.1 rad per day. The IAEA concluded that a dose rate of 0.1 rad per day or less for animals and 1 rad per day or less for plants would not affect these populations. The largest individual dose for any of the nuclear infrastructures alternatives under normal operations would be less than 0.1 millirem, which is three orders of magnitude less than the IAEA threshold for adverse effects. Therefore, implementation of any of the range of reasonable nuclear infrastructure alternatives analyzed would not be expected to result in adverse impacts on plants and animals living in potentially affected areas around the candidate sites.

Commentor No. 2271: Kathleen A. Lawrence

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

More waste will then be added to tanks if the FFTF Nuclear Reactor is restarted. More danger of accidents and further contamination of the Columbia.

Sincerely,

Name Kathleen A. Lawrence Address _____
City anacortes State WA ZIP 98665

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2271-1 || 2271-2

|| 2271-3

|| 2271-4

Response to Commentor No. 2271

- 2271-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2271-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2271-3:** As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.
- As discussed in Section 4.3 of Volume 1, no high-level radioactive waste would be added to the high-level waste tanks at Hanford.
- 2271-4:** FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Commentor No. 2272: Patricia Sims

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*There is enough leakage already.
The danger of restarting the
nuclear reactor is too high.*

*Listen to those of us who live
here & will be affected by your
sincerely, Decision.*

Name Patricia Sims Address 13617 SE Grant Ct
City Portland State OR ZIP 97233

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2272-1 || 2272-2

|| 2272-1

|| 2272-3

|| 2272-4

Response to Commentor No. 2272

- 2272-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2272-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2272-3:** The commentor's opposition to the restart of FFTF is noted. FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. This PEIS has provided an estimate of the incremental potential human health impacts associated with a reasonable range of alternatives (including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 which includes restart of FFTF, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.
- 2272-4:** Comment noted. DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and to providing ample opportunity for public comment on those actions. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

Commentor No. 2273: Patricia Sims

Dear Secretary Nichols,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

The Columbia River is an integral part of the State/locality/economy in which I live. I do not want to be poisoned w/ the nuclear waste which is already coming closer and would be severely increased by the State op of the Nuclear Reactor!!

Name *Patricia Sims* Address *13617 AB Grant Ct*
City *Hanford* State *CA* ZIP *92333*

Please listen to us!!!

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2273-1 || 2273-2

2273-3

2173-4

Response to Commentor No. 2273

2273-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2273-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2273-3: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

2273-4: Comment noted. DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in

Response to Commentor No. 2273

accordance with NEPA, and to providing ample opportunity for public comment on those actions. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

Commentor No. 2273: Patricia Sims (Cont'd)

Commentor No. 2274: M. Carnegie

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*The nuclear reactor waste at Hanford
needs to be cleaned up safely and now.
I strongly disapprove of any production
that will create more nuclear waste.*

|| 2274-1 || 2274-2

|| 2274-1

|| 2274-3

Sincerely,

Name M. Carnegie Address 11259-126th Ave. N.E.
City Kirkland State WA ZIP 98033

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2274

- 2274-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2274-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2274-3:** DOE notes the commentor's concern regarding waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 2275: Rosalyn Breen

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

I am particularly concerned about the storage and clean-up of toxic wastes. Please don't let more improperly stored toxic wastes into the Pacific N.W. and work for clean-up of what is already there.

Rosalyn Breen

Sincerely,

Name Rosalyn Breen Address 622 NW 76 St.
 City Seattle State WA. ZIP 98117

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2275-1 || 2275-2

2275-1

Response to Commentor No. 2275

- 2275-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2275-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2276: Carolyn SRB Scott

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2276-1 || 2276-2

*We cannot continue to proliferate
nuclear waste until we know how
to dispose of it safely!*

2276-3

Sincerely,

Name Carolyn SRB Scott Address 3915-48th P.O. N.E.
City Seattle State WA ZIP 98105

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2276

- 2276-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2276-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2276-3:** DOE notes the commentor's concern regarding waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Commentor No. 2277: Doris Dreyfuss

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

The Department of Energy should be giving priority to clean-up. We cannot afford to add to the pollution burden when we seem to lack the technical + financial ability to deal with the hazards already in place.

Continue to import medical isotopes from Canada + purchase plutonium-238 from foreign sources.

Sincerely, *Doris Dreyfuss*

Name Doris Dreyfuss Address 2104 NW 127th St.
City Vancouver State WA ZIP 98685

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2277-1 || 2277-2

2277-1

2277-3

Response to Commentor No. 2277

- 2277-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.
- 2277-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, as well as support for the continued importation of medical isotopes from Canada and purchase of plutonium-238 from Russia.
- 2277-3:** See response to comment 2277-2.

Commentor No. 2278: Irene R. Japha

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*We have seen recent serious problems with
the Hanford storage tanks and probable leakage
into the surrounding areas. Unless you can
reassure the citizens of Washington that Hanford poses
no threat to the populace, our waterways, and lands
I urge you to shut down the reactor & clean up Hanford*
Sincerely,

Name Irene R. Japha, MD Address 3405 26th W
City Seattle State WA ZIP 98199

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2278-1 || 2278-2

2278-1

Response to Commentor No. 2278

2278-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The environmental impacts associated with operation of the FFTF and support facilities at Hanford during normal operations and from postulated accidents are presented and discussed in Section 4.3 of this NI PEIS. All impacts to human health and to ecological resources would be small in the immediate area of the Hanford Site and negligible at all distant locations.

2278-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2279: Caroline Coreta

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2279-1 || 2279-2

Please use your high & responsible
 office to start putting the atomic
 nuclear genie back in its box -
 This can happen by not restarting
 the FFTF Nuclear Reactor. NOW!!

2279-3

Sincerely,

Name Caroline Coreta Address 9606-48th St
 City Seattle State WA ZIP 98136

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2279

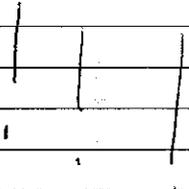
- 2279-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2279-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.
- 2279-3:** See response to comment 2279-2.

Commentor No. 2280: Irene Myers

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

|| 2280-1 || 2280-2



Sincerely,

Name Irene Myers Address P.O. Box 9763
City Seattle State WA ZIP 98107

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2280

- 2280-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2280-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2281: Bonnie Orme

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2281-1 || 2281-2

Sincerely,

Bonnie Orme
 Name 1949 Perkins Lane W. Address _____
Seattle, WA 98119
 City _____ State _____ ZIP _____

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2281

- 2281-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2281-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2282: Elizabeth Roberts

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

I have attended at least 3 hearings on this matter already. You are obligated to spend the DoE Hanford budget on cleaning up that mess. DO NOT study this issue any more. Take FFTF off standby NOW and meet your obligation to clean up Hanford!

Sincerely,

Elizabeth Roberts

Name Elizabeth Roberts Address 2132 NE Sunset Ln.
City Bremerton State WA ZIP 98310-4646

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2282-1 || 2282-2

2282-1

Response to Commentor No. 2282

2282-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

2282-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2283: Brian Watson

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*How many times do I have to say this?
FFTF needs to be shut down and all
DoE resources need to go toward
remediation + clean-up efforts! Using FFTF
to produce more Pu contradicts the
obligations under the Clean Up Agreement!*

Sincerely,

Brian E. Watson

Name Brian E. Watson Address 2132 NE Sunset Ln.

City Bremerton State WA ZIP 98310

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2283-1 || 2283-2

2283-1

Response to Commentor No. 2283

2283-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy) This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

DOE-RL, EPA, and Ecology agreed to a change in this agreement to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on FFTF's future. Public meetings were held on this formal milestone change. The NI PEIS missions would not have an impact on Hanford cleanup activities.

2283-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2284: Rhoda Stockwell

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

We citizens do not want further contamination of our land and rivers. An agreement has already been made by the Federal and State Governments - Please honor this agreement.

Sincerely, *Rhoda Stockwell*

Name RHODA STOCKWELL Address 816 So. 216th St. Tr.#100
City Des Moines State WA ZIP 98195

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2284-1 || 2284-2

2284-1

Response to Commentor No. 2284

2284-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The environmental impacts associated with operation of the FFTF and support facilities at Hanford during normal operations and from postulated accidents are presented and discussed in Section 4.3 of this NI PEIS. All impacts to human health and to ecological resources would be small in the immediate area of the Hanford Site and negligible at all distant locations.

2284-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2285: Dorli T. Rainey

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

NOTHING SHOULD BE DONE AT
HANFORD - NO STARTING - NO
STORING, UNTIL THE COMPLETE
CLEAN UP OF HANFORD IS SATIS-
FACTORILY COMPLETED.

Dorli T. Rainey
 sincerely,

Name DORLI T. RAINEY Address 30443 3RD AVE S.
 City FEDERAL WAY State WA ZIP 98003

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2285-1 || 2285-2

2285-3

2285-1

Response to Commentor No. 2285

2285-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

DOE has developed a draft "Waste Minimization and Management Plan for FFTF" to incorporate pollution prevention and waste minimization practices in its consideration of the future of FFTF. If a decision were made to restart FFTF, this plan would be used to ensure that optimum opportunities are provided for characterizing potential waste streams, identifying source reduction and recycling strategies, evaluating management, treatment, and disposition options, developing sustainable designs, and implementing effective management strategies for all waste streams related to the restart and operation of FFTF.

2285-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, opposition to Alternative 1, Restart FFTF, and opposition to storing of additional nuclear materials at Hanford.

2285-3: See response to comment 2285-2.

Commentor No. 2286: Linda J. Clifton

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

We must clean up the current mess of waste there, and not add more to it with more nuclear production, waste and contamination.

Sincerely,

Name LINDA J. CLIFTON Address 4462 Whitman N.
City SEATTLE State WA ZIP 98103

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2286-1 || 2286-2

2286-1

Response to Commentor No. 2286

2286-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

DOE has developed a draft "Waste Minimization and Management Plan for FFTF" to incorporate pollution prevention and waste minimization practices in its consideration of the future of FFTF. If a decision were made to restart FFTF, this plan would be used to ensure that optimum opportunities are provided for characterizing potential waste streams, identifying source reduction and recycling strategies, evaluating management, treatment, and disposition options, developing sustainable designs, and implementing effective management strategies for all waste streams related to the restart and operation of FFTF.

2286-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2287: Arthur Rolfe

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

~~I am both frightened and astounded at your position concerning Hanford activities. Nuclear waste storage intent is being ignored. Past promises and legal requirements are being ignored. No permanent disposal solution for any nuclear waste generated to date is at hand. Our existing nuclear weapons are in fact unusable because we would end up in self destructive retaliation (to whom?). I resent being forced to live in a "sword of Damocles" environment created by my government based on statements of "fake science" that are not credible, repeatable science.~~

Sincerely,

Arthur Rolfe

Name ARTHUR ROLFE Address 12420 SE 27th St
City Belleve State WA ZIP 98005

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2287-1 || 2287-2

|| 2287-1

|| 2287-3

|| 2287-4

|| 2287-5

Response to Commentor No. 2287

- 2287-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2287-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2287-3:** DOE notes the commentor's concern regarding waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.
- 2287-4:** DOE notes the commentor's view on nuclear weapons, although nuclear weapons issues are beyond the scope of this Nuclear Infrastructure PEIS. The DOE missions addressed in this EIS (Section 1.2 of Volume 1) include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development. The three missions are civilian nuclear energy missions and are not defense-related. Neither nuclear weapons nor components for nuclear weapons would be produced under any of the nuclear infrastructure alternatives.
- 2287-5:** DOE notes the commentor's views.

Commentor No. 2288: Nell Wolever

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

How can government officials possibly consider adding more liquid high-level nuclear waste to leaking tanks by proposed "start-up" of nuclear reactors? How can you ignore the death sentence this would bring to the Columbia River and populace surrounding that river?

Name Nell Wolever Address Bx 394
City North Bend State Wa ZIP 98054

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2288-1 || 2288-2

2288-3

2288-4

Response to Commentor No. 2288

- 2288-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2288-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2288-3:** As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.
- As discussed in Section 4.3 of Volume 1, no high-level radioactive waste would be added to the high-level waste tanks at Hanford.
- 2288-4:** FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1. In addition, Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Commentor No. 2289: Jane Civiletti

Dear Secretary Nicholson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

We, the people of the Pacific NW, want
no more nuclear facilities located here.
Our only desire for DOE tax dollars is to
have former nuclear sites "cleaned up" knowing
that this will never be totally possible.
Please, contaminate us no longer.

Sincerely,

Name Jane Civiletti Address 14614 SE Fair Oaks Ave
 City Milwaukie State OR ZIP 97267

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2289-1 || 2289-2

2289-1

Response to Commentor No. 2289

- 2289-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2289-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2290: Barbara Simelin

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*This is a bad dream that
doesn't seem to go away -
I can't believe this radioactive
waste continues on to pollute people
all around - I am a cancer
victim and don't wish it on anyone
Wake up!*

Sincerely,

Barbara Simelin
Name _____ Address _____

City *Levy Co.* State *Wa* ZIP *98261*

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2290-1 || 2290-2

2290-1

Response to Commentor No. 2290

- 2290-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2290-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2291: Leo Stammer

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*We have so much garbage
in our water, air. I guess I
should say Palutants - please
don't add anymore. Clean it
up. Our electric bill already
went up so it would be done*

Sincerely,

Name Leo M. Stammer Address 13620 S.W. Beet Bend Rd'
City Thigard State Or ZIP 97224 #27

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2291-1 || 2291-2

2291-1

Response to Commentor No. 2291

2291-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Implementation of the alternatives described in Section 2.5 of Volume 1 would have no impact on electric power rates.

2291-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2292: Margaret K. Letherman

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*More waste should not be added to the potentially
explosive and leaking tanks that already threaten
the Columbia River & people in E. Washington!
The danger of accidents will be increased!*

Cleanup, yes! More radioactivity - NO!

Margaret K. Letherman

Sincerely,

Name *Margaret K. Letherman* Address *1956 Golden Pine*
City *Goldendale* State *WA* ZIP *98620*

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2292-1 || 2292-2

2292-3

2292-4

|| 2292-1 || 2292-2

Response to Commentor No. 2292

2292-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2292-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. With respect to the commentor's concern about radioactivity, the NI PEIS has provided an estimate of the potential human health impacts from normal operations, accident, and transportation related activities for each of the alternatives and options presented in Volume 1, Chapter 4. These impacts are summarized in Chapter 2, Tables 2-6 and 2-7.

2292-3: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

As discussed in Section 4.3 of Volume 1, no high-level radioactive waste would be added to the high-level waste tanks at Hanford.

2292-4: FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Commentor No. 2293: Amy Ingram

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*I don't know how much simpler
it can be, I would like to see
all environment cleaned up &
heed of nuclear pollution along with
other man made pollution.
WHAT CAUSES CANCER?!?*

Sincerely,

Amy Ingram

Name _____ Address _____
City Seattle State WA ZIP 98109

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2293-1 || 2293-2

2293-1

Response to Commentor No. 2293

- 2293-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2293-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2294: Rachel Golden

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

Hanford has a bad track record.
Plutonium 238 is highly toxic.
Restarting the FFTF Nuclear Reactor to produce
Pu-238 would create a potentially exceptionally
dangerous situation as well as toxic waste,
which Hanford has already proven they are
Sincerely, unable to contain or dispose of safely.
Rachel Golden

Name Rachel Golden Address 12025 E. Para #903
City Seattle State WA ZIP 98122

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2294

|| 2294-1 || 2294-2

|| 2294-1

|| 2294-3

|| 2294-4

2294-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2294-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2294-3: The commentor's opposition to the restart of FFTF is noted. This PEIS has provided an estimate of the incremental potential human health impacts associated with a reasonable range of alternatives (including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. Plutonium-238 is one of many substances that have been considered in the analysis of health and safety impacts for this PEIS. Plutonium-238 is the primary contributor to the health impacts associated with the processing of irradiated neptunium targets at any of the proposed processing facilities. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

2294-4: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (i.e. solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all

Commentor No. 2294: Rachel Golden (Cont'd)

Response to Commentor No. 2294

wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Commentor No. 2295: Rolf Skar

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

*As a proud citizen of Oregon
I cannot accept the start-up or
continued "standby" of the FFTF reactor.
Stop putting our region, our economy
and our children at risk. Stop wasting
taxpayer money. SHUT DOWN FFTF for good.*

Sincerely,
Name ROLF SKAR Address 2227 SE MADISON
City PORTLAND State OR ZIP 97214

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2295-1 || 2295-2

2295-3

2295-4

2296-2

Response to Commentor No. 2295

2295-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2295-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, opposition to Alternative 1, Restart FFTF, and concern for taxpayer dollars. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Pursuant to CEQ regulations (40 CFR 1505.1(e)), agencies are encouraged to make ancillary decision documents available to the public before a decision is made. DOE mailed this document to about 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P in the Final NI PEIS.

2295-3: See response to comment 2295-2.

2295-4: This NI PEIS has provided an estimate of the incremental potential human health impacts associated with a reasonable range of alternatives (including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

The NI PEIS identifies (in Chapter 3 of Volume 1) endangered species that live on or near all of the candidate sites, as well as aquatic and wetlands areas that may be impacted by operations at candidate locations.

Commentor No. 2295: Rolf Skar (Cont'd)

Response to Commentor No. 2295

According to an International Atomic Energy Agency (IAEA) publication (IAEA Technical Report Series No. 332, Effects of Ionizing Radiation on Plants and Animals at Levels Implied by Current Radiation Protection Standards), a dose rate of 100 millirem per year to the most exposed human will lead to dose rates to plants and animals of less than 0.1 rad per day. The IAEA concluded that a dose rate of 0.1 rad per day or less for animals and 1 rad per day or less for plants would not affect these populations. The largest individual dose for any of the nuclear infrastructures alternatives under normal operations would be less than 0.1 millirem, which is three orders of magnitude less than the IAEA threshold for adverse effects. Therefore, implementation of any of the range of reasonable nuclear infrastructure alternatives analyzed would not be expected to result in adverse impacts on plants and animals living in potentially affected areas around the candidate sites.

Commentor No. 2296: Margaret Koenig

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

Shut down Hanford's FFTF Nuclear reactor. I am gravely concerned re: the environmental + health problems that already exist at this site. To even consider the resumption of Plutonium processing at Hanford is ludicrous in light of the fact sincerely that we already have leaking High-Level Nuclear waste Tanks

Name Margaret Koenig Address 1214 Lincoln St
City Haas River State OR ZIP 97031

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2296-1 || 2296-2

2296-1

Response to Commentor No. 2296

2296-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

The use of proposed alternative facilities associated with reprocessing of neptunium-237 targets would have no impact on schedules or available funding for high-level radioactive waste programs at either Hanford or the INEEL sites. The higher-activity waste would be treated as a solid form via a stand-alone vitrification system, separate from any tank waste treatment system. The existing Hanford high-level radioactive waste facilities would also not be used, and as analyzed in the PEIS, no existing or planned high-level radioactive waste facilities would be used to treat the waste resulting from processing the irradiated targets.

2296-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2297: Dorothy Arque

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2297-1 || 2297-2

The Columbia River is too important to risk radioactivity in its waters. Plutonium production is wrong, wrong, wrong! and highly dangerous

Sincerely,

Name *Dorothy Arque* Address *3015 Mossop DR*
 City *Bellingham* State *WA* ZIP *98226*
(Retired)

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Please forward to NRC/DOE

2297-3

Response to Commentor No. 2297

- 2297-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2297-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2297-3:** The FFTF and fabrication/processing facilities at the Hanford Site can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.2-4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from implementation of the alternatives involving Hanford facilities, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with Hanford site would be small.
- FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Commentor No. 2298: Michael Zemar

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor: || 2298-1 || 2298-2

I was born in the H.R. Valley & am 3rd generation here. I have a small business 'Zemar's Music' which thrives on the tourist which come to play in the beautiful C.Gary Restating wh FFTF threatens everyone - Columbia River cannot handle any more nuclear waste - Clean-up Hanford as promised - No Delay

|| 2298-3

|| 2298-1

Sincerely,

Name Michael Zemar Address 1819 W. CASCADE ST
City Hood River State OR ZIP 97031

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

Response to Commentor No. 2298

2298-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2298-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2298-3: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (i.e. solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram funds designated for Hanford cleanup, regardless of the alternative(s) selected.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Commentor No. 2299: K. M. Fitzpatrick

Dear Secretary Richardson,

Please honor the Clean-Up Agreement and Shut Down the FFTF Nuclear Reactor:

Taxpayers resent terms of agreement
being ignored. We don't have any
extra money with inflation being at
200% thanks to Democrats & Republicans
alike. Anyone perpetuating this misuse
of taxpayers money should be prosecuted
Sincerely, to the fullest extent of the law

Name K. M. Fitzpatrick Address 1608 Hoyt Ave
City Everett State WA ZIP 98201

Please include my comments in the official record for the Pu-238/FFTF Environmental Impact Statement. Also, please respond to my comments and concerns.

|| 2299-1 || 2299-2

2299-3

Response to Commentor No. 2299

- 2299-1:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2299-2:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2299-3:** DOE notes the commentor's viewpoint.

Commentor No. 2300: Pennie Stasik O'Grady

I say we consider
our children and our
children's children 7 generations
hence before we claim to
know what we "NEED" —
we don't NEED Pu 238 or any
other nuclear waste!

Pennie Stasik O'Grady
(Mother of 2)

2300-1

Response to Commentor No. 2300

2300-1: Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems and the plutonium-238 that fuels them for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, DOE anticipates that the existing plutonium-238 inventory will be exhausted by approximately 2005. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

DOE notes the commentor's concern regarding waste generation. It is DOE's policy that all wastes be managed (i.e., treated, stored, and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

**Commentor No. 2301: Thalia Syracopoulos
National Organization for Women**

Thalia Syracopoulos
Seattle Chapter National Organization for Women
Testimony on Hanford FFTF

30 August 2000

My name is Thalia Syracopoulos and I am speaking on behalf of the Seattle Chapter of the National Organization for Women.

Among us, we have found no information in the lay media verifying your claim that restarting the Hanford Fast Flux Test Facility is required in order to produce isotopes necessary for medical diagnosis, treatment or research.

My own profession requires that I read a wide variety of medical journals published in the United States and all over the world. At no time in the last 10 years have I encountered a single article in any medical journal mentioning the need for additional sources of isotopes required for medical diagnosis, treatment or research.

Prior to coming here I ran a search on the word "Hanford" in the medical literature. I reviewed the abstracts of the first 100 articles published between 1993 and 2000. There was no mention of any need for additional sources of isotopes.

There is no public health reason to restart the FFTF at Hanford. There are numerous public health reasons NOT to restart the FFTF. There is substantial medical and scientific evidence that the entire Hanford Reservation needs to be cleaned up, not perpetuated.

2301-1

2301-2

Response to Commentor No. 2301

2301-1: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions (basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term (less than 5 years).

2301-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy).

***Commentor No. 2301: Thalia Syracopoulos (Cont'd)
National Organization for Women***

Response to Commentor No. 2301

This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "... ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Commentor No. 2302: Magna

It is time for the DOE to shut down the dangerous FFTF reactor and put their focus back into clean-up of Hanford. This is on public safety of the citizens of Northwest. — Magna

2302-1

2302-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2302-2

2302-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Commentor No. 2303: Linda Rasmussen

Production, waste management, and health risk disclosure has not been honest or admirable in the past. We do not need more of the same. Emphasis should be on cleaning + disposing of the waste we have. ^{leaving this, for future} generations is unethical ^{waste}
Linda Rasmussen

2303-1

Response to Commentor No. 2303

2303-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Commentor No. 2304: Donn Colby

We have the most contaminated
in the Western world in our backyard. FFT
has been on standby for years without a
clear mission. It is time to shut it down,
stop wasting the taxpayers money, and finish
cleaning up the nuclear mess that already
exists.

Donn Colby, MD
Seattle, WA

If you can
with the
... tru.

2304-1

2304-2

2304-1

Response to Commentor No. 2304

- 2304-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2304-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2305: Amy Choyani

Dear Secretary
Please don't rob my
daughter of a healthy
environment to grow
up in. The children
are our future Don't
let this 7777 bull ~~shit~~
up our children's
future from
them.
Amy Choyani

2305-1

Response to Commentor No. 2305

2305-1: The concerns expressed in this comment with respect to the possible impacts of proposed NI PEIS actions are noted. The environmental impacts associated with all nuclear infrastructure activities are presented in Chapter 4 of the NI PEIS.

All air emissions and wastewater discharges would be in accordance with applicable permit and regulatory requirements. The release of air pollutants would result in concentrations well below Federal and state air standards. The release of radioactivity and hazardous chemicals into the atmosphere would have a negligible effect on human health. No long term adverse health effects, including cancer and genetic disorders, would be anticipated. There would be no discernible impacts to groundwater or surface water quality. The management of wastes generated at the various sites would be in accordance with applicable Federal and state laws and regulations and appropriate DOE orders, and would not be expected to adversely affect the environment. All impacts on ecological resources, including animals and fish, would be small.

It is concluded that nuclear infrastructure activities would have small effects on the environment both in the short- and long-term time periods, and would not rob anyone of growing up in a healthy environment.

Commentor No. 2306: Shirley Morrison

How many times do we
 have to tell you.
 No. No. No.
 Clean up, clean up
 that mess -
 and don't make any
 more -
 Shirley Morrison
 19 grandchildren
 let them have
 decent world. CLE

2306-1

2306-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2306-2

2306-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Commentor No. 2307: Liesl Zappler Rogers

It is inconceivable to me that the DOE would even THINK of starting up the FFTF at Hanford - the costs, the wastes, the risks to human & environmental life (including CANCER) are far too great. Clean it up - Don't start it up!
Liesl Zappler Rogers

2307-1

2307-2

2307-3

Response to Commentor No. 2307

2307-1: The concerns expressed in this comment with respect to impacts and costs of FFTF startup are noted. The environmental impacts associated with restart of the FFTF, both during normal operations and from postulated accidents, are presented in Section 4.3 of the NI PEIS. The impacts to humans and also to the biosphere (air, water, and land) are shown to be small. No fatalities among workers or in the general public from cancer or other causes would be expected from operations over the full 35-year period. The management of wastes would be in accordance with applicable Federal and state laws and regulations and appropriate DOE Orders and would not be expected to adversely affect the environment.

The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. The cost report was made available immediately upon release of the NI PEIS on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. A summary of the cost report is included as Appendix P in the final NI PEIS.

2307-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2307-3: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 2308: Anonymous

The isotopes
are not needed
for medical needs -
we have a steady
& plentiful supply
from domestic sources +
~~Canada~~ Canada.
do not re-start
FFTF under the
guise of saving
people with
cancer!!
It's a lie, & a
dishonor to the
of cancer.

2308-1

2308-1: The United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

2308-2

Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions (basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term (less than 5 years).

2308-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF. In ongoing clinical testing, therapeutic radioisotopes have proven effective in treating cancers and other illnesses while minimizing adverse side effects, making their use an attractive alternative to traditional chemotherapy and radiation treatments.

Commentor No. 2309: Anonymous

Hanford's waiting for disaster
Rest assured and have no fear
Patty Murray's isotopes will cure
whatever ills you bear
So what's a little cancer
in your kid's anatomy
It builds our GNP

2309-1

Response to Commentor No. 2309

2309-1: The commentor's opposition to the restart of FFTF is noted. This PEIS has provided an estimate of the incremental potential human health impacts associated with a reasonable range of alternatives (including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Commentor No. 2310: Dick Burton

This is the most polluted
 site in North America! Are
 you crazy?! Shut it down immediately
 and start a real clean-up!
 - Dick Burton
 Seattle, WA

|| 2310-1
 || 2310-2

Response to Commentor No. 2310

- 2310-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2310-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Commentor No. 2311: Wenonah Hauter
Public Citizen

No nuclear boondogle -
No more squandering
taxpayer money. Spend
public money cleaning up
the nuclear disaster at
Hanford - not creating more
waste.
Wenonah Hauter
WASH. I

2311-1

Response to Commentor No. 2311

2311-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Commentor No. 2312: P. Zicher

You can't handle
 the waste you've got.
 We don't need The FFTF -
 we need CLEANUP.
 F. Zicher

2312-1

Response to Commentor No. 2312

2312-1: DOE notes the commentor's opposition to Alternative 1, restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Commentor No. 2313: Naomi Gundle

End the Madness!
We are against restarting
the FTF. Listen to facts
and people and safety concerns,
not corporate propaganda

Naomi Gundle
Seattle, WA teacher

2313-1

2313-1: DOE notes the commentor's opposition to Alternative 1, Restart FTF.

2313-2

2313-2: Comment noted. DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and to providing ample opportunity for public comment on those actions. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

Commentor No. 2314: Mark Taylor-Canfield

I am very concerned about potential hazards associated with the use, delivery and storage of radioactive material. Due to common human errors, computer glitches and unseen accidents we are never really sure if we can avoid contaminating our environment for many generations to come (our children).

I'm also concerned that we may cause as many cancers as we cure due to contamination. I do not think you should approve this. Please read Chief Seattle's speech upon the treaty at Elliott point. Thank you,

Mark Taylor-Canfield
 Capitol Hill Community Council
 Citizen's Committee for Government
 Accountability

2314-1

2314-1: This PEIS has provided an estimate of the incremental potential human health impacts associated with a reasonable range of alternatives (including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

2314-2

The NI PEIS identifies (in Chapter 3 of Volume 1) endangered species that live on or near all of the candidate sites, as well as aquatic and wetlands areas that may be impacted by operations at candidate locations. According to an International Atomic Energy Agency (IAEA) publication (IAEA Technical Report Series No. 332, Effects of Ionizing Radiation on Plants and Animals at Levels Implied by Current Radiation Protection Standards), a dose rate of 100 millirem per year to the most exposed human will lead to dose rates to plants and animals of less than 0.1 rad per day. The IAEA concluded that a dose rate of 0.1 rad per day or less for animals and 1 rad per day or less for plants would not affect these populations. The largest individual dose for any of the nuclear infrastructures alternatives under normal operations would be less than 0.1 millirem, which is three orders of magnitude less than the IAEA threshold for adverse effects. Therefore, implementation of any of the range of reasonable nuclear infrastructure alternatives analyzed would not be expected to result in adverse impacts on plants and animals living in potentially affected areas around the candidate sites.

2314-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Commentor No. 2315: Tom Caryts

all:
 NOT AGAIN! How
 MANY TIMES MUST WE SAY
 IT? WE DON'T WANT MORE
 PLUTONIUM PRODUCTION AT
 SMO. STOP FFTF.
 Tom Caryts

SMO
 MUST
 SM.

2315-1

Response to Commentor No. 2315

2315-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. As discussed in Section 1.2 of Volume 1, plutonium-238 would be produced to support NASA's deep space missions. Plutonium-238 is not used to produce nuclear weapons. All missions considered in the NI PEIS are for civilian purposes.

Commentor No. 2316: Amber Waldref

Dear Sec. Richardson,
 I have found several items
 missing from the PEIS, including
 a lack of study on waste management
 disposal and an independent asses
 of the need for particular medical
 Please take my comments into consi
 and shut down FFTF
 Amber Waldref

2316-1

2316-2

2316-3

Response to Commentor No. 2316

2316-1: Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

2316-2: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

2316-3: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2317: Anonymous

Should not be any further.

— 2317
- cancer survivor -
and I am appalled
at the idea that the
FFTF is even being
considered as a help
to "cure" forms of
cancer. Let's quit trying
to find band-aids and
admit that we cause
cancer. Our Arrogance
at believe that we can
control science and
technology. We are poisoning
ourselves - and we don't even
seem to care. If you're
dead a piece of paper, a
"stump of old

Response to Commentor No. 2317

2317-1

2317-1: The commentor's positions on FFTF, science, and technology are noted. DOE's purpose for producing medical isotopes is described in Section 1.2.1 of Volume 1. As discussed in Chapter 4 of Volume 1 (e.g. sections 4.3.1.1.9, 4.3.1.1.10, 4.3.2.1.9, 4.3.2.1.10, 4.3.3.1.9, 4.3.3.1.10), implementation of Alternative 1, Restart FFTF, would not be expected to result in latent cancer fatalities among the population surrounding the Hanford Site.

Commentor No. 2318: Stephen Bomkamp

PLEASE SHUT DOWN THE
FFTF AND CLEAN UP
HANFORD AS YOU ARE LEGALLY
BOUND TO DO

Stephen Bomkamp
SEATTLE WA

2318-1

2318-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2318-2

2318-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Commentor No. 2319: Phil M. Guinnier

I raise my kids next door to Humboldt and swim in the Columbia
or Richland. Please listen. This place is safe. God Bless the
Citizens of Seattle but don't be afraid of FFTE. We are
good people and don't waste the taxpayer's money.

Phil M. Guinnier
8230-00

2319-1

Response to Commentor No. 2319

2319-1: DOE notes the commentor's support for Alternative 1, Restart FFTE.

Commentor No. 2320: Charal Stamper

It is scandalous to think that DOE would consider restarting FFTF and producing more radioactive materials when they have yet to deal with the serious hazards posed by Hanford's status as the EPA's biggest Superfund site. Containers are already leaking into the environment, endangering ^{local} residents, as well as people across the country through contamination of agricultural areas & the Columbia River & salmon runs. The recent fire at Hanford is further proof of the dangers lurking, as well as the contempt for public & worker health exemplified by DOE's initial denials of any escape radiation.

We demand that DOE responsibly clean up the radioactive contamination & not create any more deadly isotopes.

Charal Stamper
Seattle, WA

2320-1

Response to Commentor No. 2320

2320-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington Department of Ecology, Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. All environmental parameters (e.g., air, soil, surface water, groundwater, vegetation, animals, etc.) in and around the Hanford Site are monitored on a set frequency. The information is available to the public in annual monitoring reports. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

No radioactive materials were "released" in the Hanford Wildfires of 2000. Wildfires did resuspend some materials already in the environment. The resuspended materials were low, slightly above natural background levels. Real-time measurement equipment does not detect environmental contaminant levels. The low levels required several days of analysis to quantify. DOE reported information as it became available. Worker and public safety are of paramount importance to DOE.

Commentor No. 2321: Orion Berdick

When is this threat
to public health going to
be dealt with in an
adequate manner? Waste
is leaking toward the Columbia!
Shut down FFTF and
fund clean-up!
— Orion Berdick

2321-1

2321-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2321-2

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

2321-1

2321-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Commentor No. 2322: Anonymous

Alternative 5 - Close
 down the Hanford Facility. are essential.
 If the DOE mission is to clean up the
 IF we can't do that, then we should
 at Hanford. adding to the
 already existing risks & the
 problems - when DOE has
 already developed
 a cleanup program which
 so far does no meaningful
 cleanup, and has developed
 no active program which
 gives any assurance on
 a future clean-up. The
 existing & future damage to the
 Columbia River is the
 actual crisis. & the public
 should not be compensated
 for this.

Physician
 F. O. O.
 F. O. O.

to
 cause
 to
 admit
 cause

2322-1

2322-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2322-2

2322-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Chapter 3

*Oral Comments Presented at the Public Hearings
and DOE Responses*

Comments from the Oak Ridge, Tennessee, Public Hearing (August 22, 2000)

Commentor No. 2360: Daniel Axelrod

2360-1 — I want to highlight again, as I did over a year ago at a hearing here in Oak Ridge, that I favor Pu-238 radioisotope power supplies for the international space station.

I estimate that we could save at least a billion dollars in the space station costs in using radioisotope power supplies in preference to solar cells and to say nothing of mission reliability as we saw with the difficulty with the solar cells when the Mir space station was impacted and also the need to provide fuel to put the space station into higher orbit because of the solar-cell drag.

And this already has happened in one of the space shuttle missions where they had to put the preliminary space station — not even the completed one — into higher orbit from about a hundred to two hundred miles. I find it a little disconcerting that if you're talking of expanding nuclear energy requirements that Pu-238 is such a minor usage. It takes so much discussion and is so prominent in the discussions of your PEIS.

2360-2 — I think if you talk nuclear you ought to include fusion as well as fission. And without going into my report on this six billion dollar program for fusion development back in the early seventies, I would highlight at least the need for a 14 mg fusion neutron generator to test 14 mg neutrons against, first, raw materials and other portions of fusion reactors.

So I think this will be an entirely new concept that's not enunciated in your report. That should be addressed and I'm sorry it isn't listed in some of the major comments received during scoping which, I assume, would include my 24 July comments.

2360-3 — Third, as I mentioned, I want to talk of the justification for expansion of infrastructure and missions identified by DOE. In my letter to Secretary Richardson, and others of July 20th this year, I sent comments on world oil running out and I said that Mr. Richardson had made a great strategic mistake in trying to get OPEC to turn off the spigot rather than informing the public.

In summary, I talk of a need for five hundred coal to oil synthetic fuel plants each the size or equivalent of the Bull Run steam plant here in town.

2360-4 — In light of this need for nuclear power in this century, I would recommend there's a need for a test reactor for the WSHWBR, World Standard Heavy Water Breeder Reactor, which I have proposed as part of my campaign for President of the United States, and this also would be a major new facility that I can personally identify that is not at all mentioned in your presentation.

Response to Commentor No. 2360

2360-1: DOE notes the commentor's support for the use of plutonium-238 in space missions and its inclusion in the NI PEIS. However, NASA, not DOE, is responsible for spacecraft design and for determining what electric power source best suits its mission-specific needs.

2360-2: DOE notes the commentor's interest in fusion energy research, although issues of research and development of fusion energy are beyond the scope of this NI PEIS. The scope of this NI PEIS is limited to analysis of alternatives to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development.

2360-3: DOE notes the commentor's interest in synthetic fuel plants and using the nation's coal resources, although these issues are outside of the scope of this NI PEIS. The scope of this NI PEIS is limited to the analysis of environmental impacts that would result from implementation of alternatives to fulfill the requirements of the DOE missions described in Section 1.2 of Volume 1.

2360-4: DOE notes the commentor's interest in heavy water breeder reactor research, although this type of research is beyond the scope of this NI PEIS.

Comments from the Oak Ridge, Tennessee, Public Hearing (August 22, 2000)

Commentor No. 2360: Daniel Axelrod (Cont'd)

2360-5 — I identified that for each ten million barrels a day of oil loss production compared with about seventy to eighty-five million barrels per day at total peak production. For each ten million barrels per day for loss production we needed the equivalent of eight hundred million tons of coal, the equivalent of almost the entire U.S. production of coal and 400 gigawatt nuclear, which at the time was the top — still is the approximate total nuclear power in the entire world after 50 years of effort.

Response to Commentor No. 2360

2360-5: DOE notes the commentor's interest in expanding domestic energy infrastructure, although issues of energy production are beyond the scope of this NI PEIS.

Comments from the Oak Ridge, Tennessee, Public Hearing (August 22, 2000)

Commentor No. 2359: George G. Flanagan

2359-1 — I believe, the assumptions used in the medical isotope production are excessively high in terms of revenue and the amount of materials used. We've been in business for almost 30 years and we have not seen that kind of sudden increase in the needs for medical isotopes.

I would recommend that we look at nominal value, the high-end value, and low-end value. I think it can sway the determination of whether you would need an infrastructure expansion project for production or monitor what the existing facilities are capable of in meeting demand.

I do not think you can give an alternative in terms of amount or demand without producing a report. I remember from Battelle. And that report has come under a lot of criticism by a lot of people as not particularly well founded, including congressional hearings.

My other comment is that in price the HFIR right now is very unrealized in both isotope production and material irradiation capabilities and it has been for the last 9 years or 10 years, since it was operated in 1990. We do not right now see missions, which are coming down the line, of increasing that utilization over what it has been over the last 10 years.

So that goes along with my first comment. I think the demand doesn't seem to be following what is assumed in this particular program.

2359-2 — The second point is you have a point in there about HFIR is essentially interfere only for medical isotope or isotope production. The only process for the basic energy science program is instigated in HFIR for a review of what we put into the reactor and that there's an anticipated five percent in either flux or fuel cycles. And the only materials in which that happens with are material radiation stems which are highly shielded.

And there has only been a few of those in the facilities. Medical isotope production and reactors have so far not impacted the flux at the (unintelligible) in either fuel cycle maintenance or from the maintenance to the production, as far as flux is concerned.

2359-3 — The last one is you have an indication that the HFIR expansion to a 100 megawatts, which it was originally designed for, has been reduced because of the concerns about ethyl and apparently are essentially not allowable. I'm not sure that's the word that's been used. But the impact was there would be extremely long outages necessary to implement going to this operation. That isn't incorrect.

We estimate something less than a month, if an outage is required to implement and change the instrument settings, what have you, to go to a 100 megawatt; noting some estimate of time and money expenditures are needed for changing

Response to Commentor No. 2359

2359-1: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1 2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs. Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions (basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term (less than 5 years). There currently is little room for growth of medical isotope production at HFIR. The ability to expand medical isotope targets into additional reactor locations is limited by the potential impacts that the targets have on the primary experiments in the reactor. Medical isotope targets and neptunium-237 targets are not in competition for the same locations at HFIR. NEPA and CEQ regulations do not require the cost of alternatives to be included in an EIS. However, a separate Cost Report was prepared to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. The Cost Report was mailed to interested parties on August 24, 2000 and made available on the NE website (<http://www.nuclear.gov>) and in the public reading rooms. DOE has provided a summary of the Cost Report in this Final NI PEIS.

2359-2: The magnitude and nature of any impact on neutron flux levels or core cycle length due to using HFIR for plutonium-238 production or greater medical/industrial

Comments from the Oak Ridge, Tennessee, Public Hearing (August 22, 2000)

Commentor No. 2359: George G. Flanagan (Cont'd)

the authorization basis for the HFIR to proceed to a 100 megawatts. So there would be no impact from the operational facilities time wise in getting this operational plant to 100 megawatts, and that is under consideration.

The only concern we have is that we don't impact the mission of the organization based in terms of fuel cycle life while we're doing that. And there are other options available to do both at the same fuel cycle and increase the power to a 100 megawatts. That would, in fact, increase HFIR production by 15 percent.

Response to Commentor No. 2359

radioisotope production will be dependent on the number, composition, and location of targets. Core local flux reduction would be expected in the region around the target. Any significant changes in flux levels throughout the reactor due to addition of enhanced isotope production activities would be reviewed by appropriate representatives of the DOE Office of Science for approval. The commentor's statement that isotope production at HFIR, to date, has not impacted maintenance or production is noted.

2359-3: As stated in EIS Volume 1, Section 2.3.1.3, HFIR's power level was reduced to 85 megawatts for the purpose of extending the useful life of the reactor. Since the reduction to 85 megawatts, additional studies have determined that the useful operating life could be until 2035 at 100 megawatts with appropriate maintenance programs. The commentor's estimate of the time necessary to uprate the HFIR reactor to 100 megawatts and impacts on fuel cycle length is noted.

Comments from the Idaho Falls, Idaho, Public Hearing (August 25, 2000)

Commentor No. 2362: Ronald Ayers, Jr.

2362-1 — Item 1, direct to the EIS. It appears, from a casual observance of the information that was presented, that you have some alternatives that have a very high electrical load requirement associated with them, specifically the accelerators.

I did not see anything at all presented at this point that speaks to the environmental impacts of — of the higher level of electrical usage on that one than it did on the others. So, that might be something you would want to consider for inclusion in the EIS in the Final.

2362-2 — Item 2, I want to talk to the mission. At this point in time, it has been very interesting to — to note that down through history there has been several pieces and items that we have discovered as a nation and turned our back on, to our chagrin, in a later time.

I wish to point out aircraft. I wish to point out rockets. Liquid propulsion rockets specifically were developed in the United States. The whole quality aspects of the — that the — the quality aspects of production and building things in a quality manner with full quality controls on them was invented basically within the United States. We found that out — how well that could be worked at us in recent years in the automobile industry. This is another industry that we seem to be turning our back on, or another area of endeavor that we are turning our back on. And I am extremely concerned that the further we go and turn our back on these types of aspects, we're going to find ourselves in real trouble further downstream.

So, I think, in that aspect, we need to support this effort. We need to support this effort because it supports scientific efforts by our country, it supports medical efforts by our people, and it supports basically the — the industrialization of items and things that we have been studying here at the INEEL, in some cases since as early as the 1950s.

2362-3 — I would support the use of ATR and also the fluorinel process and CPP-651. I would also support the use of — follow the use of an additional production reactor-type facility that would begin to support this. My preference is for a nuclear reactor, although the accelerator is one that would be of interest and consideration. And I can't think of a better place to put it than right here.

2362-4 — The EIS - this EIS should break the wastes down in accordance with low-level waste, possibly transuranics, since that is a DOE-only definition, and high-level waste — okay — to better present to the public the hazards that may be presented with the disposal of these waste materials.

Low-level waste is readily disposable in many facilities, both by DOE and like those licensed by the NRC. High-level waste, which was cited by some people here, is a different situation. And this material does not meet the — the defini-

Response to Commentor No. 2362

2362-1: The commentor is correct in his observation that some alternatives would have high electrical load requirements associated with them. A discussion of the electricity needs for each alternative follows. Under both "No Action" and Alternative 5, "Permanently Deactivate FFTF," additional electrical power would not be required or would be very small. Under Alternative 2, "Use Only Existing Operational Facilities," the bounding additional electricity needs at Oak Ridge, INEEL and Hanford are presented in Tables 4-163, 4-167, and 4-171 of the NI PEIS. At ORR and INEEL, the additional electrical consumption would be negligible. At Hanford, the additional electrical consumption would be 55,000 megawatt-hours per year, which represents only 2.2 percent of the total site's electrical capacity. Under Alternative 3, "Construct New Accelerator(s)," the additional electrical consumption would be approximately 250,000 megawatt-hours per year and under Alternative 4, "Construct New Research Reactor" the additional electrical consumption would be approximately 25,000 megawatt^hours per year. For the accelerator alternative DOE acknowledges that a significant load would be added to the local electrical grid. In the event the Record of Decision selects the accelerator alternative for implementation, subsequent NEPA review would assess grid stability and other electrical load assessment criteria in the evaluation of alternative site locations. Included, as necessary, would be detailed electricity needs for each facility. Although implementation of the reactor alternative would require a much smaller amount of additional electricity, similar NEPA documentation would assess electrical grid capabilities for the various alternative sites. The environmental impacts of operating numerous electrical power generation facilities supporting the grid is not within the scope of the NI PEIS.

2362-2: DOE notes the commentor's support for expanding DOE's nuclear infrastructure to meet its stated missions.

2362-3: DOE notes the commentor's support for Option 2 of Alternative 2, Use Only Operational Facilities, as well as their support for Alternative 4, Construct New Research Reactor (or possibly Alternative 3, Construct New Accelerator(s)), to be located at INEEL.

2362-4: This NI PEIS addressed waste produced for each alternative, as well as cumulative impacts related to waste production. The Waste Management sections of Chapter 4 provided waste volume generations for each of the waste types expected to be generated. These waste categories, referenced in DOE Manual Chapters, are consistent with definitions found in the nuclear science and waste management literature.

*Comments from the Idaho Falls, Idaho, Public Hearing (August 25, 2000)****Commentor No. 2362: Ronald Ayers, Jr. (Cont'd)***

tion of high-level waste, which is basically the first cycled raffinates or the — or the spent fuel that is coming off of power production of nuclear production facilities.

Okay. And that would be — the lack of differentiation is confusing to the people who are unused to the differences in the hazards associating with nuclear waste, specifically those in the public.

Response to Commentor No. 2362

Comments from the Idaho Falls, Idaho, Public Hearing (August 25, 2000)

Commentor No. 2363: Beatrice Brailsford Snake River Alliance

2363-1 — The issuance of this Draft EIS, unaccompanied by a nonproliferation assessment, I think highlights the question and answers the question: Is this administration actually concerned about proliferation of nuclear weapons and materials? And the answer is: Not very.

This is not the first time that we have had to look at a project before the nonproliferation assessment comes out. You say it will be out next week. That's after six of the seven hearings on this project have occurred. It seems to me, in the year 2000, "will this present a proliferation risk" should be one of the first questions the Department of Energy asks itself.

I would, therefore, suggest that you will probably have to extend the comment period more than the additional week you already have.

2363-2 — Second, the Fluorinel Dissolution Process Facility must not be reopened because the Idaho National Engineering and Environmental Laboratory must not return to aqueous reprocessing. I would note that my memory says that in 1992, when it was shut down by declaration, it had already been shut down quite a while because it could not meet current standards and could not be licensed under RCRA. I would suggest that might still be a pending issue.

In Appendix A, and somewhere else in the document — but I can't — I couldn't find it right before this meeting — there's a sentence that says the Fluorinel — that we're looking for a new mission for the Fluorinel Dissolution Process Facility. And that was something of a surprise to me.

And I would appreciate INEEL officials contacting the alliance and explaining what the range of new facilities for an extraordinarily unfortunate facility might be.

2363-3 — I note that if you choose to use ATR for the production of plutonium-238 you would actually compromise the infrastructure for the production of medical isotopes. We would lose that task here at INEEL.

2363-4 — And then a couple of questions about the waste. It does seem to me that there is a fair amount of liquid waste over the 35 years. I'm assuming this liquid waste is from reprocessing. And it looks like it would be about 288,000 gallons. Right now we're tying ourselves in knots trying to figure out how to get rid of liquid waste. It is recognized as a hazard above the aquifer. I don't understand how this can be low-level if it comes to us from reprocessing.

2363-5 — I would also just ask if the evaporator at the chem plant is fully licensed. I know that there was a fair amount of controversy about running the calciner, which is the following step to the evaporator, without a permit. And I would just suggest you check that.

Response to Commentor No. 2363

2363-1: DOE notes the commentor's concerns regarding nuclear proliferation risk related to the proposed actions under the NI PEIS. DOE is committed to ensuring domestic and international security and stability by upholding nonproliferation as one of the nation's highest national security priorities. DOE does not take this responsibility and burden lightly. DOE prepared a separate Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such an ancillary document need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed this document to about 730 interested parties on September 8, 2000. The report was made available immediately upon release on the NE web site <http://www.nuclear.gov> and in the public reading rooms. DOE has also provided a summary of the Nuclear Infrastructure Nonproliferation Impact Assessment in Appendix Q in the Final NI PEIS. Although DOE did not further extend the public comment period, DOE considered comments submitted after the close of the comment period to the extent practicable.

2363-2: The use of proposed alternative facilities associated with processing of neptunium-237 targets would have no impact on schedules or available funding for high-level radioactive waste programs at either Hanford or INEEL. At INEEL, the tanks would not be used although certain facilities at the Idaho Nuclear Technology Engineering Center (INTEC) would be used to treat the wastes resulting from processing the irradiated targets. These are reliable systems that would process a maximum of 1,050 cubic meters of low-level radioactive waste over the 35-year nuclear infrastructure operational period. The higher activity waste would be treated as a solid form via a stand-alone vitrification system, separate from any tank waste treatment system. At Hanford, the existing high level radioactive waste facilities would not be used, and as analyzed in the PEIS, no existing or planned high-level radioactive waste facilities would be used to treat the wastes resulting from processing the irradiated targets.

2363-3: As stated in EIS Volume 1, Section 2.3.1.2, ATR would continue to meet its medical and industrial radioisotope production mission for the no action and most other alternatives considered where ATR is not used for the production of plutonium-238. If ATR were to be used as a production facility for plutonium-238 (options 1, 2, 3, 7, 8, and 9 under Alternative 2), it would support medical and industrial radioisotope production to the extent possible. DOE would try to minimize the impact of the new mission on current medical and industrial radioisotope production.

2363-4: The use of proposed alternative facilities would not impact the schedule or funding for existing cleanup activities at Hanford, INEEL or ORR. The NI PEIS addressed

Comments from the Idaho Falls, Idaho, Public Hearing (August 25, 2000)

Commentor No. 2363: Beatrice Brailsford (Cont'd)
Snake River Alliance

2363-6 — And then there's the issue of newly generated transuranic waste that is not part of the defense program and, therefore, could not be disposed of at WIPP and would, therefore, presumably, be stored here in Idaho until a high-level waste repository is opened.

The State of Idaho has very firm deadlines for the removal of transuranic wastes from this state, and they are not matched with the deadline for making certain that high-level waste is ready to leave the state. There's no deadline for the removal of high-level waste.

Response to Commentor No. 2363

the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. Approximately 1050 cubic meters (which is 280,000 gallons; not 288,000 gallons) of liquid low-level radioactive waste would be generated in total over the 35-year period of nuclear infrastructure operations from processing target for plutonium-238. High-level radioactive waste would not be generated.

2363-5: Both the INTEC Process Equipment Waste Evaporator and the INTEC High-Level Waste Evaporator have RCRA interim status.

2363-6: The Settlement Agreement (i.e., Spent Fuel Settlement Agreement, dated October 16, 1995) between U.S. DOE and the State of Idaho established schedules for the treatment of existing high-level radioactive waste, transuranic waste, mixed waste and removal of transuranic waste and spent nuclear fuel from the state. This agreement is not applicable to newly generated wastes. However, one of the most important mechanisms to address newly generated waste at the INEEL is via the Site Treatment Plan and Consent Order signed on November 1, 1995 by DOE and the State of Idaho. It requires that before an activity begins, all waste streams be identified with disposition and treatment plans identified and approved.

Comments from the Idaho Falls, Idaho, Public Hearing (August 25, 2000)

*Commentor: John Commander
Coalition-21*

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 1655.

Comments from the Idaho Falls, Idaho, Public Hearing (August 25, 2000)

**Commentor No. 2365: Lowell Jobe
Coalition-21**

2365-1 — . . .people who are opposed to nuclear energy have always been sending out comments without necessarily having anything solid, science and facts, behind them. And I challenged them to offer a solution, just one solution, that would be positive, constructive.

And one — we have one person here. The other one isn't here. And he answered, we didn't create the problem, so why should we solve it?

It seems apparent to me that they have no intention of ever doing anything positive, constructive, to give us an alternative which would be worthy of even considering.

And I think we still have, if anything, a federal government which has gone even further down the line of ignoring the facts, and all they do is try to put fears there. The country and the world is never going to go anywhere with that kind of mentality and outlook.

The additional oral comments were submitted in written form and are addressed in the responses to Commentor No. 100.

Response to Commentor No. 2365

2365-1: DOE notes the commentor's views and observations.

Comments from the Idaho Falls, Idaho, Public Hearing (August 25, 2000)

Commentor No. 2361 Dave Kuhn

2361-1 — I guess the thing that I wanted to impress the most is that I think here in Idaho we've been in the nuclear business long enough to prove to everybody that we can take care of business, and we've got a good track record. And the projects that — you know, the alternatives that you've got laid out there, you know, we can take care of here in Idaho, and we can do it right.

Americans have learned long and hard that we can stay on the leading edge of technology and we can still cleanup our messes. And, you know, it's a moot point really. Hanford doesn't have — you know, there's no way that starting up a new facility is going to interfere with their cleanup. But, if they'll let it, then we'll take care of business here in Idaho. And so — we've got the facilities.

2361-2 — And, you know, I'm sure there's going to be some people here today that don't want nuclear business in Idaho. They've been here before. And, you know, when the people who come here and they support the programs, they're the people who know about the nuclear business from the inside. We have facts, we have proof, we have everything.

The people who don't want the business to come here, they don't really have any ideas, they don't have any real proof, and they don't have any facts. So, somehow it doesn't seem like a valid argument.

2361-3 — . . . it's long been obvious that the people who don't support the nuclear program don't have any other answers that can fix the problems that the nuclear program does; however, that doesn't stop them from trying to prevent an answer to the waste problem, which I really don't believe that this environmental impact statement really has anything to do with nuclear waste. It's about moving ahead with the program.

The waste problem has to be solved, and it will be solved. And it's, evidently, going to be really painful, but — when it gets solved. But there's no use in not moving ahead with nuclear energy just because there's some problems that still need to be solved, so we can fix it.

Response to Commentor No. 2361

2361-1: The commentor's position regarding capabilities of the Idaho National Engineering and Environmental Laboratory is noted.

2361-2: DOE notes the commentor's views and observations.

2361-3: DOE notes the comment. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Comments from the Idaho Falls, Idaho, Public Hearing (August 25, 2000)

Commentor No. 2364: Tony Laporta

2364-1 — I would like to indicate that the process that we're talking about here for a new infrastructure, new research and development, is extremely important.

We need to — and I know that the Department of Energy has talked about the brain drain that's going on out here [INEEL]. And part of the reason is that we have no projects worthy of individuals taking part in them. And this is a start of a project like that.

2364-2 — With specifics to this environmental impact statement, I do find it somewhat curious that a decision is going to be made before January, which may be by a lame duck Department of Energy chairman. And I know that the — the vice-president is an individual who has expressed publicly his opposition to nuclear energy. And I find it curious that such a decision would be made by a lame duck — potentially a lame duck administration.

2364-3 — I do also concur that the Alternative 2, which is the use of existing facilities, specifically the ATR, to produce the necessary requirements for the plutonium-238 is a number one option, I believe, with the following option to build a new facility here in Idaho.

2364-4 — The concept that, well, we might use ATR or we might use Oak Ridge to do the irradiation and then use a fluorinel facility to do the reprocessing, only increases the risks of — of the potential hazard. And, therefore, any decision that should be made should include both the irradiation and processing within close proximity to minimize any hazard to the public by transportation back and forth and everything else.

2364-5 — If we talk about the hazard of liquid waste generation, it's curious to me that we've shut down the calciner [at INEEL], which was processing liquid waste. And so now we sit with over a million gallons of high-level waste, liquid waste, sitting in tanks, waiting for somebody to come up with another solution while the calciner was perfectly acceptable, even though it was not licensed.

2364-6 — . . . I would just like to make the comment that has been expressed here before, that we need to take charge of our future in this country. We need to regain the leadership that we had and not become the — I would say the laughing stock of the technological world by European countries looking at us and saying, where have you gone with your leadership in engineering and nuclear energy?

Response to Commentor No. 2364

2364-1: The commentor's positions on research and development and its effects on INEEL are noted. Civilian nuclear research and development is one of the nuclear infrastructure missions discussed in Section 1.2.3 of Volume 1.

2364-2: DOE notes the concerns expressed in this comment; the issues addressed in the comment are outside the scope of this PEIS.

2364-3: DOE notes the commentor's support for (ATR Options) of Alternative 2, Use Only Operational Facilities, as well as their support for a new facility (unspecified as to whether it would be an accelerator or reactor) at INEEL.

2364-4: DOE notes the commentor's support for alternatives in which the processing and irradiation facilities are in close proximity. Alternative 1, Options 3 and 6, and Alternative 2, Option 2 minimize transportation impacts, as shown in Table J-7. Impacts for alternatives involving unspecified commercial light water reactors or newly constructed reactors or accelerators cannot be determined and are bounded in DOE's analysis. The NI PEIS analysis, summarized in Table J-7, shows that it is unlikely that the transportation activities covered by the NI PEIS will cause an additional latent cancer fatality. The NI PEIS transportation activity with the highest risk is the air shipment of medical isotopes, which is needed for most alternatives. The analysis conservatively assumes that every isotope shipment is by air, and that each shipment requires an intermediate stop, for a total of about 500 shipments per year. The risk to the public from these shipments is far lower than the risk from background radiation. Other transportation risks are several factors of ten lower, and not significantly different for the alternatives considered. Transportation risk is only one factor in DOE's decision. Accordingly, DOE has identified its preferred alternative in Section 2.8 of Volume 1 and included a discussion of DOE's reasons for selecting it. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

2364-5: The INTEC nuclear waste calcining facility (NWCF) was shut down on June 1, 2000 and is in standby pending facility upgrades and issuance of a new air permit. INEEL met the requirements of a December 1991 consent order with the State of Idaho and EPA to calcine all the high level radioactive waste by June 30, 1998. About 5,300 cubic meters (1.4 million gallons) of liquid-sodium-bearing waste remain in the INTEC Tank Farm. New treatment processes for the remaining liquid-sodium-bearing wastes are being analyzed in the "Idaho High-Level waste and Facilities Disposition Environmental Impact Statement."

2364-6: DOE notes the viewpoint expressed in this comment.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2370: Anonymous

2370-1 — I am truly appalled that you would consider at all to add to the contamination that's there. It can moved from this contaminated place to that contaminated place. You know, not in our backyard. That's not really what we're asking for. We're asking for a cessation of creation of this toxic waste.

2370-2 — I was going to speak about this fire. You know, no problem. We're just out here. Nothing is happening. We get a fire. They deny everything. Then they admit something. And the news that I caught on the radio said, "Oh, it's just equal to one dental X-ray." You know, I'm a dentist. I take X-rays every day. I don't put any plutonium in those people's lungs.

Response to Commentor No. 2370

2370-1: DOE notes the commentor's concern regarding waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

2370-2: Direct effects of the fire on the land and biota are addressed in this NI PEIS consistent with the scope of the affected environment descriptions for the Hanford Site provided in Section 3.4. The secondary effects of the Hanford wildfire of June 27-July 2, 2000 (known as the 24 Command Fire and the Two Forks Fire) are beyond the scope of this NI PEIS. Nevertheless, a brief description of the environmental monitoring and results associated with the Hanford wildfire follows. No radioactive materials were "released" in the Hanford Wildfires of 2000. Wildfires did resuspend some materials already in the environment. The resuspended materials were low, slightly above natural background levels. Since the initial stages of the fire and continuing to the present, DOE, in conjunction with the Washington State Department of Health and the Federal EPA, have conducted environmental monitoring on and near the Hanford Site to assess potential radiological releases. Monitoring will also continue over the long term. DOE has made these monitoring results available to the public as rapidly as possible with the results to date posted on a dedicated page on the Hanford web site at <http://www.hanford.gov/>. Regarding plutonium releases, DOE monitoring data has shown elevated levels (above levels normally seen) of plutonium in the Hanford 200 Areas. The most recent monitoring data available from EPA shows elevated levels (above background) of plutonium associated with 6 of the 61 ambient air filters collected from 23 locations surrounding the Hanford site. All of these DOE and EPA results are below EPA's "protective action guides" for emergency situations, EPA National Emission Standards for Hazardous Air Pollutants, hazardous air pollutant dose limits set by the State of Washington, and within or below EPA's acceptable risk range for protecting public health and the environment. DOE will continue to work with the Washington State Department of Health and the EPA and will post additional monitoring results as they become available. Equivalent doses of ionizing radiation can be absorbed from a variety of natural and manmade sources, including cosmic radiation, medical and dental x-rays, plutonium-238, naturally-occurring radon, or any other radioactive isotope. The evaluation of potential human health impacts presented in Chapter 4 assumed that any dose of

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2370: Anonymous (Cont'd)

Response to Commentor No. 2370

ionizing radiation, no matter how small, could cause a fatal cancer. That assumption is conservative, but there is currently no scientific consensus on its accuracy. Some scientist believe that the assumption is true, while others believe that there is a threshold below which radiation doses are harmless.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2373: Anonymous

2373-1 — I'm opposed to starting the Hanford

2373-2 — ...just looking at the past track record and how the clean-up has gone so poorly, and I think it's absurd to try to do new projects when the old projects aren't cleaned up.

Response to Commentor No. 2373

2373-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2373-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2375: Anonymous

2375-1 — I'm opposed to the start-up of the FFTF reactor for all the reasons stated previously, but mostly because there is no way to dispose of the waste safely.

2375-2 — And I've said this already three times. So my question is: is this getting to Mr. Richardson, who is making the ultimate decision, or where are our comments going?

Response to Commentor No. 2375

2375-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF. Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

2375-2: The Office of Nuclear Energy, Science and Technology works closely with the Office of the Secretary to keep him informed of the progress on the NI PEIS, including stakeholder input. It is the Secretary of Energy who will make the programmatic decisions with respect to the alternatives presented in this NI PEIS to accomplish the DOE missions. Decisions made will be published in the Record of Decision no sooner than 30 days after publication of this NI PEIS. All pertinent information and public input will be provided to the Secretary so that he may make an informed and unbiased decision with respect to the alternatives presented in this NI PEIS.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2384: Anonymous

2384-1 — I'd like to address some comments specifically to the draft EIS and ask, as is required by law, that you include the things that I requested originally in my two prior comments during scoping.

I see in many, many areas — one of the flaws I see in the draft is that there's a lot of blanket statements made. "This will not cause that. This will not do this. This will do this." But I don't really see enough justification of that explanation of that deduction and of the statements that I'm seeing in the draft.

The draft is pretty thick, and it's really hard to read. So justification for those things in lay people's terms would be very helpful in the final.

2384-2 — Things that were not addressed in the draft EIS that need to be included are the other medical problems aside from cancer fatalities and non- fatal cancers, the ones that people survive; thyroid disorders. There's low thyroid, high thyroid, Graves Disease, and a number of other thyroid disorders which we know are caused from specific types of nuclear radiation that are not addressed in this draft.

There are also a number of immune system dysfunctions, stillbirths, miscarriages, and other specifically radiation related sicknesses that are not addressed.

I specifically requested that the costs, the medical costs of these projected illnesses to the American public and to tribes be included in that, and it was not. Those projections need to be specifically for low level radiation exposures, as well as catastrophic radiation incidents.

I also don't see anything in there about the hospitals in our region that will be asked to take on the overload that can't be handled in the hospitals in the Hanford area. I know some of the hospitals here have addressed this issue in their ERs, and they are not prepared for your overload, and I'd like to see that addressed as well.

You know, we all know what happened when people were drinking cow's milk from cows that were eating the radioactive grasses, and it's just not in your draft, and it must be included in there.

2384-3 — In the assessment of low income and minority populations, something that's drastically missing specifically for the tribes is I don't see anything in there for specific populations who gather roots, who use the medicines from the land, and who eat the fish and the wild meat, as I do. It's just not covered, and those things have to be taken into consideration.

Response to Commentor No. 2384

2384-1: CEQ regulations for implementing NEPA require that public comment be solicited to assisting in defining the scope of an EIS. Section 1.4 of Volume 1 of this NI PEIS, as supplemented by an expanded discussion provided in Appendix N, summarizes the prevailing issues and concerns raised during the scoping process to include identification of prevalent issues raised at individual scoping meetings. In fact, based on the scoping comments received, the scope of the NI PEIS was expanded in a number of areas as outlined in Section 1.4 and Appendix N. It should be noted, however, that NEPA and CEQ regulations do not require an agency to include and respond to each scoping comment as is required for public comments on a Draft EIS. While all comments received during the scoping periods are part of the Administrative Record for the NI PEIS, Section 1.4 and Appendix N are intended to provide a summary of the issues and associated trends identified during the scoping process rather than a tabulation of comments by specific issue. In preparing the NI PEIS, DOE carefully considered all scoping comments received from the public. CEQ regulations for implementing NEPA require that EISs be written in plain language so that they can be more easily understood and that the EIS be accompanied by a summary of the EIS's content (40 CFR 1502.8 and 1502.12, respectively). DOE strives to produce NEPA documentation and related materials that are easily understood by the public by avoiding the use of jargon, defining technical terms and concepts through the use of common comparisons, avoiding the use of acronyms to the extent possible, and provision of a summary that is clear and concise, among other means. In order to improve the public's comprehension and understanding of the PEIS, this Final NI PEIS reflects revisions that have been made to eliminate some redundant and extraneous information while some sections have been reorganized to improve readability. For example, the summary of environmental impacts (Section 2.7) has been reorganized by environmental resource area so that impacts to each area (e.g., waste management) can be quickly gauged across all alternatives.

2384-2: Appendix H provides information on potential health effects other than fatal cancers. Of the three health impacts from low levels of radiation exposure (nonfatal cancers, hereditary effects, and fatal cancers), fatal cancers have the highest probability of occurrence, roughly 500 excess cancer fatalities per million person-rem. Nonfatal cancers and hereditary effects appear at rates of approximately 20 and 26 per cent of this number. Using a single number for human health impacts provides a simple direct means to compare impacts and risks among the alternatives. Cancer fatalities, being the largest impact, were selected for presentation throughout the NI PEIS. This PEIS has provided an estimate of the incremental potential human health impacts associated with each of a range of reasonable alternatives (Alternative 1 includes the restart of FFTF)

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2384: Anonymous (Cont'd)

2384-4 — There was a woman that left on the break, and she asked me to please remind you that there's a lot of activity in Canada producing these radioactive isotopes, and many of the things that we are considering in this draft are available from Russia, which we have a contract for, and also from Canada. There are three new isotope reactors in Canada.

And I also want to remind you that I was one of the experimental — one of the people involved with the experimental populations in my formative years, and that I have survived my early cancer, and that no radiation and no chemicals were necessary for me to be cured from this. There are many, many alternatives to radiation and to radioactive isotopes.

Response to Commentor No. 2384

for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Sections 4.3 through 4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from implementation of each of the alternatives, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with each of the analyzed alternatives and with restarting FFTF would be small. The low number of health effects from normal operations or accidents projected as a result of the selection of any of these alternatives should not impact health care capabilities. The DOE has developed a comprehensive Hanford Emergency Management Plan that provides emergency response measures for radiological events at the Hanford site.

2384-3: Radiological impacts on minority and low-income populations residing within potentially affected areas surrounding the Hanford Site are addressed in Section K.5.3 of Appendix K (Environmental Justice Analysis). Models for estimating radiological health impacts (discussed in Appendixes H and I) assumed that all locally grown food supplies would be subject to radiological contamination throughout the project duration, and that all locally grown food supplies would be consumed by residents in the potentially affected area. The analysis of radiological effects that would result from implementation of the nuclear infrastructure alternatives indicates that the radiological risk to persons residing in the potentially affected area would be so small that no credible pattern of food consumption (or other ingestion pathways) would be expected to result in a latent cancer fatality.

2384-4: DOE notes the commentor's views. The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes primarily molybdenum-99, and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1 2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs. DOE notes the commentor's support for purchasing plutonium-238 from other sources to satisfy DOE's near-term responsibility to supply NASA with the necessary fuel to support future space exploration missions. DOE could

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2384: Anonymous (Cont'd)

Response to Commentor No. 2384

purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Under the current contract set to expire in 2002, the United States is authorized to purchase up to 40 kilograms of plutonium-238, with the total available for purchase in any one year limited to 10 kilograms. To date, DOE has purchased approximately 9 kilograms of plutonium-238 under this contract. Under the No Action Alternative, DOE would continue to purchase plutonium-238 to meet the space mission needs for the 35-year evaluation period considered in the NI PEIS. However, any purchase of plutonium-238 from Russia beyond what is currently available to the United States through the existing contract would likely require negotiation of a new contract and may require additional NEPA review.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2387: Anonymous

2387-1 — So the production of isotopes that are, on one hand, being promoted by the medical establishment to cure cancer may also be the cause of the same cancer that it's being used to treat. And as a matter of fact, treatment itself can be carcinogenic.

And so that's kind of one side of this parallel. Instead of talking about iatrogenic medicine, which is physician induced medicine, we talk about only palliative medicine, about the kind of medicine that treats the symptoms and not the causes, not the root causes.

Tonight we really should be looking at radiation not as a cure for disease, but as a cause.

Response to Commentor No. 2387

2387-1: The radiation effects of the alternatives on the public and workforce are discussed in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.9, 4.3.2.1.9, 4.3.3.1.9) and are shown to be small. Genetic research and other research will hopefully lead to other ways to fight cancers. However, certain radioisotopes currently offer effective treatment for some cancers. Consistent with its mandates under the Atomic Energy Act, DOE is proposing this enhancement for the purposes of addressing three primary needs: 1) to support the increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and for which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear energy research and development in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2394: Anonymous

2394-1 — I'm going to tell a little bit about myself. I'm 17. I go to high school across the river. I mean, I know what an isotope is. I know what it can do. I know good side effects of it, and I know the bad side effects. I mean I've taken my basic science classes.

I mean, you guys are talking to us like we're like — it's stuff I learned like in fifth grade. I'm like, "Oh, really?"

But now it's just like, okay, get on with it, and I don't know what to say about that except for come on. Tell us something we want to hear, not stuff we've already heard.

Response to Commentor No. 2394

2394-1: DOE notes the observations made by the commentor.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2403: Anonymous

2403-1 — In June during the Hanford fire, U.S. DOE lied about plutonium releases. Four years ago, U.S. DOE promised independent regulation of reactors, including FFTF. U.S. DOE has lied and broken its promises again. How can we trust you to run an unsafe, unregulated reactor?

Hanford's high level nuclear waste tanks are already leaking radioactive waste into the groundwater, which is moving closer and closer to the Columbia River, which flows right outside our back door here and threatens the life of the river and all the people who use it and all the creatures that live within it and around it.

2403-2 — Restarting the FFTF for a plutonium-238 mission or any mission is an irresponsible action.

2403-3 — It will add more waste to Hanford's leaking and explosive, high level nuclear waste tanks.

2403-4 — The U.S. DOE has not disclosed the cost of restarting FFTF in the effects of waste production and transportation. Without access to this information, the public does not have full disclosure. It is not okay to wait until after the public hearings to make this information available.

2403-5 — Northwest citizens have repeatedly voiced their concerns over FFTF, telling U.S. DOE to shut it down for once and for all.

2403-6 — And it's about our future and the future of our children and their children's children. Doesn't it seem obvious that radioisotopes cause cancer? I don't understand.

Response to Commentor No. 2403

2403-1: DOE notes the commentor's concerns with the Hanford high-level waste tanks and concern with migration of contaminants to the Columbia River. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is committed to honoring this agreement. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1. In regard to the Hanford wildfire of 2000, the DOE Richland Operations Office, the Washington State Department of Health, and U.S. Environmental Protection Agency performed environmental monitoring on and around the Site to assess potential radiological impacts. The wildfire did not cause a release of radioactive materials from any Hanford facilities but did result in resuspension of radioactive materials which were already in the environment. The low levels of radioactive materials that were resuspended were slightly above natural background levels and required several days of analysis to quantify. Information on this event has been made available to the public and can be accessed at <http://www.Hanford.gov/envmon/indes.html>. This site also provides a link to information on the independent offsite air monitoring that was conducted by the U.S. Environmental Protection Agency. In regards to safe operation of the FFTF, the environmental impacts associated with operation of the FFTF are addressed in detail in Section 4.3 of the NI PEIS. This section specifically evaluates the incremental radiological impact to the public associated with both normal operation and postulated accident conditions. As discussed, if FFTF were to operate for 35 years, this risk would be small (less than 1 additional latent cancer fatality). For perspective, the radiation dose the average American receives from natural sources is about 300 mrem each year. Based on the same 35 year time period used above, approximately 2,000 latent cancer fatalities would be expected among the same population as a result of this natural (non-Hanford related) radiation exposure. In that same 35 years, about 19,000 cancer fatalities from all causes (non radiological included) would be expected in the same population. As identified in Section N.4.2 of the NI PEIS, the subject of independent regulation is not within the scope of the NI PEIS but is an operational issue to be considered only if FFTF restart is selected in the Record of Decision.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2403: Anonymous (Cont'd)

Response to Commentor No. 2403

2403-2: DOE notes the commentor's opposition to the use of FFTF to produce plutonium-238 or for any other mission. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. The NI PEIS evaluates a range of reasonable alternatives for accomplishing the proposed action, one of which includes use of FFTF. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

2403-3: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. High-level radioactive waste would not be generated from merely operating FFTF. It is DOE's policy that all wastes be managed (i.e., treated, stored, and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

2403-4: The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such an ancillary document need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed this document to about 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site (<http://>

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2403: Anonymous (Cont'd)

Response to Commentor No. 2403

www.nuclear.gov) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P in the Final NI PEIS. Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site. Also, the risks and potential human health risks from roadway and marine (for Alternative 1) transportation of all materials (mixed-oxide fuel under Alternative 1, target materials, and isotopes) are addressed in the applicable sections of Chapter 4 (e.g., Section 4.3.1.1.11 and 4.3.3.1.11) of Volume 1. Associated environmental and human health impacts are assessed, with a revised summary of impacts provided in Section 2.7 of Volume 1 of this NI PEIS.

- 2403-5:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.
- 2403-6:** This PEIS has provided an estimate of the incremental potential human health impacts associated with a reasonable range of alternatives including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small. Cancers are believed to be caused by a combination of hereditary and environmental factors, including radiological and chemical agents. Statistics from the National Cancer Institute indicate that the rate of cancer incidence and the rate of cancer

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Commentor No. 2403: Anonymous (Cont'd)

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mortality has dropped during the 1990s [NCI webpage (as of 10/19/2000) - <http://cancernet.nci.nih.gov/statistics.shtml> article entitled "Cancer Death Rate Declined in the 1990s for the First Time Ever"]. A survey sponsored by the National Cancer Institute and published in the Journal of the American Medical Association in 1991 (JAMA 1991:1403-1408) detected no general increase in the risk of cancer death for people living in 107 counties adjacent to or containing 62 nuclear facilities. The Hanford Site, Idaho National Engineering and Environmental Laboratory, and Oak Ridge Reservation were included in the survey. The study used cancer mortality data from Benton, Franklin, and Grant Counties in the survey for the Hanford Site (See Section 3.4.9.3 of Volume 1).

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Commentor No. 2400: Ruth

2400-1 — In the '70s we talked about alternative energy. It's there. It's not a secret either. It's an option. It's a good option, in my opinion.

2400-2 — And I'd like to say there's a project there, but that project is clean-up because a good planet is hard to find.

Response to Commentor No. 2400

2400-1: DOE notes the commentor's interest in alternative energy sources. Issues of research and development of alternative energy sources are beyond the scope of this Nuclear Infrastructure PEIS. Despite advances in many energy technologies, America's future energy security will depend on a robust mix of energy sources which necessarily includes nuclear power generation. It is the current United States policy that clean, safe, reliable nuclear power continue as a viable component of the United States' energy portfolio. In recognition of this need, the government has initiated nuclear energy research and development programs to address potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) and to ensure that current nuclear power plants can continue to deliver adequate and affordable energy supplies. An enhanced DOE nuclear facility infrastructure is required to support such nuclear energy research and development for civilian applications.

2400-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

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Commentor No. 2399: Steve Andress

2399-1 — I just want to put in my word that I'm totally opposed to the restart of the FFTF operation in Hanford.

Response to Commentor No. 2399

2399-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2368: Scott Bergeran

2368-1 — I am opposed to the restarting of this nuclear reactor.

2368-2 — Your compilations of prior public comment are seriously lacking and show your failure to listen to the public. You failed to give any numerical breakdown for the 7,000 comments received. You only say “many” of the commentors who attended the meetings in Seattle, Portland, and Hood River were strongly opposed to the restart of FFTF.

Then you go on to say “most” of the comments received at Richland meeting were in support of the restart. You need to state the numbers of these comments. You need to state the numbers on these comments so Secretary Richardson is clear on where the people of the Northwest stand. You put the number in where it is to your advantage, and you leave them out when they are opposed. You also fail to mention the five city council resolutions opposing FFTF restart, which means you have representatives of entire cities opposing it, and their numbers should be included.

2368-3 — You have failed to demonstrate a compelling need for the production of plutonium for space, medical research isotopes, or nuclear energy research. Neither is there adequate justification for the need to produce all of them at one site. Neither is there justification for the need to produce them domestically, which makes no sense when we would continue to buy foreign nuclear fuel to run FFTF.

You must include recommendations of your own blue ribbon panel, Subcommittee, Isotope Research and Production Planning, that advised against — I say again “against” — the use of FFTF for medical isotope production.

Furthermore, EIS isotope demand projections are outdated and inadequate. They also fail to take into account possible cancer cures like gene therapy that could make medical isotopes unnecessary.

In addition, medical isotopes can be adequately produced at other DOE sites if they are a high priority as implied. Current isotope production levels for DOE reactors are misstated in the EIS at near capacity when most are only around 50 percent.

2368-4 — You must include the current demand estimates from NASA for Plutonium 238, which are considerably lower than your need projections and could easily be met under the current contract with Russia.

A discussion of alternatives to plutonium fuel must be included, and a renegotiated contract with Russia that double the current costs could meet future NASA needs at one third the cost of FFTF restart.

Response to Commentor No. 2368

2368-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2368-2: While all comments received during the scoping periods for both the Plutonium-238 Production EIS and the NI PEIS are part of the Administrative Record for the NI PEIS, Section 1.4 of Volume 1 and Appendix N are intended to provide a summary of the issues and associated trends identified during the scoping process rather than a tabulation of comments by specific issue. It should be noted, however, that NEPA and CEQ regulations do not require an agency to include and respond to each scoping comment as is required for public comments on a Draft EIS. In preparing the NI PEIS, DOE carefully considered scoping comments received from the public. Any perceived discrepancy in the grouping of comments raising any one particular issue or set of issues is attributable to the manner in which they were originally categorized and counted. For example, a number of statements, letters, or resolutions signed by multiple persons, such as city council resolutions mentioned by the commentor, were received by DOE (both for and against FFTF restart) in response to the request for scoping comments. Each such comment document was considered and counted as a single comment in the NI PEIS comment tracking system. The Office of Nuclear Energy, Science and Technology works closely with the Office of the Secretary to keep him informed of the progress on the NI PEIS, including stakeholder input.

2368-3: DOE notes the views of the commentor. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost. Section 1.2.2 of Volume 1 has been revised to clarify DOE's role in plutonium production for future NASA space missions. In ongoing clinical testing, therapeutic radioisotopes have proven effective in treating cancers and other illnesses while minimizing adverse side effects, making their use an attractive alternative to traditional chemotherapy and radiation treatments. DOE has sought independent analysis of trends in the use of medical radioisotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it has established two expert

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Commentor No. 2368: Scott Bergeran (Cont'd)

2368-5 — It is improper to release the draft EIS for public comment without the critical information requested by the public in the scoping meetings, including cost analysis of restart and all alternatives with reasonable review, with review time; studies on treatment of waste at all proposed site and nonproliferation impacts from FFTF and the importation of its necessary radioactive fuel from Europe.

2368-6 — Violation of the nonproliferation agreement by use of highly enriched uranium fuel alone is reason enough to stop restart of FFTF.

2368-7 — You have failed to adequately characterize environmental impacts from FFTF restart. An example is the statement, "environmental impacts associated with the existing inventory of spent fuel at the Hanford site are minimal."

2368-8 — To imply that the existing spent nuclear fuel inventory poses no problems is massively incorrect. More than 2,100 tons of corroding spent fuel sites in aging water filled basins near the Columbia River pose one of the largest problems for clean-up and an expected cost of more than \$1.6 billion. You must address all impacts on waste management and the environment at Hanford, not dismiss them with erroneous statements.

2368-9 — You must include the cost of FFTF and all companion facilities' documentation and decommissioning in the restart, not just every other alternative. All facilities used in all other alternatives must show the cost of decontamination and decommissioning as well.

2368-10 — You have failed to assess all existing contaminant sources at Hanford and all other sites before additional waste. You must assess current waste inventories and then assess the addition of any new waste to existing waste sources.

2368-11 — You have failed to adequately consider the use of the advanced test reactor in Idaho and the high flux isotope reactor in Oak Ridge for medical isotopes, while acquiring plutonium-238 from another source.

2368-12 — You also failed to analyze lower cost alternatives, such as subsidizing university reactors or buying time from private accelerators or reactors.

2368-13 — No action alternative must include the shutdown of FFTF, not maintaining it on standby based on prior commitments of Secretary O'Leary and Watkins and TPA milestones.

2368-14 — You failed to address the conflict of interest using PNNL's evaluations, when they are a proponent of restart and stands to gain financially.

You failed to assess the legality of introducing new programs and waste into the highly contaminated 306E or 325 buildings at Hanford that would be used with FFTF.

2368-15 — You must admit that the real reasons to start FFTF are in a hidden agenda that includes preserving jobs and starting new weapons research or other classified missions.

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committees. The first, a thirteen-member Expert Panel convened in 1998 to forecast future demand for medical isotopes, included academicians from leading medical universities and schools of public health, and professional affiliations ranging from the National Cancer Institute to manufacturers of radiopharmaceuticals. The second consists of a subcommittee of DOE's Nuclear Energy Research Advisory Committee (NERAC), established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. The members of this Subcommittee were selected based upon their expertise and experience in the production, processing, distribution, and application of stable and radioactive isotopes in the biological and physical sciences, and in medicine. The members included basic and clinical scientists, administrators, and users of isotopes from academia, industry, and the federal government. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information. The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs. The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and

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conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities. DOE does not believe that isotope production levels were misstated in the Draft NI PEIS. Section 1.2.1 identifies that "Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions (basic energy sciences or defense)." DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term (less than 5 years). It is the current United States policy that clean, safe, reliable nuclear power continue as a viable component of the United States' energy portfolio. In recognition of this need, the government has initiated nuclear energy research and development programs to address potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) and to ensure that current nuclear power plants can continue to deliver adequate and affordable energy supplies. An enhanced DOE nuclear facility infrastructure is required to support such nuclear energy research and development for civilian applications. This mission is described in Section 1.2.3 of Volume 1. There is no requirement to conduct all of these missions at one site. In the Record of Decision process, DOE could choose to combine components of several alternatives in selecting the most appropriate strategy. For example, DOE could select a low-energy accelerator to produce certain medical, research, and industrial isotopes, and an existing operating reactor to produce plutonium-238 and conduct nuclear research and development. Should FFTF be selected for restart in support of these missions,

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DOE could utilize a 15-year supply of mixed-oxide fuel that would be available from Germany under favorable economic terms (i.e., no charge for the fuel).

2368-4: Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium 238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium 238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost. DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions. Potential cost impacts associated with the NI PEIS alternatives are presented in a separate Cost Report.

2368-5: The costs and nuclear nonproliferation impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such ancillary documents need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed these documents to more than 730 interested parties on August 24 and September 8, 2000, respectively. Both reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided summaries of the Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment in Appendixes P and Q, respectively, in the Final NI PEIS. The draft Waste Minimization and Management Plan for the Fast Flux Test Facility (May 2000) was referenced in the NI PEIS and made available prior to the public hearings.

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2368-6: The use of mixed oxide or highly enriched uranium to fuel the FFTF has been rigorously evaluated in the Nuclear Infrastructure Nonproliferation Impact Assessment. This report confirms that the manner in which these fuels would be used, as described in the PEIS, is consistent with nonproliferation policy. In the event that a decision is made to restart FFTF, the first six years of operation would use existing onsite mixed oxide (MOX) fuel. DOE expects that an additional 15-year supply of mixed oxide fuel in Europe, owned by Germany, could be available for FFTF. MOX fuel does not use highly enriched uranium. Further, use of the Hanford MOX fuel would dispose of a significant U.S. stockpile of highly attractive fresh plutonium fuel by conversion to spent fuel through irradiation in FFTF. This represents a safe, low-cost, high benefit opportunity to reduce U.S. civilian plutonium without chemical or bulk processing. Use of the German MOX represents a similar advantage with respect to the German stockpile of separated civilian plutonium. During the period of MOX fuel use, in support of U.S. nonproliferation policy directives, DOE's Office of Nonproliferation and National Security would undertake a study under Reduced Enrichment for Research and Test Reactors (RERTR) to consider the technical feasibility of using low enriched uranium to fuel the FFTF. Under this nonproliferation protocol, if use of low enriched uranium fuel is found infeasible in FFTF for meeting assigned missions, policy would allow DOE to subsequently procure highly enriched uranium fuel for use in FFTF. Again, this approach is consistent with U.S. nonproliferation policy.

2368-7: The concerns expressed in this comment with respect to the adequacy of the characterization of FFTF restart impacts, are noted. The environmental impacts associated with restart and operation of the FFTF during normal operations and from postulated accidents are presented and discussed in detail in Section 4.3 of the NI PEIS. All impacts to human health and to environmental media including air, water, and land are shown to be small. No fatalities would be expected from the 35-year operating period of the FFTF. Any discharges would be in accordance with applicable permit and regulatory requirements and the impacts on air and water quality would be small. The potential impacts to the Hanford area and transportation corridors to and from Hanford associated with FFTF operations are also shown to be small. DOE also notes the commentor's concern with defense mission (non FFTF related) spent nuclear fuel (SNF) currently stored in the water basins at the 100 Area. As stated in DOE/EIS-0245F, Final Environmental Impact Statement for Management of Spent Nuclear Fuel from the K Basins (January 1996), DOE has placed a high priority on taking expeditious action to reduce risks to public health and safety and the environment by removing [defense mission] SNF from the K Basins and, subsequently, to take action to manage the SNF in a safe and environmentally

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sound manner for up to 40 years or until ultimate disposition decisions are made and implemented. Consistent with the purpose of a cumulative impact assessment (i.e., to evaluate the sum of the impacts from normal operations within various environmental categories, such as public health and land use) and in full recognition of DOE's position to take expeditious action in regards to management of the defense mission SNF, Section 4.8.3.5 of the NI PEIS addresses the cumulative impacts of the existing spent fuel and the spent fuel that would be associated with operation of FFTF. It is shown in the documents cited in that section that the radiological impact to the public from the management of the existing 2133 metric tons heavy metal (MTHM) inventory of SNF at Hanford (which consists of 2103.4 MTHM defense mission SNF, 11.0 MTHM of existing (non defense mission) FFTF SNF stored at 400 Area, and 18.4 MTHM of other non-defense-mission SNF) is less than 0.1 mrem/year. This dose is well below the EPA's Clean Air Act Standard of 10 mrem/year and the Drinking Water Standard of 4 mrem/year, as implemented by DOE Order 5400.5. The incremental impacts associated with managing an additional 16 MTHM of FFTF SNF were evaluated in Section 4.3.1.1.14 of the NI PEIS for the restart of the FFTF. The radiological impact to the public from overall radionuclide releases from the entire FFTF complex during the last year of reactor operation was less than 0.0001 mrem/year. The dose contribution from FFTF SNF management would be expected to be a small fraction of the FFTF reactor operation dose. Therefore, it would have no discernable impact on the 0.1 mrem/year dose from the existing 2133 MTHM Hanford SNF inventory. The currently used FFTF-specific SNF storage system designs (i.e., facility storage vessels and dry storage casks) are the key factors in the determination that the incremental radiological and environmental impacts would be small.

2368-8: Although not within the scope of the NI PEIS, DOE notes the commentor's concern with defense mission (non-FFTF related) spent nuclear fuel (SNF) currently stored in the water basins at the 100 Area. As identified in DOE/EIS-0245F Final Environmental Impact Statement for Management of Spent Nuclear Fuel from the K Basins (January 1996), DOE has not dismissed this threat but has placed high priority on taking "expeditious action to reduce risks to public health and safety and the environment by removing (defense mission) SNF from the K Basins and, subsequently, to take action to manage the SNF in a safe and environmentally sound manner for up to 40 years or until ultimate disposition decisions are made and implemented."

2368-9: DOE assumes that the commentor is referring to deactivation, not decommissioning. Decommission costs were not included for any alternative. Deactivation of FFTF is

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not part of implementing Alternative 1, Restart FFTF. Deactivation of FFTF is part of implementing Alternatives 2, 3, 4, and 5 and including the cost of FFTF deactivation in the implementation costs for these alternatives is appropriate. The Cost Report was structured to identify the implementation costs of the various alternatives so the Secretary of Energy would have this information along with other data for consideration.

2368-10: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. Ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The current inventory of wastes managed at the Hanford Site are identified in Section 3.4.11.1 of Volume 1. In addition, the generation rates of wastes associated with the NI PEIS options that use Hanford facilities are compared with the current waste generation rates at the site in Section 4.3 of Volume 1. As stated in Sections 4.3 1.1.13, 4.3.3.1.13, and 4.4.3.1.13, the generation rates of wastes at Hanford associated with the options that utilize either FFTF, FMEF and or RPL/306-E would be much smaller than the current waste generation rates at the site. These volumes would also be small in comparison to the existing inventory at the site (Section 3.4.11.1, Volume 1). These comparisons were also made for the other options which involved INEEL and ORR facilities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

2368-11: The potential production of plutonium-238 using ATR, HFIR, or a commercial reactor was evaluated in the NI PEIS because it would be compatible with the operating requirements of these facilities' existing missions. However, different irradiation requirements are associated with the production of medical, industrial, and research isotopes. While ATR, HFIR, or a commercial reactor may possess the potential capability or capacity to support isotope production, it is unlikely that reliable, increased isotope production to support projected needs could be accomplished using these facilities without disturbing their existing missions. There is little room for growth of medical isotope production at either ATR or

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HFIR. At ATR the neptunium-237 targets for plutonium-238 production will compete for space in the reactor. There are potential negative impacts to the private company that leases reactor space for the production of radioisotopes due to being assigned less desirable irradiation space. At HFIR, the ability to expand medical isotope targets into additional reactor locations is limited by the potential impacts that the targets have on the primary experiments in the reactor. Medical isotope targets and neptunium-237 targets are not in competition for the same locations in at HFIR.

2368-12: The NI PEIS considered the use of a wide range of irradiation facilities, including those operated by universities and private concerns. Privately owned and operated CLWRs were added to the PEIS scope for the production of plutonium-238 and were analyzed in detail in the document. University reactors were considered, but were dismissed because they do not have sufficient available core volume to accommodate the required missions. Section 2.6.2 provides a complete discussion of irradiation facilities considered but dismissed.

2368-13: The No Action alternative is required under Council on Environmental Quality regulations (40 CFR 1502.14(d)). It provides a point of comparison for the action alternatives. The No Action Alternative generally represents the status quo; that is, it includes those actions that would normally take place without the proposed action. Since the status quo involves maintaining FFTF in standby and not its deactivation it is not appropriate to include its deactivation as part of the No Action Alternative. Deactivation of FFTF is included as Alternative 5, Permanently Deactivate FFTF, and as part of Alternative 2, Use Only Existing Operational Facilities, Alternative 3, Construct New Accelerator(s), and Alternative 4, Construct New Research Reactor.

2368-14: PNNL is not preparing this PEIS, although it has offered technical comments on it. These comments have been evaluated by DOE and the contractor preparing the PEIS. PNNL has also previously provided technical and cost analyses on matters related to the FFTF, which have undergone independent scrutiny, and have helped confirm the need for the environmental review now being independently developed. PNNL's work does not present a conflict of interest. Ultimately, DOE has full control over the contents of the PEIS. DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of

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Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2368-15: Other than the missions discussed in the NI PEIS, no alternate uses for FFTF are being considered. None of the alternatives in the NI PEIS include defense missions nor would they contribute to future weapons production. Socioeconomic impacts associated with Alternative 1 are discussed in Section 4.3 of Volume 1.

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Commentor No. 2409: Kim Birkland
Columbia Riverkeeper

2409-1 — The Department of Energy's compilations of prior public comment are seriously lacking and show the department's failure to listen to the public. You failed to give any numerical breakdown for the 7,000 comments received. You only say "many" of the commentors who attended the meetings in Seattle, Portland and Hood River were strongly opposed to the restart of FFTF.

That needs to be quantified, and Secretary Richardson needs to hear the exact number of folks who are opposed to the restart.

It is improper to release the draft EIS for public comment without the critical information requested by the public in scoping meetings, including the cost analysis of restart and all alternatives with reasonable review time.

The draft EIS must state the preferred alternative for adequate public review, and I am really surprised that there is no preferred alternative in this EIS. I've never seen that before in an EIS, and it gives us no opportunity to comment adequately. It just sets us back where we were in the scoping process.

2409-2 — You failed to demonstrate a compelling need for the production of plutonium for space, medical, or research isotopes or nuclear energy research. Neither is there adequate justification for the need to produce all of them at one site.

This is a cover-up for some other reason to be starting the nuclear facility because tritium was the primary reason for restarting at the last meeting I attended, and it is now off the list. So there must be some other reason why the Department of Energy wants to restart. The department must include the recommendations of your own blue ribbon panel, the Subcommittee for Isotope Research and Production Planning that advised against the use of FFTF for medical isotope production.

You must include the current demand estimates for NASA for Plutonium-238, which are considerably lower than your need projections and could easily be met under the current contract with Russia.

2409-3 — The FFTF will be much more expensive than reasonable alternatives by at least \$2 billion.

2409-4 — Studies on treatment of wastes at all proposed sites [needed in EIS]. To imply that the existing spent nuclear fuel inventory poses no problems is massively incorrect.

2409-5 — ...the nonproliferation impacts from FFTF and the importation of its necessary radioactive fuel from Europe, which is a violation of the nonproliferation agreement by use of highly enriched uranium fuel alone, and that's reason enough to stop the production at FFTF facility or stop the restart of FFTF

Response to Commentor No. 2409

2409-1: Section 1.4 of Volume 1 of this NI PEIS, as supplemented by an expanded discussion provided in Appendix N, summarizes the prevailing issues and concerns raised during the scoping process to include identification of relevant issues raised at individual scoping meetings. It should be noted, however, that NEPA and CEQ regulations do not require an agency to include and respond to each scoping comment as is required for public comments on a final EIS. While all comments received during the scoping periods are part of the Administrative Record for the NI PEIS, Section 1.4 and Appendix N are intended to provide a summary of the issues and associated trends identified during the scoping process rather than a tabulation of comments by specific issue. The Office of Nuclear Energy, Science and Technology works closely with the Office of the Secretary to keep him informed of the progress on the NI PEIS, including stakeholder input. The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such an ancillary document need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed this document to about 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P in the Final NI PEIS. As outlined in 40 CFR Part 1502.14 (e), an agency is not required to specify a preferred alternative or alternatives in the Draft EIS if one does not exist, but must do so in the Final EIS. Accordingly, DOE has identified its preferred alternative in Section 2.8 of Volume 1 that includes a discussion of DOE's reasons for selecting it. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

2409-2: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the

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Commentor No. 2409: Kim Birkland (Cont'd)
Columbia Riverkeeper

2409-6 — You have failed to adequately characterize environmental impacts from FFTF restart. An example is a statement that environmental impacts associated with the existing inventory of spent fuel at the Hanford site is minimal.

2409-7 — More than 2,100 tons of corroding spent fuel sits in aging water filled basins near the Columbia River posing one of the largest problems for cleanup at an expected cost of more than \$1.6 billion. You must address all impacts on waste management and the environment at Hanford, not just dismiss them with erroneous statements.

Right across from Hanford there's a critical area that protects the shrub ecosystem in Washington State. That ecosystem is endangered. That ecosystem is also highly radioactive. Those are the only species that we have that are remaining in Washington State, and that is not considered in this impact statement.

...especially when I look down river from the Hanford site, and there is evidence and tests indicated that the nuclear fuel that has been disposed of in the past is already in the river.

2409-8 — . . .nor is any other health risk aside from cancer, which I find very disturbing,

2409-9 — The no action alternative must include shutdown of FFTF

2409-10 — . . .you must admit the real reasons to restart FFTF are a hidden agenda that includes preserving jobs and starting new weapons research or other classified missions.

2409-11 — And the U.S. DOE should include the alternative — should choose the Alternative 5, shutdown FFTF, or Alternative 2, produce at existing sites with the shutdown of FFTF at Hanford as much too contaminated to start up again.

Response to Commentor No. 2409

future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1 2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs. The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities. DOE has taken the Expert Panel and NERAC report recommendations under consideration in developing the range of alternatives evaluated in the NI PEIS. These reports were made available to the public at the NI PEIS public information centers and on the Internet at www.nuclear.gov. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Although research to identify other

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*Commentor No. 2409: Kim Birkland (Cont'd)
Columbia Riverkeeper*

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potential fuel sources to support these space exploration missions has been conducted, no viable alternative to using plutonium-238 has been established. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost. DOE could purchase plutonium 238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions. A May 22, 2000, correspondence from NASA to DOE identified that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium 238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions. In January 1997, President Clinton tasked his Committee of Advisors on Science and Technology (PCAST) to evaluate the current national energy research and development portfolio and to provide a strategy that ensures the United States has a program to address the Nation's energy and environmental needs for the next century. In its November 1997 report responding to this request, the PCAST Energy Research and Development Panel determined that restoring a viable nuclear energy option to help meet our future energy needs is important and that a properly focused research and development effort to address the potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) was appropriate. The PCAST panel further recommended that DOE reinvigorate its nuclear energy research and development activities to address these potential barriers. Section 1.2.3 provides information on the nuclear energy research and development mission. There is no requirement to conduct all of these missions at one site. In the Record of

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Decision process, DOE could choose to combine components of several alternatives in selecting the most appropriate strategy. For example, DOE could select a low-energy accelerator to produce certain medical, research, and industrial isotopes, and an existing operating reactor to produce plutonium-238 and conduct nuclear research and development. Should FFTF be selected for restart in support of these missions, DOE expects it could utilize a 15-year supply of mixed-oxide fuel that would be available from Germany under favorable economic terms (i.e., no charge for the fuel). The Record of Decision for the PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives. DOE has no hidden agenda for the use of FFTF. The only missions currently being considered are those analyzed in the NI PEIS, which are the production of isotopes for medical, research, and industrial uses; plutonium-238 production for future NASA space exploration missions; and U.S. nuclear research and development needs for civilian application.

2409-3: DOE notes the commentor's opinion.

2409-4: The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored, and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. The discussion in the Summary and Section 4.8.3.5 of Volume 1 on the cumulative impacts for spent nuclear fuel management at Hanford was revised to clarify that the management of the existing spent nuclear fuel at Hanford results in a dose of less than 0.1 millirem per year to the maximally exposed member of the public. This dose is well within the DOE limits given in DOE Order 5400.5. As discussed in that Order, the dose limit from airborne emissions is 10 millirem per year, as required by the Clean Air Act; drinking water is 4 millirem per year, as required by the Safe Drinking Water Act; and the dose limit from all pathways combined is 100 millirem per year. DOE has committed to remove the spent nuclear fuel at Hanford for ultimate disposition in a geologic repository.

2409-5: DOE notes the nonproliferation concern expressed in the comment, and can assure that its proposed action in the PEIS supports U.S. nonproliferation goals. This has been confirmed by the Nuclear Infrastructure Nonproliferation Impact

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Assessment, published in September 2000. Although this policy analysis is not required under NEPA, DOE considers it to be an essential element in the decision-making process for the DOE nuclear infrastructure, and has included a summary of the assessment in Appendix Q in the Final NI PEIS. In the event that a decision is made to restart FFTF, the first six years of operation would use existing onsite mixed oxide fuel. DOE expects that an additional 15-year supply of mixed oxide fuel in Europe, owned by Germany, would be available for FFTF. The Nuclear Infrastructure Nonproliferation Impact Assessment for the NI PEIS alternatives stated that using the two different sources of existing mixed oxide (MOX) fuel for FFTF (existing FFTF fuel and German MOX fuel) is consistent with U.S. nonproliferation policy, and, additionally, represents a safe, low-cost opportunity to reduce civilian plutonium without chemical or bulk processing, which would afford substantial nonproliferation benefits. DOE's approach to potential use of HEU in FFTF is also consistent with U.S. nonproliferation policy. The FFTF is an existing research reactor capable of performing its research missions using HEU fuel, if MOX fuel is not available. U.S. nonproliferation policy provides for such a circumstance as part of the effort to reduce and discourage HEU use. During the period of MOX fuel use, in compliance with U.S. nonproliferation policy directives, DOE's Office of Nonproliferation and National Security would undertake a study under the Reduced Enrichment Research and Test Reactor (RERTR) program to consider the technical feasibility of using low enriched uranium to fuel the FFTF. Under this nonproliferation protocol, if use of low enriched uranium fuel is found feasible, it will be used; if found infeasible for meeting assigned missions in the FFTF, an already existing research reactor, policy would allow DOE to subsequently procure highly enriched uranium fuel for use in that facility. This approach is consistent with U.S. nonproliferation policy.

2409-6: The concerns expressed in this comment on the potential environmental impacts associated with FFTF restart are noted. The environmental impacts from restart and operation of the FFTF during normal operations and from postulated accidents are presented and discussed in Section 4.3 of the NI PEIS. All impacts to human health and to environmental media including air, water, and land are shown to be small. No fatalities would be expected from the 35-year operating period of FFTF. Any discharges would be in accordance with applicable permit and regulatory requirements and the impacts on air and water quality would be small. The potential impacts to the Hanford area and transportation corridors to and from Hanford associated with FFTF operations are also shown to be small.

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2409-7: Although not within the scope of the NI PEIS, DOE notes the commentor's concern with the defense mission (non-FFTF related) spent nuclear fuel (SNF) currently stored in the water basins at the 100 Area. As identified in DOE/EIS-0245F Final Environmental Impact Statement for Management of Spent Nuclear Fuel from the K Basins (January 1996), DOE has not dismissed this threat but has placed high priority on taking "expeditious action to reduce risks to public health and safety and the environment by removing (defense mission) SNF from the K Basins and, subsequently, to take action to manage the SNF in a safe and environmentally sound manner for up to 40 years or until ultimate disposition decisions are made and implemented." The incremental impacts associated with managing an additional 16 MTHM of FFTF SNF were evaluated in Section 4.3.1.1.14 of the NI PEIS for the restart of the FFTF. The radiological impact to the maximally exposed member of the public from overall radionuclide releases from the entire FFTF complex during the last year of reactor operation was less than 0.0001 mrem/year. Additionally, the dose contribution from FFTF SNF management would be expected to be a small fraction of the FFTF reactor operation dose. Therefore, it would have no discernable impact on the 0.1 mrem/year dose from the existing 2133 MTHM Hanford SNF inventory. The currently used FFTF-specific SNF storage system designs (i.e., facility storage vessels and dry storage casks) are the key contributors for determining that the incremental radiological and environmental impacts are small. Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site. In regards to the commentor's concern with the shrub ecosystem, no ecosystems across from Hanford are "highly radioactive" as a result of Hanford activities. No food or water restrictions are in place outside

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the Hanford Reservation as a result of Hanford activities. Annual environmental monitoring reports are publically available.

- 2409-8:** Appendix H provides information on potential health effects other than fatal cancers. Of the three health impacts from low levels of radiation exposure (nonfatal cancers, hereditary effects, and fatal cancers), fatal cancers have the highest probability of occurrence, roughly 500 excess cancer fatalities per million person-rem. Nonfatal cancers and hereditary effects appear at rates of approximately 20 and 26 per cent of this number. Using a single number for human health impacts provides a simple direct means to compare impacts and risks among the range of reasonable alternatives. Cancer fatalities, being the largest impact, were selected for presentation throughout the NI PEIS. Low risk (low health impact) from fatal cancers implies low risk for all other radiological induced health consequences.
- 2409-9:** The No Action alternative is required under Council on Environmental Quality regulations (40 CFR 1502.14(d)). It provides a point of comparison for the action alternatives. The No Action Alternative generally represents the status quo; that is, it includes those actions that would normally take place without the proposed action. Since the status quo involves maintaining FFTF in standby and not its deactivation, it is not appropriate to include its deactivation as part of the No Action Alternative. Deactivation of FFTF is included as Alternative 5, Permanently Deactivate FFTF, and as part of Alternative 2, Use Only Existing Operational Facilities, Alternative 3, Construct New Accelerator(s), and Alternative 4, Construct New Research Reactor.
- 2409-10:** Other than the missions discussed in the NI PEIS, no alternate uses for FFTF are being considered. None of the alternatives in the NI PEIS include defense missions nor would they contribute to future weapons production. Socioeconomic impacts associated with Alternative 1 are discussed in Section 4.3 of Volume 1.
- 2409-11:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, or Alternative 2, Use Only Existing Operational Facilities.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2376: Brian Carlson

2376-1 — I was going to state this at the beginning, but I think I probably should anyway. I am opposed to the restart of FFTF.

2376-2 — The river, Columbia River, is the life blood of Gorge communities, especially Hood River, well, because I live there. That's my point of view. Without a healthy river, our communities will fall apart. In 1986, Congress created the Columbia Gorge scenic area, not the Columbia Gorge toxic sewer pipe. One of the things I tell my kids is, "Please clean up your toys before you take out any more." What I need to say to the Department of Energy: clean up your toys and stop the madness.

Response to Commentor No. 2376

2376-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2376-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor: Michael Contini
National Association of Cancer Patients

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 1700.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2367: Stephen J. Curley

2367-1 — The claimed plutonium and isotope needs for which our region would be subjected to the risks of FFTF nuclear reactor restart are now revealed to be illusionary claims by the proponents of this dangerous project.

2367-2 — The draft EIS is deeply flawed by its failure to disclose information that is essential to informed decision making. Therefore, the most prudent course of action would be to remove restart of the FFTF reactor from consideration until these concerns are addressed.

2367-3 — There is no justification for either NASA or medical isotopes.

U.S. DOE's own panel of experts conclude that FFTF is not a viable source of medical research isotopes. Even the Washington State Medical Association says there is not need for FFTF as an additional source of medical isotopes. Why wasn't this information included in the EIS?

2367-4 — Hanford needs to be cleaned up. The DOE has lied to the public on radiation gas releases in the past, and we do not believe you any longer. Do not start FFTF, and clean up the mess you have already created.

2367-5 — I guess it is legal to go from meeting to meeting, but let the record stand that the few voices you're going to hear tonight that are for the FFTF are from Richland. They bus themselves down here. I'm sorry. I don't go to your meetings. I don't believe you should come to ours.

Response to Commentor No. 2367

2367-1: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1 2.1 of Volume I was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs. DOE has taken the Expert Panel and NERAC report recommendations under consideration in developing the range of alternatives evaluated in the NI PEIS. These reports were made available to the public at the NI PEIS public information centers and on the Internet at www.nuclear.gov. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Under the No Action Alternative, DOE would continue to purchase plutonium-238 to meet the space mission needs for the 35-year evaluation period considered in the NI PEIS. However, DOE recognizes that any purchase beyond what is currently available to the United States through the existing contract would likely require negotiation of a new contract and may require additional NEPA review. The May 22, 2000, correspondence from NASA to DOE identifies that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-

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Commentor No. 2367: Stephen J. Curley (Cont'd)

Response to Commentor No. 2367

238 to support deep space missions. Rather, SRTG development efforts were stopped in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires one-third less plutonium-238 as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000, letter to DOE that large RTGs be maintained as backup. Section 1.2.2 of Volume 1 was revised to clarify plutonium-238 mission needs. This PEIS has provided an estimate of the incremental potential human health impacts associated with a reasonable range of alternatives including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

2367-2: This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS. Further, DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives. The facilities and locations evaluated in this NI PEIS specifically represent a range of reasonable alternatives for accomplishing DOE missions and serve to enable DOE to meet its responsibilities under the Atomic Energy Act. Therefore, there is no basis for removing any particular alternative from consideration. DOE made every effort to obtain, analyze, and disclose all required information to make a decision on expanding nuclear infrastructure.

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Commentor No. 2367: Stephen J. Curley (Cont'd)

Response to Commentor No. 2367

- 2367-3:** See response to 2367-1. The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.
- 2367-4:** DOE notes the commentor's opposition to FFTF restart and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.
- 2367-5:** DOE notes the commentor's views. It is DOE policy to encourage public input on matters of regional, national and international importance as part of its commitment to facilitate a public participation process that is open and unbiased. It is not uncommon or illegal under CEQ regulations for individuals and special

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Response to Commentor No. 2367

interest groups, who may be for or against a particular proposed action or alternative, to attend multiple meetings including those outside their "home" area. However, DOE believes and strives to ensure that the hearing format used serves to promote open and equal representation by all individuals and groups, regardless of the motivation for attending.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2404: Les Davenport

2404-1 — I do support the restart of the FFTF, specifically Alternative 1, and I support expanding the DOE infrastructure because we do have a mission to supply isotopes for both research and medical and do experiments for life extension for the current nuclear reactors.

2404-2 — Two of the alternatives here are to build another nuclear reactor somewhere or to build two accelerators somewhere. We also know that the other reactors in the United States that are producing isotopes currently, the advanced test reactor and the high flux isotope reactor, in about five years will be fully booked, and they cannot keep up with demand.

2404-3 — As Colette pointed out, the radiation risks of the isotopes and the FFTF is really driven by the processing facility. I'll point out it is impossible with the targets and the material that's being created, the isotopes that's being created, it is impossible to have a criticality accident. Plutonium-238 will not go critical. It will melt itself down and the other radioisotopes will not support criticality. So you're mixing up criticality with the production of the isotopes.

2404-4 — I hear a lot about the Hanford clean-up, either people saying that it's not going fast enough or nothing's happening at all. I'd like to call your attention to the large sheets in the very far back panel. There are four of them, and this gives the plan for Hanford clean-up, and more specifically to date, there have been over two and a half million tons of dirt containing radionuclides that have been scraped up from along the river and put into a licensed CERCLA approved disposal facility in the central plateau of Hanford. Two and a half million tons has been cleaned up from along the river shore.

Secondly, one reactor has been cocooned, and two more are in process. The paper work and the biological clean-up on two more is ongoing, and by 2005 we expect to have five of those reactors cocooned so that they're not a hazard to the environment.

By 2010, they expect that all the river clean-up will be completed, and eight of the reactors cocooned.

2404-5 — First of all, the fuel for the FFTF exists. It's already manufactured. It just needs to be put into the reactor, and we'll take it for a little over six years. If the German fuel were used to extend the time, it comes from the BNR-300 reactor. That fuel is already fabricated also. It exists. It's in this world with us. All it needs to do is to be put into an outer shroud that's a hexagonal structure about six inches across on flats. That's about all that has to be done. There is no waste from repackaging this German fuel and from using the FFTF fuel to get into the reactor. That will take it out about 21 years of operation.

Response to Commentor No. 2404

2404-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

2404-2: A discussion of DOE's isotope production capability is addressed in Section 1.2.1. Assuming a midpoint growth curve for future isotope demand and a diversity and redundancy of isotope supply, it is likely that DOE's isotope production facilities, would be fully used within a 5- to 10 year timeframe if no enhancements to the existing nuclear facility infrastructure are implemented.

2404-3: DOE agrees that the possibility of a criticality is extremely low. Procedures and controls will be in place to protect personnel and facilities from contamination. Both neptunium-237 and plutonium-238 would be stored in shielded containers in quantities and configurations that preclude criticality. Target preparation and postirradiation processing would be carried out in batches involving quantities well below those at which criticality could occur.

2404-4: Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2404-5: The commentor is correct in stating that, including the unirradiated German MOX fuel currently stored in Europe, there currently exists enough fuel to operate FFTF for 21 years and that this fuel is already fabricated.

2404-6: DOE notes the comment.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2404: Les Davenport (Cont'd)

2404-6 — Now, let's consider what happens when this fuel comes out of the reactor. It, along with all the spent nuclear fuel from commercial reactors, will be treated the same, namely, it will eventually go to a geologic repository. This may be Yucca Mountain. Who knows? Whenever the government makes a decision. And it will not be reprocessed. It will not create high level waste. So there will be nothing in high level waste to go into the Hanford tanks, and every time I hear that it's going to create new, high level waste in the Hanford tanks, that's wrong, patently false, and I wish people would stop using these false statements so frequently.

The low level waste, yes, it would go into 55 gallon drums. It would have to be disposed, but this would come from reprocessing of the targets, which make the Plutonium-238 or the radioisotopes for industrial or medical, and it's that small quantity, a few dozen 55 gallon drums that are created over the period of a year that would have to be dealt with and when you compare... The waste that would be generated from FFTF can be compared to about 80,000 drums of transuranic waste, which will have to be disposed from Hanford. Eighty thousand drums versus FFTF creating through developing isotopes a couple of dozen drums per year. It's a drop in the bucket. It's something that has to be dealt with properly. No question. But it can be done, just as the waste from Hanford can be taken care of.

Response to Commentor No. 2404

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

**Commentor No. 2391: Cyndy deBruler
Columbia Riverkeeper**

2391-1 — I express extreme, extreme sadness at the fact that this meeting was called for a Monday night the last week of summer vacation. You do not encourage public participation in that manner, and you need to acknowledge the fact that over 200 people turned out in spite of that fact tonight, the first night of Monday night football, and at a 6:30 hearing when every hearing in 12 years I've ever been to has been scheduled at seven o'clock. So three strikes against us, but we're here anyway. So please listen.

Columbia River Keeper has prepared extensive comments since obviously you're not listening to our simple appeals, and I urge any members of the audience who haven't gotten one to please pick up one of the white sheets, fill it out, and we will see that we count them before sending them in so that we know how many comments were submitted, even though DOE does not count them or forward them on to Secretary Richardson obviously in looking at what happened with the last round of meetings.

It's interesting to note that there were five city council resolutions, and four of them right here in the Gorge, Portland, Seattle, Hood River, the Town of Bingen, Town of Mosher, and the Town of Lyle. All passed city resolutions opposing the restart.

Where are those representatives and those number of the population base represented? They're not even mentioned in the EIS.

I ask that be included and that Secretary of State or Secretary of Energy Richardson be made aware of those city resolutions.

Also, there's an extensive letter from Wyden's office here. Please make sure that Richardson receives that, as well.

Why don't you listen? You know, the comments have been made, and they're not being received in any way or forwarded. You have not taken what we gave you last time, which were very specific comments about the scoping of the EIS.

2391-2 — You've not justified the need. Instead you've totally ignored NASA's updated amounts of plutonium that they really need and forged ahead with this as your major mission and reason for this restart. It's not valid.

2391-3 — You need to go back and redo all of your numbers. Your cost numbers which just came out, and for some strange reason, even though you said that everybody received them, we did not get them. We've gotten them second hand from other parties.

There's not sufficient time to evaluate those numbers, but our best guess looks like about two billion more would be spent to restart FFTF than to produce medical isotopes elsewhere and buy the plutonium from Russia. So all of those numbers need to be justified.

Response to Commentor No. 2391

2391-1: The schedule for the public hearings was determined in part by CEQ guidelines for implementing NEPA that require that the hearings be held no sooner than 15 days after release of the Draft NI PEIS. Days and times were set to ensure that the expected level of public input could be fairly accommodated within the course of each scheduled hearing and that the schedule of hearings be completed in a timeframe that would enable DOE to thoroughly consider and respond to the public's comments. Section 1.4 of Volume 1 and Appendix N of the NI PEIS are intended to provide a summary of the issues and associated trends identified during the scoping process rather than a tabulation of comments by specific issue. Each such comment document was considered and entered in the NI PEIS comment tracking system. All comments received are part of the Administrative Record for this NI PEIS. In preparing this NI PEIS, DOE carefully considered all scoping comments received from the public. In fact, based on the scoping comments received, the scope of the NI PEIS was expanded in a number of areas as outlined in Section 1.4 to include adding a new alternative (Alternative 5) that would permanently deactivate FFTF. As referenced by the commentor, a number of statements, letters, or resolutions signed by multiple persons, such as city council resolutions mentioned by commentor, were received by DOE both for and against FFTF restart) in response to the request for scoping comments. The Office of Nuclear Energy, Science and Technology works closely with the Office of the Secretary to keep him informed of the progress on the NI PEIS, including stakeholder input. In preparing the Final PEIS, DOE has assessed and considered both oral and written comments received on the Draft PEIS during the public comment period and has responded to these comments in the Final PEIS. Volume 3 of the NI PEIS contains public comments received on the NI PEIS and DOE responses to those comments.

2391-2: Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2391: Cyndy deBruler (Cont'd)
Columbia Riverkeeper

2391-4 — It's on the environmental statements. They say, "Environmental impacts associated with existing inventory of spent fuel at Hanford site are minimal."

If that is what they're writing, the whole EIS needs to be thrown out and redone.

Response to Commentor No. 2391

domestic supply of plutonium 238, DOE's ability to support future NASA space exploration missions may be lost. The May 22, 2000, correspondence from NASA to DOE identifies that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium 238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

2391-3: The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such an ancillary document need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed this document to about 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Volume 2, Appendix P in the Final NI PEIS.

2391-4: DOE notes the commentor's concern with the existing inventory of defense mission spent nuclear fuel (SNF) currently stored in the water basins at the 100 Area. As stated in DOE/EIS-0245F, Final Environmental Impact Statement for Management of Spent Nuclear Fuel from the K Basins (January 1996), DOE has placed a high priority on taking expeditious action to reduce risks to public health and safety and the environment by removing (defense mission) SNF from the K Basins and, subsequently, to take action to manage the SNF in a safe and environmentally sound manner for up to 40 years or until ultimate disposition decisions are made and implemented. Consistent with the purpose of a cumulative impact assessment (i.e., to evaluate the sum of the impacts from normal operations within various environmental categories, such as public health and land use) and in full recognition of DOE's position to take expeditious action

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

*Commentor No. 2391: Cyndy deBruler (Cont'd)
Columbia Riverkeeper*

Response to Commentor No. 2391

in regards to management of the defense mission SNF, Section 4.8.3.5 of the NI PEIS addresses the cumulative impacts of the existing spent fuel and the spent fuel that would be associated with operation of FFTF. It is shown in the documents cited in that section that the radiological impact to the public from the management of the existing 2133 metric tons heavy metal (MTHM) inventory of SNF at Hanford (which consists of 2103.4 MTHM defense mission SNF, 11.0 MTHM of existing ((non defense mission)) FFTF SNF stored at 400 Area, and 18.4 MTHM of other non-defense- mission SNF) is less than 0.1 mrem/year. This dose is well below the EPA's Clean Air Act Standard of 10 mrem/year and the Drinking Water Standard of 4 mrem/year, as implemented by DOE Order 5400.5. The incremental impacts associated with managing an additional 16 MTHM of FFTF SNF were evaluated in Section 4.3.1.1.14 of the NI PEIS for the restart of the FFTF. The radiological impact to the public from overall radionuclide releases from the entire FFTF complex during the last year of reactor operation was less than 0.0001 mrem/year. The dose contribution from FFTF SNF management would be expected to be a small fraction of the FFTF reactor operation dose. Therefore, it would have no discernable impact on the 0.1 mrem/year dose from the existing 2133 MTHM Hanford SNF inventory. The currently used FFTF specific SNF storage system designs (i.e., facility storage vessels and dry storage casks) are the key factors in the determination that the incremental radiological and environmental impacts would be small.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

**Commentor No. 2369: Greg deBruler
Columbia Riverkeeper**

2369-1 — Now, let's talk about the EIS. I've spent the last 11 years looking at environmental impacts at Hanford, and we all remember the winds that were blowing up here at the fire last time, and they said there was no radiation released from Hanford ever during the fires. Broad statement. Secretary of Energy: no radiation release.

Banner headlines in the paper: "no radiation release." And the people outside here are going, "Wait a second. Does that makes sense? How could there be no radiation released at Hanford?"

Now all of a sudden we learn that the plutonium levels were 1,000 times above what they normally get, and then in the newspaper they come up and say, "Oh, the plutonium is just circulating the globe and it's everywhere."

2369-2 — The Department of Energy is here because they want to perpetuate making more waste. They want to perpetuate their game, and when I asked last time that they consider all the environmental impacts that will occur from processing to decommissioning, I didn't mean just to look at the human health risk. I meant to look at every risk that's out there.

In other words, if you tear a facility down, where is the waste going? Where is that waste going to go and what dump is it going into? And how much waste do you have in the existing dump?

2369-3 — So if you have a landfill and you've got ten million curies and you add another five million curies, what's the long-term risk for as long as those materials remain hazardous?

2369-4 — So if it's for Uranium-238, 4.4 billion years. I want a cost analysis that looks at every drop of waste produced in these perpetual missions, every existing amount of waste, because you have to know what you have currently before you can assess how much more you can add, and then look at the long-term risks.

2369-5 — The EIS has failed miserably. It is not a quality document and will end up in a court of law if they decide that FFTF is going to be a chosen option.

2369-6 — Environmental impact statement, I pride myself in knowing a lot about Hanford and knowing a lot about environmental impacts, and you know, the scientific world is an amazing things when they think of the environment as some species or maybe they say, "Oh, it's the salmon," because that's the hot thing to think about. So they do a risk analysis on the salmon.

But they forget about the clams. They forget about the lamprey in the river. They forget about the sturgeon.

Response to Commentor No. 2369

2369-1: DOE notes the commentor's views and concerns to include plutonium releases from the recent Hanford wildfire. Direct effects of the fire on the land and biota are addressed in this NI PEIS consistent with the scope of the affected environment descriptions for the Hanford Site provided in Section 3.4. The secondary effects of the Hanford wildfire of June 27-July 2, 2000 (known as the 24 Command Fire and the Two Forks Fire) are beyond the scope of this NI PEIS. Nevertheless, a brief description of the environmental monitoring and results associated with the Hanford wildfire follows. Since the initial stages of the fire and continuing to the present, DOE, in conjunction with the Washington State Department of Health and the Federal EPA, have conducted environmental monitoring on and near the Hanford Site to assess potential radiological releases. Monitoring will also continue over the long term. DOE has made these monitoring results available to the public as rapidly as possible with the results to date posted on a dedicated page on the Hanford web site at <http://www.hanford.gov/>. Regarding plutonium releases, DOE monitoring data has shown elevated levels (above levels normally seen) of plutonium in the Hanford 200 Areas. The most recent monitoring data available from EPA shows elevated levels (above background) of plutonium associated with 6 of the 61 ambient air filters collected from 23 locations surrounding the Hanford site. All of these DOE and EPA results are below EPA's "protective action guides" for emergency situations, EPA National Emission Standards for Hazardous Air Pollutants, hazardous air pollutant dose limits set by the State of Washington, and within or below EPA's acceptable risk range for protecting public health and the environment. DOE will continue to work with the Washington State Department of Health and the EPA and will post additional monitoring results as they become available.

2369-2: Decommissioning FFTF, including associated costs and cleanup, is not within the scope of the NI PEIS. Before decommission activities were undertaken, DOE would prepare the appropriate environmental documentation to address the associated environmental impacts. Cost assessments would also be prepared. DOE remains committed to cleaning up the Hanford Site independent of ultimate decision on FFTF. The amounts of wastes associated with decommissioning FFTF would be small. The schedule for cleaning up these other wastes would not be affected if FFTF were restarted.

2369-3: The risks associated with long term disposal of waste depends upon the disposal option selected. Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2369: Greg deBruler (Cont'd)
Columbia Riverkeeper

They forget about every living thing that exists in the environment, every living thing.

The science done at Hanford would make a real high quality scientist just shrivel up and walk away from the process because of what they failed to assess and what they failed to look at.

You call this an environmental impact statement. I call it an industrial development statement. It does not, does not address the environmental impacts that will occur at any of these sites or all of these sites, and it does not address the environmental impacts.

If you were to ask them what they would want the science to look at, they would simply tell you every living thing that depends on clean air, clean dirt, clean water, every living thing. So if you were to do an EIS, you would have to assess, first of all, how much waste you have at Hanford currently in the ground, in vessels that are going to fail in the time frame that they're going to be there before they're ever treated.

Then you'd have to assess those impacts to all the little critters on the surface, on the land, and in the water, because eventually that waste is going to move, and eventually it's going to migrate to the Columbia River.

And then you would have to take all of your waste that you're proposing to make, this new mission at all these different sites, and you'd have to lay that waste in on top of it, and then look at that risk over time.

The problem with our risk assessments are we look out ten years, 30 years. Maybe we try 1,000 years, but we kind of quite and shrivel up and go. We just can't handle that. Our science can't handle what I'm requiring you to do, but you can get a heck of a lot closer by doing a valid environmental impact statement.

This environmental impact statement, I guarantee you, if the Secretary of Energy was to make a decision today based on this and it was to go pro FFTF, you would lose when it comes to a court of law just in the environmental side of it, not counting all the other things you left out. Just in the assessment side of it, it fails miserably.

And I had a conversation last fall, and, Colette, you weren't in the room. It was with Shane and some other people after all the requirements we wanted in this EIS, and we had kind of a nice round table discussion, and the round table discussion really ended up with some people talking straight, and they all said, "In the time frame we have, there's no way we can do a totally credible EIS."

Response to Commentor No. 2369

that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

2369-4: The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such an ancillary document need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed this document to about 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P in the Final NI PEIS. With respect to waste management and cleanup issues, the Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this Agreement. FFTF milestones were placed in abeyance in the final Tri Party Agreement, as agreed by all three parties, until a decision is made on the future of the facility by the Secretary of Energy. Hanford Site cleanup is funded through the DOE Environmental Management Program Office. The alternatives considered in this PEIS would be funded by the DOE Office of Nuclear Energy, Science and Technology, which has no funding connection to cleanup activities. Waste management costs for existing cleanup activities were not presented in the Cost Report because they are beyond the scope of this NI PEIS. FFTF restart would not impact the cleanup missions at Hanford.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2369: Greg deBruler (Cont'd)
Columbia Riverkeeper

The resources are not there; manpower is not there; and the time allotted isn't there. So I don't know what we do to make this a decision that's based on credible science, which is what Secretary of Energy Richardson wants, because there is not credible science used in this.

Some of the statements in here are really appalling.

2369-7 — And I mean think of it this way. When we talk about clean-up at Hanford, we talk about CERCLA and we talk about MTCA or RCRA, the three laws we play with out there. MTCA is the one that the United States Department of Energy wants to roll over and ignore. Washington State Department of Ecology is trying to ignore it right now in the 300 area. Those laws don't even go close enough to the trust responsibility that this Federal government has to the tribes, the three sovereign nations, not counting the other 14 nations that live up and down the river.

2369-8 — One of the things that I do appreciate you putting in was Option No. 5, and I appreciate you putting in Option No. 5 because that's what I brought up.

So if Richardson doesn't make a decision in the no action alternative, shut down FFTF.

2369-9 — I would like to make a change to Option No. 1, the no action.

And in the to action, if there is no action, FFTF is shut down and decommissioned immediately, in the no action alternative, and the only simple reason is this. Two prior Secretaries of Energy, O'Leary and Watkins, both made a commitment to the people of the Northwest and the Congress that the end of the Cold War was over, that the mission at Hanford was clean-up, and that there were no further production missions at Hanford.

It was so clear that in 1995, they put it in the tri-party agreement and said they will decommission and shut this thing down, drain the sodium out of it, and put it to death. Dead, goodbye, it's finished. That's their commitment.

So if you're going to go further and delay it by no action, you owe the American taxpayers \$360 million for the last nine years that you let this thing sit around on standby and you can't allow the political morass to continue.

Response to Commentor No. 2369

2369-5: This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives. This was accomplished through review and analysis of site-specific information on the environmental conditions prevailing at ORR, INEEL, and Hanford to include a comprehensive analysis of the associated environmental and health risks of each alternative. DOE made every effort to obtain, analyze, and disclose all required information to make a decision on expanding nuclear infrastructure.

2369-6: No aspects of the impacts analysis have been omitted rather, the NI PEIS discusses impacts in proportion to their significance as specified by CEQ regulations for implementing NEPA (40 CFR 1502.2). For Alternative 1, Restart FFTF, it was determined that there was little to no potential for impacts to such resources as land use, noise, geology and soils, ecological resources (including aquatic life), and cultural and paleontological resources. DOE considers the level of detail already provided for most resource areas to already exceed that which is commensurate with the level of expected impact, as specified by CEQ regulations. The cumulative impacts of the alternatives, including Alternative 1, with respect to resource use, air quality, public and occupational health and safety, and waste management are presented in Section 4.8 of Volume 1.

2369-7: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2369-8: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2369-9: The No Action Alternative is required under Council on Environmental Quality regulations (40 CFR 1502.14(d)). It provides a point of comparison for the action alternatives. The No Action Alternative generally represents the status quo; that is, it includes those actions that would normally take place without the proposed action. Since the status quo involves maintaining FFTF in standby and not its

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*Commentor No. 2369: Greg deBruler (Cont'd)
Columbia Riverkeeper*

Response to Commentor No. 2369

deactivation, it is not appropriate to include its deactivation as part of the No Action Alternative. Deactivation of FFTF is included as Alternative 5, Permanently Deactivate FFTF, and as part of Alternative 2, Use Only Existing Operational Facilities, Alternative 3, Construct New Accelerator(s), and Alternative 4, Construct New Research Reactor. A 1999 change to the Tri-Party Agreement (TPA) removed the planned milestone for total deactivation of the FFTF until its ultimate fate was assessed. That proposed TPA milestone change was the subject of previous public meetings.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2401: Dirk Dunning

2401-1 — I'm surprised to hear that the EIS or the Fast Flux Test Facility has not been used or considered for military missions. I think I remember a time just one ago here where it was proposed to produce tritium to produce hydrogen bombs. Somehow I think that's used for nuclear weapons.

2401-2 — I remember when I first came to work for the state, one of the very first things I ended up running into is some documents that were part of the restart arguments from a couple of times ago. I've been through three of them now. There were three before that. This thing has more lives than a cat, and one of the most discouraging things that I heard was from Al Farabee last week because when I came into this issue, I frankly don't have an opinion about whether this reactor should run or not as we started. I've developed an opinion since then, but the discouraging word that I heard from Al was that once this decision is made and we get to the end of this process in December and the Secretary makes a decision, whichever way it goes, that if the decision is against it or even if the decision is for it, for that matter, that we can expect when the administration changes next January 20th that we're going to get to reconsider it again.

2401-3 — The last one I want to comment on is the K basins. In the EIS it says that there is no significant environmental hazard from the spent fuel already on site. That's bilge.

The 2,300 metric tons of rotting fuel in those basins is a tremendous hazard. That fuel is in a condition that DOE describes as deteriorating. It's incredibly horrible. On the order of seven percent of the fuel has dissolved away into the water and left a sludge on the bottom of the basins.

The basins, when they were originally designed, were designed to leak. They're not physically joined to the reactor block. There's a seam that's a designed leakage seam, and in the case of one of the basins, K West, that seam was painted with epoxy and sealed. In the other basin, K East, it was not.

That basin has leaked probably continuously since it was first filled with water. Because that fuel is rotting, the nearest adjacent well, the K-30 well, has tritium levels of several million pica curies per liter. There's also high levels of cesium, strontium, Carbon-14, and other things, and this is 500 yards off the Columbia River.

To call that not an environmental hazard is a farce, and then to compare the 16 tons of spent fuel from the FFTF to that is just ludicrous.

Response to Commentor No. 2401

2401-1: Other than the missions discussed in the NI PEIS, no alternate uses for FFTF are being considered. None of the alternatives in the NI PEIS include defense missions and would not contribute to future weapons production.

2401-2: DOE notes the commentor's views and concerns regarding implementation of the Record of Decision for the NI PEIS. It is DOE's expectation that the Record of Decision would not be reconsidered by the new administration.

2401-3: The discussion in the Summary and Section 4.8.3.5 of Volume 1 on the cumulative impacts for spent nuclear fuel management at Hanford was revised to clarify that the management of the existing spent nuclear fuel at Hanford results in a dose of less than 0.1 millirem per year to the maximally exposed member of the public. This dose is well within the DOE limits given in DOE Order 5400.5. As discussed in that Order, the dose limit from airborne emissions is 10 millirem per year, as required by the Clean Air Act; drinking water is 4 millirem per year, as required by the Safe Drinking Water Act; and the dose limit from all pathways combined is 100 millirem per year. DOE has committed to remove the spent nuclear fuel at Hanford for ultimate disposition in a geologic repository.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2385: Rob Gosman, Jr.

2385-1 — I'd like to speak to the term "commitment" that I heard from these spokespeople here. I heard the statement you're reiterating the commitment to the Hanford clean-up. "Commitment" is a big word for me. It's a big word for most people. I've been taught to respect the word "commitment," and I'd just like to state that I, with what education I do have, have seen no proof of any kind of commitment to the people that live on this planet regarding these concerns, which kills people.

The plain language is that there is no proof that you can clean it up or that you're even willing to or that you're committed to it. You can only state it, okay, and then reiterate it, and then we can all come back and hear you state it and reiterate it again, but there is no real proof that you can actually clean it up.

2385-2 — Because we're talking about these medical and industrial isotope production, okay, and production of fuel to power future NASA missions and civilian nuclear research and development, and I'd like to speak for my family and most of all for my father. If he was here right now, he would say, "Stop."

Response to Commentor No. 2385

2385-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2385-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2405: Karen Harding

2405-1 — I work with children, and that's a pretty scary thought, dead world. I can step outside my house with a baby in my arms, and we live in the woods. You know, the air and the trees and the leaves moving, they're so alive to that. They need a world that's focused on a livable, sustainable energy source. They need a world where the adults are cleaning up, cleaning up the messes that I know are almost impossible. No one knows how to clean it up. That's why we come here for ten years, trying to figure it out.

Response to Commentor No. 2405

2405-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2374: Daniel Harvey

2374-1 — Dealing with the nuclear waste on site seems precarious to me. Dealing with the waste that already exists seems to be problematic.

The last point I'd like to make addresses the irony of creating something that is good medically, and by that very creation producing byproducts that are evil medically, creating the isotopes, and yet that's going to create more waste.

2374-2 — So if it's not clear yet, my wish is for Alternate 5.

2374-3 — I think we should spend our money on cleaning up, not on starting up.

Response to Commentor No. 2374

2374-1: DOE notes the commentor's concern regarding waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

2374-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2374-3: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2398: Harold Heacock

2398-1 — First, I'm a little bit puzzled by some of the dichotomies here tonight. Look at the amount of waste, low level, mixed waste to be generated in FFTF and the EIS, and then we looked at the amount that the hospitals in Oregon ship to Hanford for disposal, and there's substantially more waste coming out of medical uses in the State of Oregon that are disposed of at Hanford than would be generated by the FFTF. Secondly, last year Oregon fell all over itself wanting to ship us a reactor vessel from Trojan of some 26 million curies of radioactivity in it, but you know, that was safe to dispose of at Hanford, but we had to get it out of Oregon. But now we talk, well, we've got to clean Hanford up. Why don't you keep your waste?

2398-2 — I'd like to comment a few comments on some issues that have come up both in some of the handout material and in some of the comments. First is the FFTF was never intended for utilized nuclear weapons production and none are being considered by Department of Energy for it.

2398-3 — Secondly, the lower power operation of the reactor as proposed in the EIS adds substantial additional safety margin to those that already exist.

2398-4 — Accelerators to meet the isotope requirement are not available that have the energy level and size that would be required, nor are there any hard scientific data to support the construction of such an accelerator.

2398-5 — As far as start-up and operation of FFTF, it would be funded entirely separately from the clean-up mission, and as a number of folks here know, that funding is put through different committees. By law it's segregated from the clean-up money and will not interfere with the clean-up of the Hanford site.

2398-6 — You will find when you look at the total comments that are submitted on the EIS there is a substantial amount of comment provided in support of FFTF by labor, business, and governmental leaders.

In previous testimony on this subject, a large compilation of support letters, over 200 from different industrial organizations, governmental agencies, port districts and other interests were submitted to the department in support of FFTF, and we would request that these be included in the present record.

And in summary, we request the assets of FFTF receive an objective, balanced, realistic evaluation of the alternatives during the preparation of the record decision on this environmental impact statement.

Response to Commentor No. 2398

2398-1: The commentor's position on waste generation and disposal are noted. As discussed in Chapter 4 of Volume 1, if facilities at Hanford are selected to support the nuclear infrastructure missions, then waste generated during implementation of the alternative(s) would be disposed of in compliance with the Tri-Party Agreement for the Hanford Site.

2398-2: The commentor is correct in stating that FFTF was never designed for the production of nuclear weapons material and DOE is not considering any nuclear weapons related mission for FFTF.

2398-3: DOE agrees that FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small. In the event that FFTF restart is selected, a new Safety Analysis Report, including a Probabilistic Risk Assessment (PRA), will be prepared and it will address any changes in plant configuration, operating conditions and procedures. The revised safety analyses will be subjected to a thorough independent review process.

2398-4: DOE operates two accelerators that are being utilized for the production of medical isotopes, the Brookhaven Linac Isotope Producer (BLIP) located at the Brookhaven National Laboratory and the Los Alamos Neutron Science Center (LANSCE) located at the Los Alamos National Laboratory. DOE is currently in the process of upgrading the LANSCE facility with the 100 MeV isotope production facility. The upgrade is scheduled for completion in 2001. While DOE has the final design for accelerator with an energy level and size larger than the high-energy accelerator proposed in the NI PEIS, DOE has no conceptual, preliminary, or final design for an accelerator that has the energy level and size required to support the plutonium-238 production mission at the maximum production rate of 5 kilograms per year. The accelerator designs for Alternative 3 were developed to a level of detail that was adequate to assess the environmental impacts associated with the construction and operation of the proposed facilities and the technical feasibility of meeting the mission objectives. The commentor is not correct in his statement that there is no hard scientific data to support the design and construction of such a facility. Tests have been performed at LANSCE to support the design of large high-energy accelerators.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2398: Harold Heacock (Cont'd)

Response to Commentor No. 2398

2398-5: The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

2398-6: DOE notes the commentor's view that there is strong support for FFTF by labor, business, and government leaders and desire for an objective and balanced evaluation of the alternatives. The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS. DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives. This was accomplished through review and evaluation of site-specific information on the environmental conditions prevailing at ORR, INEEL, and Hanford to include a comprehensive analysis of the associated environmental and health risks of each alternative. Public comments have been entered into the NI PEIS Administrative Record. In preparing the Final NI PEIS, DOE carefully considered comments received from the public. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2417: Michelle Hoffman

2417-1 — I just wanted to state for the record that I'm opposed to starting up FFTF. . .

2417-2 — I am in support of Alternative 5, which is to shut it down. . .

2417-3 — . . .clean up the waste that has already been made.

Response to Commentor No. 2417

2417-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

2417-2: See response to comment 2417-1.

2417-3: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2411: John Hollinger

2411-1 — Your compilations of prior public comment are seriously lacking and show your failure to listen to the public. You failed to give any numerical breakdown for the 7,000 comments received. You only say “many” of the commentors who attended the meetings in Seattle, Portland, and Hood River were strongly opposed to the restart of FFTF. Then you go on to say “most” of the comments received at the Richland meeting were in support of restart.

You need to state the numbers of these comments so Secretary Richardson is clear on where the people of the Northwest stand. You put the numbers in when it is in your advantage and leave them out when they are opposed.

You also fail to mention the five city council resolutions opposing FFTF restart, which means that you have representatives of entire cities opposing it, and their numbers should be included.

You have totally misled the public. You’ve been told over and over again we don’t want this restarted. I would say pull your head out.

2411-2 — You have failed to demonstrate a compelling need for the production of plutonium for space, medical or research isotopes, or nuclear energy research. Neither is there adequate justification for the need to produce all of them at one site. Neither is there justification for the need to produce them domestically, which makes no sense when we would continue to buy foreign nuclear fuel to run FFTF.

You must include recommendations of your own blue ribbon panel, Subcommittee for Isotope Research and Production Planning. That panel advised against the use of FFTF for medical isotope production. Your own panel advised against it.

Furthermore, EIS isotope demand projections are outdated and inadequate. They also fail to take into account possible cancer cures like gene therapy that could make medical isotopes unnecessary.

In addition, medical isotopes can be adequately produced at other DOE sites if they are a high priority, as implied. Current isotope production levels for DOE reactors are misstated in the EIS at near capacity when most are only around 50 percent.

Response to Commentor No. 2411

2411-1: While all comments received during the scoping periods for both the Plutonium-238 Production EIS and the NI PEIS are part of the Administrative Record for the NI PEIS, Section 1.4 of Volume 1 and Appendix N are intended to provide a summary of the issues and associated trends identified during the scoping process rather than a tabulation of comments by specific issue. It should be noted, however, that NEPA and CEQ regulations do not require an agency to include and respond to each scoping comment as is required for public comments on a Draft EIS. In preparing the NI PEIS, DOE carefully considered scoping comments received from the public. Any perceived discrepancy in the grouping of comments raising any one particular issue or set of issues is attributable to the manner in which they were originally categorized and counted. For example, a number of statements, letters, or resolutions signed by multiple persons, such as city council resolutions mentioned by the commentor, were received by DOE (both for and against FFTF restart) in response to the request for scoping comments. Each such comment document was considered and counted as a single comment in the NI PEIS comment tracking system. The Office of Nuclear Energy, Science and Technology works closely with the Office of the Secretary to keep him informed of the progress on the NI PEIS, including stakeholder input.

2411-2: Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and of which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. The NI PEIS evaluates a range of reasonable alternatives for accomplishing the proposed action, one of which includes use of FFTF. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action. There is no requirement to conduct all of these missions at one site. In the Record of Decision process, DOE could choose to combine components of several alternatives in selecting the most appropriate strategy. For example, DOE could select a low-energy accelerator to produce certain medical, research, and industrial isotopes, and an existing operating reactor to produce plutonium-238 and conduct nuclear research and development. Should FFTF be selected for restart in support of these missions, DOE expects it could utilize a 15-year supply of mixed-oxide fuel that would be available from Germany under favorable economic terms (i.e., no

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2411: John Hollinger (Cont'd)

Response to Commentor No. 2411

charge for the fuel). The commentor also questions the need to produce these materials domestically. The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily Molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. Further, supplies of many research isotopes are not readily available from existing foreign or domestic sources, causing a number of medical research programs to be terminated, deferred, or seriously delayed. As such, reliance on these other sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 was revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs. Whereas DOE could purchase plutonium-238 from Russia, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was similarly revised to clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions. DOE notes the commentor's concern regarding isotope demand projections and their relationship to other available therapies. In ongoing clinical testing, therapeutic radioisotopes have proven effective in treating cancers and other illnesses while minimizing adverse side effects, making their use an attractive alternative to traditional chemotherapy and radiation treatments. A forecast for future demand for medical isotopes and the expected growth rate of medical isotope use during the next 20 years is provided in Section 1.2.1 of Volume 1 of the NI PEIS. The growth projections were adopted by DOE as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information. The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2411: John Hollinger (Cont'd)

Response to Commentor No. 2411

for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities. DOE does not believe that isotope production levels were misstated in the Draft NI PEIS. Section 1.2.1 identifies that approximately 50 percent of DOE's isotope production capability is being used.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2377: Michael Hussman

2377-1 — And I've been to a lot of these meetings, and it's getting really tiring, but here I am again, and there's a lot of other people that would have liked to have been here tonight, but according to the scheduling that you guys came up with, they couldn't be here.

2377-2 — So, anyway, as far as my friends and neighbors are concerned, this is more or less the way they feel. So I kind of summed it up in a short, sweet comment, and it was you folks at the DOE really need to get a clue because the public doesn't want this going on. They're really tired of it, and until you can effectively or safely figure out a way to clean up your messes, the nuclear age is over.

Response to Commentor No. 2377

2377-1: DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and holding public hearings is an essential and required part of the NEPA process. The schedule for the public hearings was determined in part by CEQ guidelines for implementing NEPA that require that the hearings be held no sooner than 15 days after release of the Draft NI PEIS. The public also had the opportunity to comment on the Draft NI PEIS through the U.S. mail, e-mail, a toll-free fax number, and a toll-free phone number. DOE gave equal consideration to all comments, regardless of where or from whom received. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

2377-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2395: Chief Johnny Jackson

2395-1 — You know, my people, my people who live along this reservation, live along this river here and on the reservations used to enjoy live along this river, but it's kind of difficult to look at them today, to see and hear about what's happening to a lot of them.

The Yakimas who are neighbors of the Hanford Reservation, we've even opened up an area west of the Hanford — on the western side of the reservation and told my people that they can go and harvest the food there. I've seen some of it, and I told them that it wasn't worth it.

Many of my people on the reservation, in fact, on both reservations, Warm Springs, Umatilla, Colville, as well as Siakwa (phonetic) are starting to die of cancer. Leukemia, the kids and some of the young people; some of the men don't even reach the age of 30, and some of the women don't reach that age either, and they come down with cancer and die.

It never used to be that way, and it's all happened over around the Yakima Reservation, around the Colville Reservation.

We've went and we filed a suit for what is happening to the river for our people. The program was set up by the government and DOE, but the questionnaires we got and we filled out, they said, "You're not Downwinders."

In those forms, they never mentioned nothing about the water and the river, which is being contaminated and polluted by Hanford.

I caught fish quite a few years ago which started me to fight against Hanford. Right here in this river every one of them fish were contaminated. They were going back upstream. You've never seen fish with no eyes but still alive swimming up river, and the bodies of those fish that were badly mutilated.

I got them fish out of my nets, and I turned them over to the authorities who were supposed to send them to the laboratory for further studies. For some reason they didn't reach there because I never got no report back on them.

On a national conference up at Montana the year before last, some people came to that conference from the Colville Reservation to ask us for help. They wanted us to intervene in looking into a lawsuit or doing something about what is happening to their animals on the Colville Reservation, the wildlife.

2395-2 — You've never seen kids like I have in Arizona that are in the hospital that can't walk, can't talk and some that cry day and night, but still — you want to start up this Hanford, you're going to start up this reactor again. We can do without it and I hope you stop it.

Response to Commentor No. 2395

2395-1: The commentor's concerns about contamination of rivers and tribal lands are noted. As discussed in Chapter 4 of the NI PEIS, implementation of the nuclear infrastructure alternatives would not be expected to result in radioactive or chemical contamination of the Columbia River or land surrounding the Hanford Site. No food or water restrictions are in place outside the Hanford Site as a result of Hanford activities. As shown in Figures K-10 and K-11 of Appendix K (Environmental Justice Analysis), the western boundary of the Yakama Indian Reservation is approximately 30 kilometers (19 miles) southwest of the nearest boundary of the Hanford Site. Although the Yakima River flows along western boundary of the Yakama Reservation and along a portion of the southern boundary of the Hanford Site, the reservation is upstream from the Hanford Site. Prevailing winds at the Hanford Site blow from the south to south-southwest directions toward Grant County. Hence, Grant County would be expected to bear a major burden of wind borne contamination from the Hanford Site. As discussed in Section 3.4.9.3 of Volume 1, the question of whether residents in the Hanford area are subject to elevated cancer rates is unresolved. Existing studies and data suggest that cancer mortality rates in counties adjacent to the Hanford Site are not elevated. Although Yakima County was not included in the studies cited in studies cited in Volume 1, Section 3.4.9.3, the impacts of the Hanford site on counties adjacent to the site boundary would be expected to exceed the impacts on the Yakama Indian reservation. Available data and studies described in Volume 1, Section 3.4.9.3 do not exclude the possibility of elevated cancer mortality rates on the Yakama Reservation. Currently accepted factors for conversion of effective dose equivalence to latent cancer fatalities include age dependence, but no dependence on race or ethnic origins. Although the question of whether the Hanford Site causes or promotes excess cancer mortality rates on the Yakama reservation is unresolved, implementation of the Alternatives described in Volume 1, Section 2.5 of Volume 1 would not be expected to result in latent cancer deaths among the population residing on the Yakama reservation because the resulting radiation doses in Yakama County would be small in comparison to that required to produce an excess cancer fatality. The Colville Indian Reservation is approximately 320 kilometers (200 miles) north-northwest of the Hanford Site. Along the Columbia River, Colville Reservation is upstream from the Hanford Site. It is in the direction of prevailing winds from the Hanford Site. As discussed in the paragraph above, airborne radiological and chemical contaminants from the Hanford Site would be expected to primarily impact Grant County, and there is no evidence of excess cancer mortality in Grant County. Impacts on the Colville Reservation would be expected to be much less than those on Grant County because the airborne concentrations of radioactive materials and

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2395: Chief Johnny Jackson (Cont'd)

Response to Commentor No. 2395

hazardous chemicals decrease with increasing distance from the source. Operations at the Hanford Site would not be expected to adversely affect fish in the Yakama River. According to an International Atomic Energy Agency (IAEA) publication (IAEA Technical Report Series No. 332, Effects of Ionizing Radiation on Plants and Animals at Levels Implied by Current Radiation Protection Standards), a dose rate of 100 millirem per year to the most exposed human will lead to dose rates to plants and animals of less than 0.1 rad per day. The IAEA concluded that a dose rate of 0.1 rad per day or less for animals and 1 rad per day or less for plants would not affect these populations. As discussed in Section 3.4.9.1 1 of Volume 1, the largest individual dose to the public from normal operations at the Hanford Site in 1997 was 0.004 millirem, which is more than four orders of magnitude less than the IAEA threshold for adverse effects. For the same reason, impacts to ecological resources would be small in the immediate area of the Hanford Site and negligible at all distant locations.

2395-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2392: Robin Klein

2392-1 — This reactor [FFTF] has been in search of a mission for ten years, and this EIS has been uniquely crafted to specifically justify its restart, and that's despite the lack of demonstrated need.

2392-2 — And even so, the EIS shows that FFTF start-up would pose the largest risk from accident compared with the other alternatives.

2392-3 — It would create 6,000 cubic meters of new waste, contaminate an uncontaminated facility, the FMEF, which by the way doesn't get spoken about much, but the contamination and the volume of waste produced by that facility would be the vastest.

2392-4 — And it also doesn't mention that DOE would foot the entire bill for NASA's plutonium supply that would be produced there.

2392-5 — But here we are again, despite the many times we've been here before and despite the overwhelming opposition that has been brought up over and over again, and that is the city councils that have come up in full opposition. The two largest cities in this region have come out in full opposition.

Oregon state legislature two years ago specifically came out in opposition. That was overwhelming, bipartisan agreement, and a conservative Republican legislature.

We have had it over and over again, our congressional delegates speaking out against restart.

The message doesn't seem to be getting through, but I'm glad right now that we are at the end game here supposedly. The decision is to be made. We hear from Richardson by the end of the year. So I look forward to him honoring that commitment.

And I also see this as a challenge for democracy. This is the true test. If this decision that goes forward with the restart of FFTF, if he does not shut it down, then he has not heard anything. He has not heard that the citizens in the Northwest are overwhelmingly opposed to this facility, and I will no longer believe that we are living in a democracy, that Richardson, the Clinton-Gore administration and public process mean nothing.

Response to Commentor No. 2392

2392-1: Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. The NI PEIS evaluates a range of reasonable alternatives for accomplishing the proposed action, one of which includes use of FFTF. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

2392-2: FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Sections 4.2-4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from implementation of alternatives, including normal operations and a spectrum of accidents that included severe accidents. Although there are minor differences in the risks among alternatives, the environmental analysis showed that radiological and nonradiological risks associated with all the alternatives would be small.

2392-3: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (i.e. solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. DOE notes the commentor's concern regarding contamination of new facilities that have never been contaminated (i.e., FMEF). Information regarding waste generation from processing and fabrication or irradiated targets is discussed in Sections 4.3.3.1.13 and 4.4.3.1.13. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2392: Robin Klein (Cont'd)

Response to Commentor No. 2392

the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

- 2392-4:** The commentor is incorrect that DOE is responsible for the entire cost of NASA's plutonium-238 supply, although DOE is mandated by the Atomic Energy Act to provide isotope production support for other federal agencies. Through an interdepartmental arrangement with NASA, DOE is reimbursed for plutonium-238 production and for associated power system hardware.
- 2392-5:** DOE notes the commentor's views. The Secretary of Energy will make the programmatic decisions with respect to the alternatives presented in this NI PEIS to accomplish the DOE missions. Decisions made will be published in the Record of Decision no sooner than 30 days after publication of this NI PEIS. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2415: Bob Lanbeer

2415-1 — Anyway, I was a contractor in Olympia for many years, and you know, really the cleanup report of the Hanford site, boy, I was in the wrong business. I mean, get this. I bid on this contract. I went ten times over on my bid, right? Could walk away from the job, and I get paid all that money, and somebody else would come in and take the place and I did a good thing.

I really don't believe the Department of Energy is even the slightest bit interested in cleaning up their mess.

2415-2 — What the deal is, is in the back of their minds they know that somewhere in the next 20 years we're going to run out of oil. Right? When we run out of oil, all of a sudden now there's going to be this national emergency because people's cars are going to be at the gas stations. Everybody is going to say, "Hey, what can we do?"

All of a sudden, hey, what about nuclear power? So by the Department of Energy just keeping these reactors going, keeping the technology going, people are going to make some really bad choices. All of a sudden they're going to say, "Hey, this is the best that we've got."

Hey, why don't we start spending some money doing renewable energy projects? Right now minimal dollars; I mean, the Department of Energy right now has a two million solar roof project, and basically what they're trying to do is they're trying to get solar power out there.

But the problem is they're not investing any money into it. There's no money available, but here we're going to spend billions of dollars to keep pushing a technology that we know is bad. Hey, let's get the price of solar energy down, and let's start looking at wind power. Let's start looking at, you know, micro hydroelectric power, start pushing those industries, start putting money into those industries because when the time comes we're out of oil, 2020 or whatever year they figure, hey, let's make some good choices.

Response to Commentor No. 2415

2415-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2415-2: DOE notes the commentor's interest in alternative energy sources, although issues of research and development of alternative energy sources are beyond the scope of this Nuclear Infrastructure PEIS. The DOE missions to be addressed in this EIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2366: Daniel Lichtenwald

2366-1 — The development of the NI PEIS glosses over the potential long-term barriers aspects and jumps heartily to the conclusion that DOE's nuclear R&D initiatives require an enhanced nuclear facility infrastructure in three basic categories: materials research, nuclear fuel research, and advanced reactor development, nothing about those potential long-term barriers to expanded use of nuclear power, like waste, proliferation, safety and economics.

2366-2 — Indeed, the analyses provided in all of the NI PEIS documents of the alternatives and relevant infrastructure and facilities devote a higher level of detail and evaluation to the FFTF than they do for all other elements supposedly under consideration.

2366-3 — Any R&D and consultant production at Hanford should be devoted to the as yet unresolved problems of containment, storage, and intricate processes and neutralization of toxics.

As I've said at previous meetings, DOE has a conflict of interest as a federal agency responsible for management of clean-up at the Hanford site. As long as DOE is committed to responsibilities that it sees as being to, "insure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development activities related to development of nuclear power for civilian use" it is not surprising that it can't keep its fingers out of the FFTF and perennially gives short shrift to the problems of clean-up at Hanford.

Opening up a toxic waste dump that is out of control to new sources of toxics is not a good idea. The needs to end World War II were met by the creation of a unique project and oversight at Hanford. Now we are living with a need to eliminate the hazard that Hanford has become for all life for all time in the region.

A new project and oversight needs to be created or brought in. We don't need a Department of Energy there. We need a department of clean-up.

2366-4 — Staying with the script, we prefer that Alternative 5 be selected, that the FFTF be taken out of standby, be deactivated and dismantled...

2366-5 — Alternative 3 can be considered if facilities resource — reluctantly considered if facilities, resources and activities at Hanford are not involved.

2366-6 — Alternative 4 is unacceptable as that calls for construction of another reactor and another source of toxic waste.

Response to Commentor No. 2366

2366-1: In January 1997, President Clinton tasked his Committee of Advisors on Science and Technology (PCAST) to evaluate the current national energy research and development portfolio and to provide a strategy that ensures the United States has a program to address the Nation's energy and environmental needs for the next century. In its November 1997 report responding to this request, the PCAST Energy Research and Development Panel determined that restoring a viable nuclear energy option to help meet our future energy needs is important and that a properly focused research and development effort to address the potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) was appropriate. The PCAST panel further recommended that DOE reinvigorate its nuclear energy research and development activities to address these potential barriers. Further information on the need for nuclear energy research and development is provided in Section 1.2.3 of Volume 1.

2366-2: In order to adequately evaluate and demonstrate the potential environmental consequences of Alternative 1, Restart FFTF, as contained in Chapter 4 of Volume 1, it was necessary to fully characterize the standby condition in both Chapters 3 and 4 so that the incremental impacts of restart could be clearly presented. Further, the facility descriptions for FFTF (e.g., as contained in Appendix D) are also somewhat detailed owing to the relative uniqueness of the facility's design and the need to discuss its historical operations and proposed operations after restart, including projected facility modifications. Although there are necessary additional informational elements contained in the NI PEIS for FFTF, a comparable level of detail has been provided for the other proposed facilities on such elements as core configuration and facility layout. Other factors that add to the additional level of discussion necessary for FFTF surround the fuel use options that are assessed for FFTF operation. A similar situation exists for FMEF in that it has never operated for its intended use requiring that an additional level of detail be provided in describing the baseline operating conditions of this facility and those during its proposed operation to support the DOE missions. Chapter 3 of Volume 1 has been revised to include additional, comparable baseline information for the other processing and irradiation facilities under consideration. However, DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives and candidate facilities. DOE made every effort to obtain, analyze, and disclose all required information to make a decision on expanding nuclear infrastructure.

2366-3: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research

*Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)**Commentor No. 2366: Daniel Lichtenwald (Cont'd)**Response to Commentor No. 2366*

applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission. DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. DOE also notes the commentor's desire for a separate department of cleanup.

2366-4: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, support for Alternative 3, Construct New Accelerator(s), at a site other than Hanford, and opposition to Alternative 4, Construct New Research Reactor. It should be noted that the FFTF would be deactivated and not dismantled under Alternatives 2, 3, 4, and 5.

2366-5: See response to comment 2366-4.

2366-6: See response to comment 2366-4.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2383: John P. Mansfield

2383-1 — Hydroelectric power is down the street. You did all kinds of studies, and what for? And you're going to open another nuclear power plant, poison the water, poison the fish, poison our children again?

Now, radioactivity versus geothermal energy. You've got all kinds of geothermal things around here. Why not use them instead? Costs too much money.

2383-2 — Okay. Mr. Clinton and Mr. Blair, you also failed to analyze lower cost alternatives, such as subsidizing university reactors. Great, or buying time from private accelerators or reactors.

2383-3 — Man has raped this planet since time immemorial, and I think, you know, the heavenly plan would be to get rid of Hanford. It's not a national asset. Gentlemen, it's a national liability.

Response to Commentor No. 2383

2383-1: DOE notes the commentor's interest in alternative energy sources, e.g., geothermal and hydroelectric, although issues of research and development of alternative energy sources are beyond the scope of this Nuclear Infrastructure PEIS. Chapter 4 of the PEIS evaluates potential environmental and waste management impacts, and makes clear that the PEIS alternatives would provide for safe waste management without adverse or harmful effect on the environment. The DOE missions addressed in this PEIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies.

2383-2: The NI PEIS considered the use of a wide range of irradiation facilities, including those operated by universities and private concerns. Privately owned and operated CLWRs were added to the PEIS scope for the production of plutonium-238 and were analyzed in detail in the document. University reactors were considered, but were dismissed because they do not have sufficient available core volume to accommodate the required missions. Section 2.6.1 provides a complete discussion of irradiation facilities considered but dismissed.

2383-3: DOE notes the commentor's concerns regarding Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2407: Anne Moore

2407-1 — I also can't believe I'm coming back here again. It seems like this is just a process driven to wear us down maybe.

I'd like to start out with a favorite quote I have from Burl Ives in "Cat on a Hot Tin Roof." Maybe you remember this. "Mendacity, mendacity," because I think what we're hearing here are lies. We have lies from the DOE and lies from their corporate partners, TRIDEC, who sound a lot like a science fiction movie villain except they're real life, who by the way have presented us with a nice Orwellian propaganda table.

So what is this National Association of Cancer Patients? How come I've never heard of you? If there's so many of you, why have I never run into you before? And who are you sponsored by?

You know, people have been bused in to try to convince us that if we oppose the restart of FFTF, we want cancer patients to die. That's patently untrue.

2407-2 — My uncle is getting the radioactive isotopes for treatment from his cancer, and I certainly support that, and I don't want him to die. This is just a pure Orwellian smoke screen.

Few, if any, in here want to prevent medical research in cancer treatment, nor will it be prevented. As these people know, medical isotopes have been, are, and will continue to be available without the restart of the FFTF. There is no delay in time for my uncle to get treatment. I don't believe that there really is a shortage.

2407-3 — What we have here is a good, old fashioned and still popular greed fest. Hiding under a mask of social concern, we have a bureaucratic dinosaur government agency in a small desert community, have very selfish, money oriented people who put money above the continuance of life on earth, and these two groups are putting our lives and the lives of our children and all future generations at risk, all for a fast buck. That is the bottom line with this whole program.

2407-4 — Yes to Alternative No. 5, please.

2407-5 — And please clean up the mess you've already made.

Response to Commentor No. 2407

2407-1: DOE notes the commentor's remarks. DOE is committed to discharging its responsibilities in an open and unbiased manner and providing the public with comprehensive environmental reviews of its proposed actions.

2407-2: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs. The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs. Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions (basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term (less than 5 years).

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2407: Anne Moore (Cont'd)

Response to Commentor No. 2407

2407-3: DOE notes the commentor's concerns. DOE remains committed to its mission to serve the Nation in energy matters, and in particular, with respect to its nuclear facility infrastructure, to ensure the availability of isotopes for medical and industrial use, to meet the nuclear material needs of other Federal agencies, and to undertake research and development related to the application of nuclear energy for peaceful, civilian use.

2407-4: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2407-5: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2371: Michael Mulhall

2371-1 — . . .so that we don't see what happened here in Hanford since the start-up of all this go down. All I can say I'm against this.

2371-2 — I think we should take all this money that you're willing to throw away again, our money, the people's money, and start cleaning up the mess we've already created.

Response to Commentor No. 2371

2371-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2371-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2406: Wanda Munn
Nuclear Medical Research Council

2406-1 — I'm president of the Nuclear Medical Research Council. Our concern is over the use of isotopes and the shortage that exists in the United States. Therefore, we were very pleased to have the Department of Energy address nuclear infrastructure on a large scale.

It's very difficult to not react to many of the statement and misstatements that were made during the course of this evening, but I want to try to focus what my organization would be interested in, which is the contents of the EIS and what it means. There was one slight misrepresentation, I think, with respect to the need for additional medical isotopes just for research and development. The statement that this particular facility was not needed for that is slightly misleading.

It's true that most currently used R&D isotopes can be produced in smaller quantities elsewhere, but there is no other fast reactor that can produce some few which have caused the shutdown of some clinical trials because it was impossible to obtain them anywhere, either in the United States or in Canada.

The one thing that the EIS seems to have done quite well is to point out the major holes that exist in the infrastructure. Any objective assessment of the information that's given would see very clearly that the operation of the Fast Flux Test Facility would be the most expedient, would be the safest, and would be the most efficient way of filling those holes in the short term.

We urge the choice of Option 1 for restart.

Response to Commentor No. 2406

2406-1: DOE notes the commentor's support for Alternative 1, Restart FFTF. DOE assumes the commentor is also referring to conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000, regarding the suitability of FFTF for producing research isotopes in a timely and cost-efficient manner. However, these conclusions were made in the context of the facility producing research isotopes as its sole mission. Sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2378: Judy Nelson

2378-1 — Shame on you for holding these meetings in half of July, all of August, the top vacation times, and two weeks in September when everybody is getting their kids settled into school. That is inappropriate. It's unprofessional, and it's not plain fair. And then you slipped in at the beginning of the meeting that there were things that you sent out to 1,000 people so that we have information that we don't have access to, and you're going to release some more information in two more weeks, but we can read that and we can comment on it. My calculations, if this goes on until September the 18th, that would leave us four days to get hold of it and make comments if you're releasing it in two weeks. Not possible. Shame on you for doing it that way. It's not professional.

2378-2 — The analogy is Hanford is soiled, and it's growing as it reaches closer to the river and as it burns up in the grass, and for God's sake don't eat the jackrabbits or the deer up there on that reserve. They're all contaminated and radioactive, and the fish. In fact, there are people I know who used to come to Hood River every winter. They don't come anymore. So you think there's an economic impact? Yes, but there's a life impact.

Well, saying you want to start up Hanford again is like getting the old lady with 100 to 200 animals to promise she'll clean the place up and then, "Oh, by the way, would you take some more animals?"

So what you're wanting us to do is to believe that even though you have failed your promises in the millions and hundreds of millions of dollars that have been put in there to G.E., to Martin Marietta, to all the other companies, and about the time things get hot, they let loose of the contract and pass it on to the next guy. So they're really only paying off their stockholders.

It's a game. It's a shell game. It's also the people up there in Tri-Cities thinking they can't survive without you. Well, let me tell you folks up there, it's okay. You will survive without them. In fact, you may survive longer because you won't be dealing with the radioactivity. The analogy: Hanford is a mess. Clean it up. Don't break your promise. And listen to what the scientists have said they don't need.

2378-3 — And finally, I am a cancer survivor, ovarian cancer, 85 to 95 percent death rate. So every day to me is a gift. They don't know why it's come on so suddenly. Well, guess. Anything that's shot up in the past couple of decades. But let me tell you where my radiation came from. I lived 15 miles from Oak Ridge, Tennessee, when I went to college. It's in a valley, and I got radiation for four years because they were doing their own downwinder experiments at that time.

I lived near Paducah, Kentucky, and they just now this past year have told the dying men that, "Yes, you were right after all. We just didn't want to tell you before, but, yeah, you are dying from radiation sickness," which they knew all along, but they would not admit it to them.

Response to Commentor No. 2378

2378-1: The schedule for the public hearings was determined in part by CEQ guidelines for implementing NEPA that require that the hearings be held no sooner than 15 days after release of the Draft NI PEIS. DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and holding public hearings is an essential and required part of the NEPA process. The public also had the opportunity to comment on the Draft NI PEIS through the U.S. mail, e-mail, a toll-free fax number, and a toll-free phone number. DOE gave equal consideration to all comments, regardless of where or from whom received. In preparing the Final NI PEIS, DOE carefully considered comments received from the public. The costs and nuclear nonproliferation impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such ancillary documents need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed these documents to more than 730 interested parties on August 24 and September 8, 2000, respectively. Both reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided summaries of the Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment in Appendixes P and Q, respectively in the Final NI PEIS.

2378-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2378: Judy Nelson (Cont'd)

Response to Commentor No. 2378

designated for Hanford cleanup, regardless of the alternative(s) selected. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1. The environmental impacts associated with operation of the FFTF and support facilities at Hanford during normal operations and from postulated accidents are presented and discussed in Section 4.3 of the NI PEIS. All impacts to human health and to ecological resources would be small in the immediate area of the Hanford Site and negligible at all distant locations.

2378-3: The commentor's concerns about radiation from the Oak Ridge Reservation and Paducah are noted. Risks to the public that would result from implementation of the nuclear infrastructure alternatives are described in Chapter 4 of Volume 1.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2397: Christopher Nygard

2397-1 — I would like to say that I would like DOE to take Alternative 5, the shutdown of the FFTF reactor as the only option in your project.

2397-2 — I would also like to ask that you be accountable in numbers to report directly back in a report, in numbers, how many people have opposed and how many people are for the FFTF reactor. I feel that you've done us a great injustice.

Response to Commentor No. 2397

2397-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2397-2: Section 1.4 of Volume 1 of this NI PEIS, as supplemented by an expanded discussion provided in Appendix N, summarizes the prevailing issues and concerns raised during the scoping process to include identification of prevalent issues raised at individual scoping meetings. It should be noted, however, that NEPA and CEQ regulations do not require an agency to include and respond to each scoping comment as is required for public comments on a Draft EIS. While all comments received during the scoping periods are part of the Administrative Record for the NI PEIS, Section 1.4 and Appendix N are intended to provide a summary of the issues and associated trends identified during the scoping process rather than a tabulation of comments by specific issue. In preparing the Final PEIS, DOE has assessed and considered both oral and written comments received on the Draft PEIS during the public comment period and has responded to these comments in the Final PEIS. Volume 3 of the NI PEIS contains public comments received on the NI PEIS and DOE responses to those comments. These comments are summarized, tabulated, and cross-referenced by commentor, category, and method of submission.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor: Laurel Pippo

The oral comments were submitted in written form and are addressed in the responses to Commentors Nos. 410 and 1488.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

**Commentor No. 2380: Gerald Pollet
Heart of America Northwest**

2380-1 — Well, according to their cost report, they must — one of you has to take it home because under the alternative for restarting FFTF there's no cost assigned for ever shutting it down or cleaning it up. So I assume they expect someone to take it away for free. So check your trunks. Look in your back packs. Pieces of the nuclear waste are there. That's commercial disposal, too, I take it.

2380-2 — I'm . . .with Heart of America Northwest, and we joined the eight members of the United States Congress, the City Commission of Portland and mayor, members of the City Council of Seattle in saying that we are dismayed at the illegal action of the Department of Energy in pretending to disclose the environmental impacts in an environmental impact statement while hiding, one, what would be done with the wastes; a separate report — you can't see it until after the hearings.

Two, what the costs are; a separate report — you can study it after the hearing. Three, what are the nuclear nonproliferation impacts? Separate report — you can find out about the impacts and comment on them and see if we misled the public about those after the hearing.

2380-3 — Four, we failed to disclose to you, sorry, that NASA has totally changed the demand for plutonium-238.

Now, why should we trust this process? What does the environmental impact statement say about these specific reactors?

"Without these power systems, these types of space exploration missions could not be performed by NASA, speaking very specifically about the very specific reactors and their very specific plutonium needs."

But NASA wrote May 22nd, "We're not going to use that particular reactor at all. We have a new advanced technology."

Now, there was plenty of time to disclose this to you. Colette only disclosed it to us today after Senator Wyden and seven members of Congress wrote the Secretary of Energy today saying that they were dismayed like the rest of us about this lack of disclosure.

2380-4 — What else has not been disclosed? Oh, yes. A subcommittee that we were told to wait the report of. A blue ribbon medical advisory committee said, "You shouldn't think about using this reactor (a) for research medical isotopes and (b) you shouldn't be in the business of producing the 'commercial' radioisotopes either," and lists four highly recommended alternatives, which you won't find in the environmental impact statement. That's full disclosure.

2380-5 — Now, we come today, and I'm dismayed to find out that instead of what's in the EIS about what would be done with the nuclear wastes from FFTF reactor restart, the presentation today says, "Oh, we might violate the Secretary of

Response to Commentor No. 2380

2380-1: DOE notes the commentor's views. Deactivation of FFTF is not part of implementing Alternative 1, Restart FFTF. Deactivation of FFTF is part of implementing Alternatives 2, 3, 4, and 5 and including the cost of FFTF deactivation in the implementation costs for these alternatives is appropriate. The Cost Report was structured to identify the implementation costs of the various alternatives so the Secretary of Energy would have this information along with other data for consideration. Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

2380-2: Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site. Further, the draft Waste Minimization and Management Plan for the Fast Flux Test Facility (May 2000)

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Commentor No. 2380: Gerry Pollet (Cont'd)
Heart of America Northwest

Energy's commercial disposal policy enunciated to Congress repeatedly that the Department of Energy will not use commercial disposal facilities", not to mention it is against the law for the Department of Energy to attempt to dispose of certain wastes at commercial disposal facilities.

So we have another moving target. What do we learn about these wastes? If you look at the environmental impact statement, "the restart of FFTF would not be expected to result in impacts on ecological resources, the facilities, research and developments for it would not result in impacts on ecological resources at Hanford facilities, and it has referred to the same chapter that Colette Brown referred me to in answer to the question earlier today."

And you turn to that section, and you find the following: what is the cumulative impact analysis? The cumulative impact analysis is this. Sufficient capacity would exist to manage the site wastes. The tanks are already in violation. The low level burial grounds are in violation of federal and state hazardous waste laws. The mixed waste burial ground permit says that it is predicated on the capacity for Hanford clean-up, not new additional wastes.

2380-6 — It is time for this environmental impact statement to withdraw FFTF

2380-7 — [It is time for this environmental impact statement to withdraw FFTF] and to be honest in its full disclosure.

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was referenced in the NI PEIS and made available prior to the public hearings. The costs and nuclear nonproliferation impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such ancillary documents need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed these documents to more than 730 interested parties on August 24 and September 8, 2000, respectively. Both reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided summaries of the Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment in Appendixes P and Q, respectively in the Final NI PEIS.

2380-3: DOE notes the commentor's concern about NASA's need for plutonium 238 for space missions. The May 22, 2000, correspondence from NASA to DOE identifies that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

2380-4: The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for

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Heart of America Northwest*

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civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities. DOE has taken the NERAC report recommendations under consideration in developing the range of alternatives evaluated in the NI PEIS. This report was made available to the public at the NI PEIS public information centers and on the Internet at www.nuclear.gov. The NERAC report did not state that DOE should not be in the business of producing radioisotopes. Rather, the report stated that DOE should "Limit commercial isotope production to products where the DOE has a unique production capability and where other market supplies are not sufficient to meet U.S. demand." DOE's production and sale of radioisotopes fall into two categories, commercial and research, and both types of isotope production are considered under the proposed actions. Commercial radioisotopes are those that are produced in large, bulk quantities and sold to pharmaceutical companies or distributors, or to equipment or sealed source manufacturers. Examples of commercial radioisotopes produced by DOE include strontium-82 and germanium-68 for medical applications, and iridium-192 and californium-252 for industrial applications. DOE only produces commercial isotopes when there is no U.S. private sector capability or when foreign sources do not have the capacity to meet U.S. needs reliably. In contrast, research radioisotopes are typically produced and sold in small quantities in response to specialty orders from researchers preparing experiments in the field of medicine, with small quantities of these radioisotopes also purchased by industrial researchers. Because small-quantity production of research isotopes is not financially attractive to private-sector producers and is generally not undertaken, DOE attempts to provide all research radioisotopes that are requested, subject to production capability, inventory, and financial constraints. As successful application of a specific research isotope is established, the production and sales of that radioisotope may shift from research to commercial status. In recent years, over 95 percent of DOE's sales of radioisotopes by dollar volume were commercial and 5 percent have been for research. Additional discussion of how DOE's isotope program fits into the overall

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U.S. and foreign isotope production capabilities was incorporated into Section 1.2.1 of Volume 1.

2380-5: Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site. DOE Order 435.1 "Waste Management" gives responsibility to the DOE Field Element Managers to approve exemptions for use of non-DOE facilities for the storage, treatment or disposal of DOE radioactive waste based on certain requirements. One of these requirements is that the facility must have the necessary permits, licenses, and approvals for the specific waste. As discussed in DOE's "Commercial Disposal Policy Analysis for Low Level and Mixed Low-Level Wastes" dated March 9, 1999, there are three commercial low-level radioactive waste disposal facilities (i.e., Envirocare of Utah; Barnwell, South Carolina; and US Ecology, Richland, Washington) which are currently operating and licensed to receive low level radioactive waste. Envirocare of Utah also has a permit to receive RCRA hazardous wastes. DOE has and is currently disposing of low level radioactive waste and mixed low-level radioactive waste at Envirocare of Utah and has sent low-level radioactive waste to Barnwell, South Carolina. In June 1995, US Ecology submitted an unsolicited proposal to DOE for the disposal of DOE waste at the US Ecology facility. In November 1995, the State of Washington informed US Ecology and DOE that it would allow the disposal of DOE waste at the facility subject to certain conditions. The Low-Level Burial Ground trenches are regulated by DOE under the Atomic Energy Act of 1954, as amended, and under DOE Order 435.1, Radioactive Waste Management. This Burial Ground also contains the following three active permitted mixed waste trenches whereby mixed low-level waste is both stored and disposed of: (1) Trench 31 is a permitted, lined Subtitle C disposal trench that is currently utilized for greater

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Heart of America Northwest

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than 90-day storage of mixed low-level radioactive waste; (2) Trench 34 is a permitted, lined Subtitle C disposal trench currently utilized for the disposal of mixed low-level radioactive waste that has been treated and is compliant with Land Disposal restrictions; and (3) Trench 94 is a permitted, unlined disposal trench utilized for the disposal of decommissioned naval reactor components. Use of Trench 94 for naval reactor compartments is authorized under a special exemption from the Washington State Department of Ecology (Ecology). Currently, the Low-Level Burial Ground has a Part A Permit approved by Ecology under the State of Washington Dangerous Waste Regulations, State of Washington Administrative Code (WAC) 173-303, and, as such, is an interim status treatment, storage, and disposal (TSD) unit under the Resource Conservation and Recovery Act (RCRA). The permitted active and future mixed waste units of the Low-Level Burial Ground meet all regulatory requirements of WAC 173-303 and RCRA and will be incorporated into the Hanford Site RCRA Facility Part B Permit and will operate under final status regulations. In early June 2000, a working draft of the Hanford Site RCRA Facility Part B Permit application was submitted to Ecology. The use of proposed alternative facilities associated with reprocessing of neptunium-237 targets would have no impact on schedules or available funding for high-level radioactive waste programs at Hanford. The higher activity waste would be treated as a solid form via a stand-alone vitrification system, separate from any tank waste treatment system. The existing Hanford high-level radioactive waste facilities would not be used, and as analyzed in the PEIS, no existing or planned high-level radioactive waste facilities would be used to treat the wastes resulting from processing the irradiated targets.

2380-6: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2380-7: This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS. Further, DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives. The facilities and locations evaluated in this NI PEIS specifically represent a range of reasonable alternatives for accomplishing the DOE missions and serve to enable DOE to meet its responsibilities under the Atomic Energy Act. Therefore, there is no basis for withdrawing any particular alternative. DOE made every effort to obtain, analyze, and disclose all required information to make a decision on expanding nuclear infrastructure.

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Commentor No. 2413: John Ritter

2413-1 — Just very briefly, I'm totally against FFTF restart, and that's all I have to say about this.

2413-2 — I can't believe that we're even dealing with this matter anymore, and I'm just hoping to God that the decision hasn't already been made.

Response to Commentor No. 2413

2413-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2413-2: DOE policy encourages effective public participation in its decision making process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public. No final decisions have been made with regard to the facilities and locations evaluated to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238 for NASA space missions, and nuclear research and development. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2418: Elizabeth See

2418-1 — The PEIS fails to assess non-cancer illnesses caused by the radiation for proposed restart at FFTF and the other facilities. This must be assessed from normal operations, low level exposure, and critical incidence.

These assessments must be made for fish, wildlife, insects, plants, and water. Analysis of biological and medical problems must be done with an independent medical information, such as from Helen Caldicott and Physicians for Social Responsibility.

2418-2 — Because there is no way to dispose of the waste created by FFTF . . .

2418-3 — . . .it [FFTF] should never be started.

Response to Commentor No. 2418

2418-1: Appendix H provides information on potential health effects other than fatal cancers. Of the three health impacts from low levels of radiation exposure (nonfatal cancers, hereditary effects, and fatal cancers), fatal cancers have the highest probability of occurrence, roughly 500 excess cancer fatalities per million person-rem. Nonfatal cancers and hereditary effects appear at rates of approximately 20 and 26 per cent of this number. Using a single number for human health impacts provides a simple direct means to compare impacts and risks among the range of reasonable alternatives. Cancer fatalities, being the largest impact, were selected for presentation throughout the NI PEIS. Low risk (low health impact) from fatal cancers implies low risk for all other radiological induced health consequences. This PEIS has provided an estimate of the incremental potential human health impacts associated with a reasonable range of alternatives (including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, Restart FFTF, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small. The NI PEIS identifies (in Chapter 3 of Volume 1) endangered species that live on or near all of the candidate sites, as well as aquatic and wetlands areas that may be impacted by operations at candidate locations. According to an International Atomic Energy Agency (IAEA) publication (IAEA Technical Report Series No. 332, Effects of Ionizing Radiation on Plants and Animals at Levels Implied by Current Radiation Protection Standards), a dose rate of 100 millirem per year to the most exposed human will lead to dose rates to plants and animals of less than 0.1 rad per day. The IAEA concluded that a dose rate of 0.1 rad per day or less for animals and 1 rad per day or less for plants would not affect these populations. The largest individual dose for any of the nuclear infrastructures alternatives under normal operations would be less than 0.1 millirem, which is three orders of magnitude less than the IAEA threshold for adverse effects. Therefore, implementation of any of the range of reasonable nuclear infrastructure alternatives analyzed would not be expected to result in adverse impacts on plants and animals living in potentially affected areas around the candidate sites.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2418: Elizabeth See (Cont'd)

Response to Commentor No. 2418

2418-2: Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

2418-3: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

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**Commentor No. 2390: Don Segna
Nuclear Medicine Research Council**

2390-1 — . . . But what I'd like to point out here is there's two sides to the story. There's two sides to the story, and we are hearing your side of the story now, and I think DOE does owe you something to insure that the risk is worth the benefit. I have to say it that way because there is no such thing in earth that doesn't have some risk to it, whatever you do.

So you have to look at the risk, and I've heard all the risk here. You know, we're all going to get cancer from the radiation and stuff like that. Do we really know that?

Response to Commentor No. 2390

2390-1: This PEIS has provided an estimate of the incremental potential human health impacts associated with a reasonable range of alternatives including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, Restart FFTF, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2414: Debra Seyler

2414-1 — I have noticed in the draft that there has been no addressing of other illnesses that are radiation related, except for cancer fatalities.

And so I would like also to make certain that in the final EIS credible medical evidence is brought forward from independent sources addressing thyroid disorders, immune system dysfunction, stillbirth, miscarriages, and all other radiation related sicknesses.

And also I ask that the cost of this to the American public be done, and that there is a local fact among the local hospitals that they are not prepared for the overflow from a high impact incident from Hanford

The tribes themselves are facing a crisis of high incidences of cancers and radiation related illnesses that are not limited to cancer, and this has not been fully disclosed or addressed in the draft.

Additionally, we've only begun the process of compensating people for their medical conditions in radiation related illnesses. The very first round was some of the workers being compensated or the widows or widowers or survivors of those who died from those past problems at Hanford.

And so what's going to be the economic cost of compensating the rest of the workers up there on cleanup and the people who handle any waste products made from the proposed start of the FFTF or the Tennessee facility or any other facility.

And for the people who are downwind from there or who may receive catastrophic doses of radiation, what is the cost to the American public in compensating them economically for their medical conditions and loss of life?

2414-2 — I see no actual justification in the draft EIS for the necessity for the restart of the FFTF for medical isotopes as these are currently being produced rapidly in three new facilities in Canada, and also that we have a contract for those products that the FFTF is being looked at for from Russia.

2414-3 — The scientific analysis of impacts to plants, animals, insects, fish, all of these things are just basically not addressed at all. We know from all over the world that within a couple hundred mile radius of nuclear reactors, because of the low level radiation that comes from them and also from storage facilities, that we have drosophila and other insect deformities, rabbit deformities, plant mutations, fish mutations. None of these are actually addressed.

And again, I would ask if independent scientific reporting would be included in that so that they're thoroughly analyzed, not just from government statistics, but also from people doing independent research who are not part of the federal government.

Response to Commentor No. 2414

2414-1: DOE notes the commentor's concern for the health of tribes and compensation for medical conditions related to past practices, although these issues are beyond the scope of this Nuclear Infrastructure PEIS. The health and safety of workers and the public is a priority of the nuclear infrastructure program, regardless of which approach is chosen. Operation of the facilities would comply with applicable Federal, state, and local laws and regulations governing radiological and hazardous chemical releases. Appendix H provides information on potential health effects other than fatal cancers. Of the three health impacts from low levels of radiation exposure (nonfatal cancers, hereditary effects, and fatal cancers), fatal cancers have the highest probability of occurrence, roughly 500 excess cancer fatalities per million person-rem. Nonfatal cancers and hereditary effects appear at rates of approximately 20 and 26 per cent of this number. Using a single number for human health impacts provides a simple direct means to compare impacts and risks among the alternatives. Cancer fatalities, being the largest impact, were selected for presentation throughout the NI PEIS.

2414-2: The United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily Molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs. DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

2414-3: Chapter 3 of the NI PEIS identifies plant and animal species that live on or near all of the proposed sites, as well as aquatic and wetlands areas that may be impacted by operations at all of the proposed locations. According to an International Atomic Energy Agency (IAEA) publication IAEA Technical Report Series No. 332 "Effect of Ionizing Radiation on Plants and Animals at Levels Implied by Current Radiation Protection Standards", a dose rate of 100 millirem per year to the most exposed human will lead to dose rates to plants and animals of less than 0.1 rad per day. The IAEA concluded that a dose rate of 0.1 rad per day or less for animals and 1 rad per day or less for plants would not affect these

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Commentor No. 2414: Debra Seyler (Cont'd)

2414-4 — Under the human health risks and environmental cumulative impacts it's basically blown off. There are so many existing sites that are contaminated there, high and low level waste, that are not cleaned up and are not safely contained that it is basically insane to consider making more waste. We do not have a place to put the waste now.

We have inadequate storage facilities. We have nuclear waste in temporary holding facilities that are leaking and are cracked, and we do not need anymore of this kind of risk.

2414-5 — Also, again, the federal government has made agreements with other governments and the tribes that the mission, the sole mission at Hanford, would be cleanup, and that is not so.

. . .and no more missions except cleanup at Hanford.

2414-6 — We are continually fighting the proposed restart of the FFTF reactor, and it is time that reactor is closed for good.

No more excuses and coming up with reasons. Shut down the FFTF,...

2414-7 — The other thing is that in considering the minorities and the socioeconomic equations for the area around Hanford, other areas are not adequately assessed because the people doing the analysis have simply taken a few facts on what the populations look like in terms of numbers, but they have not considered tribal issues, such as my own people have, and that is that we eat the natural foods from the land and take our medicines from there, and many of the traditional gathering sites of the local tribes are sites that can no longer be used because of the contamination.

Response to Commentor No. 2414

populations. The largest individual dose for any of the alternatives evaluated is below 0.1 millirem, three orders of magnitude less than the IAEA identified threshold level. This is well below the IAEA benchmark. Therefore, all of the proposed alternatives would have no effect on the plants and animals around the proposed sites.

2414-4: The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2414-5: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2414-6: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.

2414-7: The commentor's concerns regarding contamination of natural foods, medicines, and traditional gathering sites is noted. Radiological impacts on minority and low-income populations residing within potentially affected areas surrounding the Hanford Site are addressed in Section K.5.3 of Appendix K (Environmental Justice Analysis). Models for estimating radiological health impacts (discussed in

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Commentor No. 2414: Debra Seyler (Cont'd)

Response to Commentor No. 2414

Appendixes H and I) assumed that all locally grown food supplies would be subject to radiological contamination throughout the project duration, and that all locally grown food supplies would be consumed by residents in the potentially affected area. The analysis of radiological effects that would result from implementation of the nuclear infrastructure alternatives indicates that the radiological risk to persons residing in the potentially affected area would be so small that no credible pattern of food consumption (or other ingestion pathways) would be expected to result in a latent cancer fatality. Implementation of the nuclear infrastructure alternatives would not be expected pose a significant risk of radiological contamination of land within the potentially affected area.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2372: Donna Smollenrock

2372-1 — Until the DOE can identify and clean up the waste at Hanford, don't even consider creating new wastes.

2372-2 — So I am thoroughly opposed to the restart for any reason of the FFTF.

Response to Commentor No. 2372

2372-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford and opposition to FFTF restart. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2372-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2386: Kathy Sneider

2386-1 — The medical isotopes, you know, maybe the people do need them. I personally don't believe that you need those. There's a lot of other ways to deal with cancer. My family has had cancer. In my family, I'm third generation Oregon person. We've dealt with cancer in other ways.

2386-2 — At any rate, the last time I was here we talked about Alternative 5 and we wanted to promote an Alternative 5. This is not the Alternative 5 that I was pushing for. I don't know what happened to this Alternative 5 between the time that we were talking about it last time and now.

But Alternative 5 states deactivate FFTF, no new missions, and it says permanently deactivate FFTF, which I am totally in favor of. It says no domestic production of PU-238 or government production. No production of PU-238 at all, not just domestic. Let's have no production of it.

Shut it down.

2386-3 — The third point is continue medical and industrial isotope production and nuclear R&D activities at the current operating levels of existing facilities. I don't think so. We have to clean it up. We can't continue R&D activities, research and development activities, at the current operating levels. No, no, no, n-o. Read my lips.

2386-4 — Clean it up.

Response to Commentor No. 2386

2386-1: DOE notes the commentor's views that medical isotopes are not needed in the treatment of cancer. However, in ongoing clinical testing, therapeutic radioisotopes have proven effective in treating cancers and other illnesses while minimizing adverse side effects, making their use an attractive alternative to traditional chemotherapy and radiation treatments.

2386-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. Alternative 5 was developed based on a number of comments from the public during the scoping hearings; thus, it likely could vary from the specific proposals of any one individual. Alternative 5 does not include the potential purchase of plutonium-238 from Russia.

2386-3: DOE notes the commentor's opposition to continued isotope production and nuclear research and development activities at current levels (i.e., the No Action Alternative). DOE also notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site.

2386-4: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2410: Rebecca Stonestreet

2410-1 — I'm here as a citizen of the United States to tell the United States Department of Energy to not — that I am against the FFTF restart at the Hanford nuclear site.

2410-2 — And as with the roadless policy that I commented on, and I had tears, heartfelt comment, this one is not that way. This one is a total disgust with the Department of Energy that we have to come here again to tell you that we do not want this thing restarted. Apparently you've been told that many times.

Response to Commentor No. 2410

2410-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2410-2: DOE policy encourages effective public participation in its decision making process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor: Leon Swenson

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 171.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2382: Matt Swire

2382-1 — I live in Hood River, and I'm an aerospace engineer by training, and I have actually worked on some of the NASA projects to do some space research in space flight, and I also recently lost my mother to cancer.

With that in mind, I would like to vehemently object to the restart of the reactor at Hanford prior to cleaning up the initial work that was done there.

Response to Commentor No. 2382

2382-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2402: Annie Tomlin

2402-1 — My first and foremost comment is that I'm absolutely dedicated to Alternative 5, permanently deactivating FFTF with no new missions.

2402-2 — I have been to many public hearings and am familiar with the endless reams of material put out by the DOE in its charade of responsibility to public involvement, and I am constantly amazed at the DOE's transparent disregard of its responsibility.

On page S-1 of the summary is a statement by the Chairman of the Nuclear Energy Research Advisory Committee, and I quote. "There is an urgent sense that the nation must rapidly restore an adequate investment in basic and applied research in nuclear energy if it is to sustain a viable United States capability in the 21st Century."

Who exactly does the DOE think the nation is? If the nation is not its citizens, then who exactly is in a state of such urgency?

The DOE knows it couldn't go out on the streets of Hood River or anywhere in the Pacific Northwest or the rest of the nation, for that matter, and have a clear mandate for the proliferation of this deadly industry.

So Secretary Bill Richardson just appoints some industry hack to say it for us.

I would like to think that it mattered if I responded to this draft EIS, but this document hides behind the illusion of science to intimidate and frustrate the people of this nation.

And this isn't about science anyway. This is about corporate welfare, criminal and political conspiracy, and genocide. Corporate welfare? What else would you call it when we, the people, are always here, but the pitch men from Westinghouse, Lockheed, Battelle, Bechtel, TRW Environmental, Fluora and Informatics never are?

This public comment hearing is not a legitimate democratic process. This is a sham and a farce, a cynical ritual where the public is supposed to vent its anger at the wall of indifference of the DOE. Then tomorrow it's business as usual.

2402-3 — Criminal conspiracy? What else would you call the plan to privatize the FFTF under a scheme cooked up by DOE's Dr. Terry Lash and Richard Thompson's advanced nuclear and medical systems, a plan they sold lock, stock and barrel to my two idiot Senators, Democrat Patty Murray and Republic Slade Gorton, with a ridiculous sales pitch that they could make tritium and cure AIDS. Does everybody remember that one? Now it's plutonium-238 and medical isotopes.

Response to Commentor No. 2402

2402-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.

2402-2: DOE notes the commentor's view. DOE policy encourages effective public participation in its decision-making process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

2402-3: Comment noted. DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "... ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental to accomplishing this mission from a range of reasonable alternatives. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission.

2402-4: DOE notes the commentor's opposition to nuclear power generation and opposition to NASA and defense funding, although these policy issues are beyond the scope of this Nuclear Infrastructure PEIS. The scope of this Nuclear Infrastructure PEIS is limited to analysis of alternatives to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development. None of the missions described in Section 1.2 of Volume 1 of the NI PEIS are defense- or weapons-related. The environmental impacts associated with operation of the FFTF and support facilities at Hanford during normal operations and from postulated accidents are presented and discussed in Section 4.3 of the NI PEIS. All impacts to human health and to ecological resources would be small in the immediate area of the Hanford site and negligible at all distant locations. The environmental impacts of a range of reasonable alternatives to fulfill the requirements of the DOE missions were disclosed and evaluated in the NI PEIS. DOE made every effort to obtain, analyze, and disclose all required information to make a decision on expanding nuclear infrastructure. The costs and nuclear nonproliferation impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report and Nuclear Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2402: Annie Tomlin (Cont'd)

2402-4 — Political conspiracy? What else do you call the boot licking of the Clinton-Gore administration to the Nuclear Energy Institute, a \$100 million a year trade organization that's kept busy usurping the Kyoto Protocol on global warming so that U.S. companies can cover the planet with green nuke plants?

Genocide? What else do you call an industry that has to calculate into its operating decisions the number of cancer deaths and associated risks to human health; an industry that works hand in hand with the Pentagon and NASA to gobble up billions of dollars of the annual budget at the expense of education, health care, affordable housing?

2402-5 — I think everyone in this room should start preparing themselves for the restart of the FFTF and be ready to put their bodies on the line, just like they had to do to stop the start-up of the N reactor because I really believe that's what it's going to come down to.

Response to Commentor No. 2402

may make an informed decision with respect to the alternatives presented in the NI PEIS. The costs of economic impacts are beyond the scope of this NI PEIS including any impacts on funding priorities. The proposed actions considered in this NI PEIS to accomplish the stated missions would be funded by the DOE Office of Nuclear Energy, Science and Technology, which has no direct funding connection to other federal agency activities.

2402-5: See response to comment 2402-1.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2389: Bart Vervloet

2389-1 — I really don't think my voice makes a damned bit of difference.

But there was 7,000 comments made, and my main objection to this thing is this is supposed to be a public process, and all the meetings that I've gone to for three years, 80, 90, 92 percent, 93 percent, ten percent effective, five percent better than last year's, new and improved, whatever; the majority of people who come to these hearings are opposed to FFTF, FFTF restart, Fast Flux Test Facility. Yet that doesn't come up. The only serious thing you can count at these meetings is the number of people opposed. Out of 7,000, how many people were opposed? Many, some, a few, maybe we'll need — you know, it's all vague.

So I'm here to basically state to you and Secretary Richardson and anyone else who's counting the numbers: how many of the 7,000 were opposed? I'd like to know that one fact. That's all I would ask for. Is it lost? Is it gone? Is it a checklist? Here's what my little public registration form says, and I'll just put it on the record so you're aware, my little public form here. This is my public process that I'm a democratic, free-loving American.

Let's put two and two together there. You're not being democratic. This is a democratic country. It's a process. It's a public process, and we're being ignored and lied to, and of all the little pre things that they gave us to say to tell the DOE, you are not compiling our public record. You are lying to us and not putting our vote to the top.

Response to Commentor No. 2389

2389-1: While all comments received during the scoping periods for both the Plutonium-238 Production EIS and the NI PEIS are part of the Administrative Record for the NI PEIS, Section 1.4 of Volume 1 and Appendix N are intended to provide a summary of the issues and associated trends identified during the scoping process rather than a tabulation of comments by specific issue. In preparing this NI PEIS, DOE carefully considered scoping comments received from the public. Any perceived discrepancy in the grouping of comments raising any one particular issue or set of issues is attributable to the manner in which they were originally categorized and counted. For example, a number of statements, letters, or resolutions signed by multiple persons, such as city council resolutions mentioned by the commentor, were received by DOE both for and against FFTF restart) in response to the request for scoping comments. Each such comment document was considered and counted as a single comment in the NI PEIS comment tracking system. The Office of Nuclear Energy, Science and Technology works closely with the Office of the Secretary to keep him informed of the progress on the NI PEIS, including stakeholder input.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

**Commentor No. 2408: Amber Waldref
Heart of America Northwest**

2408-1 — And I just wanted to make a few comments on the EIS because I know I had some concerns about what was not included, and the first concern I have that really hasn't been talked about to much because I don't want to talk about things that have already been underscored, but the nonproliferation study has not come out yet, and it was mentioned that it will probably come out in a couple of weeks, but that, of course, is far into the public comment period.

2408-2 — And I just was reading over the summary of the environmental impact statement, and I really have some concerns because I would have liked to have that study included in the PEIS because the two fuels are going to be used in FFTF, the mix oxide fuel and the highly enriched uranium, some combination of those over a depending number of years; that the U.S. nonproliferation policy, it says here, strongly discourages the use of highly enriched uranium fuel.

And so to be in compliance, like there's going to be further studies done, but so it says that right there that it strongly discourages the use of the highly enriched uranium fuel according to U.S. nonproliferation policy.

And then later on, it says if low enriched uranium fuel is found infeasible, DOE would subsequently procure highly enriched uranium fuel in a manner consistent with U.S. nonproliferation policy.

Response to Commentor No. 2408

2408-1: The nuclear nonproliferation impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such an ancillary document need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed this document to about 730 interested parties on September 8, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Nuclear Infrastructure Nonproliferation Impact Assessment in Appendix Q in the Final NI PEIS.

2408-2: DOE notes the nonproliferation concern expressed in the comment, and can assure that its proposed action in the PEIS supports U.S. nonproliferation goals. This has been confirmed by the Nuclear Infrastructure Nonproliferation Impact Assessment, published in September 2000. Although this policy analysis is not required under NEPA, DOE considers it to be an essential element in the decision-making process for the DOE nuclear infrastructure, and has included a summary of the assessment in Appendix Q in the Final NI PEIS. In the event that a decision is made to restart FFTF, the first six years of operation would use existing onsite mixed oxide fuel. DOE expects that an additional 15-year supply of mixed oxide fuel in Europe, owned by Germany, would be available for FFTF. The Nuclear Infrastructure Nonproliferation Impact Assessment for the NI PEIS alternatives stated that using the two different sources of existing mixed oxide (MOX) fuel for FFTF (existing FFTF fuel and German MOX fuel) is consistent with U.S. nonproliferation policy, and, additionally, represents a safe, low-cost, high benefit opportunity to reduce civilian plutonium without chemical or bulk processing, which would afford substantial nonproliferation benefits. DOE's approach to potential use of HEU in the FTFF is also consistent with U.S. nonproliferation policy. The FFTF is an existing research reactor capable of performing its research missions using HEU fuel, if MOX fuel is not available. U.S. nonproliferation policy provides for such a circumstance as part of the effort to reduce and discourage HEU use. During the period of MOX fuel use, in compliance with U.S. nonproliferation policy directives, DOE's Office of Nonproliferation and National Security would undertake a study under the Reduced Enrichment Research and Test Reactor (RERTR) program to consider the technical feasibility of using low enriched uranium to fuel the FFTF. Under this nonproliferation protocol, if use of low enriched uranium fuel is found

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

*Commentor No. 2408: Amber Waldref (Cont'd)
Heart of America Northwest*

Response to Commentor No. 2408

feasible, it will be used; if found infeasible for meeting assigned missions in the FFTF, an already existing research reactor, policy would allow DOE to subsequently procure highly enriched uranium fuel for use in that facility. This approach is consistent with U.S. nonproliferation policy.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

**Commentor No. 2396: Bonnie White
Columbia Grower Audubon Society**

2396-1 — On behalf of the Columbia Grower Audubon Society, representing our 300-plus members in the mid-Columbia area, I would like to say we emphatically oppose any proposal to restart the FFTF at the Hanford facility.

2396-2 — CGAS insists that the DOE focus all available resources on hazardous waste clean-up. Unless we can isolate and control the mess we have made there, I believe there is no hope for our seventh generation.

2396-3 — If we have to choose an alternative, we choose Alternative 5.

2396-4 — I would like to ask that the testimony of the 13,000 employees of Hanford be identified as such and lumped together the same way that all of our testimony is lumped together. Their interests are single minded, and they are not the only recipients of the cancers their choices cause.

They continually come to the trough demanding our tax dollars be spent to finance their special interests, which are in conflict with all other life on earth.

The politicians continually pander to that minority. Why? Maybe it's because cancer is good business for corporate America. It opens the wallets of their victims. Their assets are redistributed to the medical establishment, doctors, hospitals, drug companies, instead of supporting their families.

It surprises me to hear people from Hanford acknowledging the high levels of cancer and then supporting further production of nuclear waste. I guess it shouldn't. They're trying to get more of our tax dollars for their salaries.

Response to Commentor No. 2396

2396-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

2396-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2396-3: See response to comment 2396-1.

2396-4: DOE notes the commentor's views. It is DOE policy to encourage public input on matters of regional, national and international importance as part of its commitment to facilitate a public participation process that is open and unbiased. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2381: Kirk Williamson

2381-1 — There will be additional demand for isotopes as they are approved for clinical use, but we don't have the capacity to meet today's demand, much less provide for the future.

One of the most important values I learned here in the mid-Columbia is that we don't waste resources, natural or otherwise. To allow the purveyors of fear and ignorance to convince us to waste FFTF would be an insult to the memories of Dorothy and Amy and every other person who battles cancer.

I would urge Alternative 1.

Response to Commentor No. 2381

2381-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2412: Tom Wood

2412-1 — Based on the information primarily that I've read in the cost reports and from the draft of the EIS, I am against the start-up of the reactor, of the FFTF, and I'll tell you why, and I would like this to kind of sink home as best it can with public feedback.

2412-2 — Being an engineer, I know that financial information is typically what drives the start-up or development of some sort of a manufacturing facility. That's what I do myself.

From what I see in the financial information, you really had four adequate manufacturing solutions. When looking at the data in the cost report, of those four, all of the budgets other than Option 1 and Option 2 were padded with the deactivation of the FFTF at 281.2 million, and what's interesting is that it appears that Option 4 actually has a less initial capital investment than Option 1, which seems to be typically what drives decisions like this.

2412-3 — The way I see it is you have really Option No. 2 is the most appropriate step to take here, which is the expansion of current manufacturing facilities, because by far and large it is the cheapest of the different options available

2412-4 — . . .also it's not clear to me that the need for radioactive materials that would be developed at the FFTF manufacturing site has been clearly defined to you either by the medical community or NASA community, and that most of the projected needs are speculative at this point.

It's also interesting to me that the short-term and long-term needs of the products that we've produced here are not clearly defined also, or at least have the backing of several different officials in the communities that would be using that material. So I struggle with that.

2412-5 — Thirdly, I also struggle with the fact that currently you have a facility, which is Hanford, that is not manufacturing right now. So you'll essentially begin manufacturing at the Hanford facility, where you have a community that is not used to manufacturing. It's been closed down now for I'm guessing on the order of about 20 to 25 years, to the actual manufacturing of weapons grade plutonium and other products. And you have to go through the process of reeducating the community on the potential effects and hazards with having a nuclear facility in your backyard.

2412-6 — It seems to make a heck of a lot more sense to get a better bearing on what the long-term needs are going to be for the products that FFTF will be manufacturing, and make this decision at a later time instead of making it now when all the needs are considered speculative at this point.

Response to Commentor No. 2412

2412-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 2, Use Only Existing Operational Facilities. It is assumed that when the commentor mentions "Option No. 2," he is referring to Alternative 2.

2412-2: Deactivation of FFTF is not part of implementing Alternative 1, Restart FFTF. Deactivation of FFTF is part of implementing Alternatives 2, 3, 4, and 5 and including the cost of FFTF deactivation in the implementation costs for these alternatives is appropriate. The Cost Report was structured to identify the implementation costs of the various alternatives so the Secretary of Energy would have this information along with other data for consideration.

2412-3: See response to comment 2412-1.

2412-4: Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. The NI PEIS evaluates a range of reasonable alternatives for supporting these long-term needs over a 35-year operating period. DOE acknowledges the difficulty in reliably predicting isotopic needs for future uses in research and medicine. DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2412: Tom Wood (Cont'd)

Response to Commentor No. 2412

programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs. The United States currently purchases approximately 90% of its medical isotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium 238, DOE's ability to support future NASA space exploration missions may be lost. DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

2412-5: Work to deactivate the FFTF began in 1994. A complement of trained staff have been maintained since then to work necessary facility functions. Details of staff training for facility operation was provided in the companion NI PEIS Cost Report. For all options except the use of FMEF, processing of targets would be conducted in facilities that have ongoing DOE and commercial missions. These facilities have trained workers on staff, but would probably augment the staffing levels. Staff training/qualification would be conducted for the FMEF option.

2412-6: See above response to 2412-4.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2379: Cosmos Worth

2379-1 — I just want to let you all know that I'm in opposition here with my family tonight to starting up the FFTF.

2379-2 — We don't want any more nuclear waste.

2379-3 — "We join hands in UNITY

"To sing and shout our choice!

"Yes, we are ONE!

"ONE VOICE

"WE join hands in UNITY

"To sing and shout our choice!

"We're done being held prisoners

"Of the corporate empire's greed.

"We say 'NO TO MORE PLUTONIUM!'

"It sure isn't what we need!

"We say 'PUT ALL THE RESOURCES

"TO CLEAN UP WASTE AND LEAKY TANKS!'

"We say, 'YES TO LIFE, AND LOVE, AND FREEDOM!'

Response to Commentor No. 2379

2379-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2379-2: DOE notes the commentor's concern regarding waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

2379-3: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2393: Tim Young

2393-1 — One of the reasons that we have this nuclear energy research council is because of the Clinton-Gore administration wants to make green nuclear energy. The Kyoto Protocol says that, you know, carbon dioxide is causing global warming. So how do we cut back global warming? Well, gee, I guess nuclear energy is the new way to do it.

So basically all I want to say to you is that if anybody, who my environmental friends out there, think that Gore is against nuclear energy and continued nuclear weapon research, they're wrong.

Response to Commentor No. 2393

2393-1: DOE notes the commentor's interest in energy policy, although the production of electricity is beyond the scope of this Nuclear Infrastructure PEIS. The scope of this Nuclear Infrastructure PEIS is limited to analysis of alternatives to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development.

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2388: Catherine Zangar

2388-1 — I think that you're naive in thinking that you can run a nuclear reactor near a river or anywhere on this planet and not expect bad things to happen. There are human beings running that. There's room for error. There's room for sabotage. There's room for vandalism.

2388-2 — I worked in contracting construction. I talked to people who worked at Hanford and told me what they got away with when those things were constructed, when they were operated, and that will continue.

That's life. People cheat. They make mistakes. You have to expect that if you're flying radioactive materials around airplanes that someday something will happen.

2388-3 — If you look at population estimates for the next 25,000 years — is that the half-life of one of these things we're talking about? — and we look at the human geography of this region, is that taken into account in your environmental impact statement, how many people will be living along this region, what they would want, what the cost is to keep maintaining that dump that used to be a beautiful sage desert and was a place for animals to roam freely and what you've turned into a dump?

I am surprised that anybody would also have the silly idea to ask people whose jobs and livelihood depend on an industry what should be done with that industry. We don't go to loggers and say, "Should we keep any old growth?" We don't go to Navy bombers and say, "Should we keep bombing this island in the Atolls?" We don't go to people whose livelihood depend on things and say, "What do you think?" because they can't make an objective decision.

They're not usually well informed of the big picture, and that's so true of the tri-cities.

I still have family involved out at Hanford. I have research scientists in my family. I have people in tank maintenance, and we talk about this all the time, and they don't have as much information as people living in other parts of the country get.

You can read more in the Fisherman's Journal and in the Seattle PI, in the Oregonian than you can read in the Tri-City Herald, and it's sad that they're left out of the picture, but that's the way it is.

So I don't think you should be even quoting what people in the tri-cities want. Anywhere in the job market shouldn't be involved in the decision process. That's ridiculous, and I wouldn't do that.

I work in this area. Logging is important here. Farming is important here. You don't go to farmers and say how much pesticides do you get to put in the river. It just doesn't work that way because people will always look out for their jobs and money.

2388-4 — We know that the other FFTFs are all shut down, mothballed, thrown away, closed and inoperative for a good reason.

Response to Commentor No. 2388

2388-1: FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The accident spectrum included internal events, external events, natural phenomena, common-cause events, and sabotage and terrorist activities. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

2388-2: DOE notes the commentor's views regarding the quality of work and management at its facilities. The health and safety of workers and the public is the priority of the nuclear infrastructure program, regardless of which approach is chosen. Operation of the facilities would comply with applicable Federal, state, and local laws and regulations governing radiological and hazardous chemical releases. The transportation of medical isotopes is discussed in Appendix J.5.3 in Vol. 2. It is not likely that one additional latent cancer fatality will occur from transportation of medical isotopes.

2388-3: The commentor's question referencing population estimates over 25,000 years and half-life is unclear. This NI PEIS evaluates the environmental and human health impacts of operating the proposed facilities for 35 years to irradiate targets for medical and industrial isotope production, plutonium 238 production, and to meet nuclear research and development requirements. As described in Appendix H.2.2.2 of the NI PEIS which discusses the methodology for estimating radiological impacts on human health from facility operations, the population within 80 kilometers (50 miles) of the candidate sites was projected to the year 2020. These projections are based on the current population distribution around the sites. This projection was assumed to be representative of the site populations over the 35-year production campaign assuming steady population growth. The half-life for representative medical isotopes that could be candidates for production in the irradiation facilities under consideration, such as FFTF, is provided in Table C-1 of the NI PEIS. Plutonium-238 that would be produced to support NASA space missions has a half-life of 87.7 years. DOE assumes that the commentor also questions the cost of operation and maintenance of the Hanford Site. The cost of maintaining the Hanford Site over the 35-year mission is beyond the scope of this NI PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an

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Commentor No. 2388: Catherine Zangar (Cont'd)

It's an antique. It's a dinosaur, and it's not necessary.

I have not seen any compelling reasons that there aren't reasonable alternatives for starting up that reactor. I violently and adamantly oppose the start-up of the FFTF.

2388-5 — I think the risk hasn't been addressed.

You haven't looked at effects outside the cancer area.

2388-6 — The waste stream management hasn't been addressed.

2388-7 — You haven't looked at the effects on other creatures besides humans.

Response to Commentor No. 2388

informed decision with respect to the alternatives presented in the NI PEIS. Such an ancillary document need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed this document to about 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P in the Final NI PEIS.

2388-4: DOE notes the commentor's opposition to Alternative 1, Restart FFTF. It should be noted that there is only one FFTF and it is currently in standby at Hanford.

2388-5: This PEIS has provided an estimate of the incremental potential human health impacts associated with a reasonable range of alternatives including the restart of FFTF for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, Restart FFTF, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small. As stated in Appendix H of the EIS, other human health impacts (non fatal cancers and genetic mutations) occur with a lower frequency for the same level of exposure. Since latent cancer fatalities would not be expected among the public, it follows that the expected result for other radiological health impacts would also be small.

2388-6: Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In

Comments from the Hood River, Oregon, Public Hearing (August 28, 2000)

Commentor No. 2388: Catherine Zangar (Cont'd)

Response to Commentor No. 2388

addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

2388-7: The NI PEIS did examine the impact of each alternative and each option on ecological resources, including terrestrial resources, wetlands, aquatic resources, and threatened and endangered species. This evaluation may be found in Chapter 4 of the PEIS.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2421: Anonymous

2421-1 — I've been coming to these meetings for many years, since 1983 and I've been hearing the same thing. When they told us that Purex was okay, there would be no effect from Purex, no leakage, then we know that the radiation leaked from the 200 area. Then they said they wanted to keep the N reactor running. They had meetings in Portland to keep the N reactors running. You know, they wanted to keep it running up there. And they shut it down. Thank goodness for a lot of people. It's really hard, in 1983, we did a walk from Astoria to Hanford to the gates of Hanford. We were the first peace group to ever walk into Hanford and we started working to shut down Hanford with a lot of people's help.

I've been there when the breeder reactor was running in the early years and you know, the lives — I'm saying lives because I stood in front of the DOE office and I heard DOE officials say that you're not — you don't know what you're talking about when we told them about the leaks and everything happening. And now, look what's happening.

I can remember going to a meeting with some people and a Native American woman came up to me and she said why are you our children dying of leukemia? Remember the plutonium and the radiation that was mined on Native American land came to Hanford and now it's affecting people, Native American people.

You know, from the radiation down on the Navajo Reservation I saw kids with birth defects. Now you tell me that there's no — what happens if there's an accident at Hanford? And I just wanted to ask another question. What happened if you lost the water behind Grand Cooley Dam? What would happen? It would be over the top of Hanford. So I mean not many people talk about that. Yeah, it would be over everything, but you'd have a major nuclear accident. And it's real hard for me to get up here and speak because I've heard — I was up there years ago and listened to the stuff. My father worked up there and died of cancer. I mean it's — people — I hear certain comments from some of the Richland people, but you know, I know, it's you know. Just like the fire up there, you know, you said that there was no radiation leakage — I mean no radiation up there. Now the new paper that came out said oh, there was some allowable limits of plutonium? Does anybody know what allowable limits of plutonium or background radiation? Plutonium is a manmade subject and you know, it's made. It's not — there's no background to plutonium. It's made. And now it's — we let 300 balloons loose at Hanford in 1983 when we did that walk and they landed in a schoolyard in Hermiston, Idaho. That's how far the balloons went and that's the route of — there was another thing. There was a fire in the stack at Purex and they said there was nothing to be worried about, but the information came out that there was contamination released. So how do we know? I have heard this same thing over and over and over again. The DOE saying. I've been coming to these meetings, like I said, from 1983 and it's the same stuff coming out and I don't believe you. Maybe if they needed to start it up and maybe if there was an accident

Response to Commentor No. 2421

2421-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. In recognition of DOE's position to take expeditious action in regards to Hanford cleanup, the NI PEIS evaluated the maximum cumulative radiation exposure to the public from all reasonably foreseeable Hanford Site activities over the 35 year time-frame. These activities include future waste management activities (as estimated in the Hanford Comprehensive Land Use Plan), tank waste remediation, K Basin spent nuclear fuel management, decommissioned naval reactor plant disposal, and Plutonium Finishing Plant Stabilization (see section 4.8.3.3). As shown in Table 4-173, the dose to the maximally exposed individual would be expected to remain well within regulatory limits. Based on an exposure period of 35 years, 0.21 (<1) latent cancer fatalities would be expected to occur among the local population over the 35-year period as a result of Hanford related radiation exposure. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1. No radioactive materials were "released" in the Hanford Wildfires of 2000. Wildfires did resuspend some materials already in the environment. The resuspended materials were low, slightly above natural background levels. Since the initial stages of the fire and continuing to the present, DOE, in conjunction with the Washington Department of Health and the federal EPA, have conducted environmental monitoring on and near the Hanford Site to assess potential radiological releases. Monitoring will also continue over the long term. DOE has made these monitoring results available to the public as rapidly as possible with the results to date posted on a dedicated page on the Hanford web site at <http://www.hanford.gov/>. Regarding plutonium releases, DOE monitoring data has shown elevated levels (above levels normally seen) of plutonium in the Hanford 200 Areas. The most recent monitoring data available from EPA shows elevated levels (above background) of plutonium associated with 6 of the

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Commentor No. 2421: Anonymous (Cont'd)

then people would realize. I've had people tell me that maybe what we need is an accident to wake up people. I mean, what do we want, a Chernobyl in the Northwest? The tank is leaking up there. I mean when you see children affected by the uranium on a Navajo Reservation from the tailings and you know, it makes you look and think about that.

Response to Commentor No. 2421

61 ambient air filters collected from 23 locations surrounding the Hanford site. All of these DOE and EPA results are below EPA's "protective action guides" for emergency situations, EPA National Emission Standards for Hazardous Air Pollutants, hazardous air pollutant dose limits set by the State of Washington, and within or below EPA's acceptable risk range for protecting public health and the environment. DOE will continue to work with the Washington Department of Health and the EPA and will post additional monitoring results as they become available. As stated in Chapter 5 of the NI PEIS, "it is DOE policy to conduct its operations in a manner that ensures the protection of public health, safety, and the environment through compliance with all applicable Federal and state laws, regulations, orders, and other requirements." This chapter also discusses the applicable Federal Environmental, Safety, and Health Laws, Regulations, and Executive Orders, U.S. Department of Energy Orders, and State Environmental Laws, Regulations, and Agreements that pertain to the NI PEIS alternatives.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2423: Anonymous

2423-1 — I'm here to say a definite no to starting Fast Flux Test Facility in a nuclear reservation for any reason including isotopes for medical purposes.

2423-2 — We don't need it [FFTF] and for nuclear weapons production be it material for the existing weapons under stewardship.

Response to Commentor No. 2423

2423-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2423-2: The only missions being considered for FFTF at this time are those analyzed in the NI PEIS, which are the production of isotopes for medical research, and industrial uses; plutonium production for future NASA space exploration missions; and U.S. nuclear research and development needs for civilian application. None of the alternatives in the NI PEIS include defense missions and would not contribute to future weapons production.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2424: Anonymous

2424-1 — We can turn the tide on cancer and we can make a difference. We must put aside antiquated environmental phobias and see the restart of FFTF for what it is, hope for the future.

2424-2 — Alternative 2, using existing facilities are totally unacceptable.

2424-3 — The No Action option is a death sentence for untold millions of people. I realize that by law, the report had to include this option, but it should not be seen as viable.

Response to Commentor No. 2424

2424-1: DOE notes the commentor's support for Alternative 1, Restart FFTF, and opposition to Alternative 2, Use Only Existing Operational Facilities, and the No Action Alternative.

2424-2: See response to comment 2424-1.

2424-3: See response to comment 2424-1.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2425: Anonymous

2425-1 — I want to follow, like the old gentleman here that talked following the officials. I'm kind of like him. I've been around a long time. Now I'd like to go back a little further than he did. I'm talking about atomic energy. Now I don't want to go all the way to Japan and so on, but I'd like to bring up the subject of the hell bomb. I wonder how many young people remember that. The hell bomb, they called it. It was fired on Bikini Island and I know that island. I was there on a ship one time before this happened. Anyway, a strange thing about it, when it was shot it was heard over the air oh, what a wonderful thing it was. It was a choke of sun, oh, what a glorious thing. At that time, can you imagine that? And no thought of what happened to those people that lived for ages on those islands. Think about the people for a change.

They had to take those people away from there to shoot that bomb. Okay, they sent them way south on another island and I found out about this afterwards. The article come out in the National Geographic Magazine, a very good expose of it, this come out in the 1960s. I forgot the issue, but it's there. And it exposed this. After 10 years, I believe it was, they — the authorities assumed that nature over the world would assimilate the problems around it and they would bring these people back and let them try to live there again. Well, they've come back and some of them and got some fish. I forgot one thing too, the Japanese fishermen warned us about it. They said some of the fish they caught there were not fit to eat. They had found out all this before. Okay, people were brought there to give it a try again and they couldn't stay. They started getting sick. So they sent them back to the island before. That is what the magazine said and that's the only report I've heard since. It's been a hush. I tell you, it's been a hush of that. And it's just about time that we quit this stuff.

Response to Commentor No. 2425

2425-1: DOE notes the commentor's opposition to nuclear weapons and concern over the effects on the public of weapons testing, although these issues are beyond the scope of this Nuclear Infrastructure PEIS. The scope of this Nuclear Infrastructure PEIS is limited to analysis of alternatives to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development. The three missions are civilian nuclear energy missions and are not defense-related.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2426: Anonymous

2426-1 — You haven't even cleaned up this mess from 60 years ago. And it's been what, it's been in the river?

My father worked at Hanford. He was an engineer there. He left me when I was two years old. It's like I don't trust really anything from this corporate state we live under any more. It's lied to me. It's lied to the Native American people here who were ripped off. Let's just put it on their land. Let's just bury it in the ground somewhere and hope it goes away. This is a waste that I think all your degrees that you have and learned about this process and Hiroshima and Nagasaki weren't enough. We should really look a little deeper.

2426-2 — We spend how much of our lives working for a government that has potentially is the greatest leadership capabilities in the world. But it doesn't follow its own words, so to speak. I just think it's time we started looking at alternatives. If, you know, research, you know, I think is a very important tool and we need to take and look at the alternatives other than just what allopathic medicine has conditioned us to believe and live by, standards that took its original core from the earth. . .

Response to Commentor No. 2426

2426-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

2426-2: DOE examined numerous alternatives and options (see Section 2.5) to meet the purpose and need of the proposed action (see Section 1.2) of the NI PEIS. It is beyond the scope of the PEIS to examine alternatives to the medical use of radioisotopes in the treatment of disease.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2427: Anonymous

2427-1 — I favor Alternative 5.

2427-2 — I've been to a lot of these meetings on FFTF over the past few years and I agree with the City of Portland City Council in September 1999 when they said no to the restarting of the FFTF.

2427-3 — Hopefully, the DOE will eventually be left behind and Hanford will be managed by some agency that can take care of it properly.

Restarting this 20-year-old sodium-cooled, liquid sodium-cooled reactor in an area that has been so poisoned and so desperately needs to focus on its cleanup mission is totally absurd and most people outside of the DOE and the Tri-Cities area do see that.

2427-4 — I think the DOE and its corporate friends still actually want to use the FFTF for tritium production and other things such as the purpose that they state on page D-16 of Volume II of the PEIS which says "there is a particular interest in materials testing associated with extension of commercial nuclear power plant license renewals."

Well, I don't want to see old ready to die nuclear plants retrofitted with things cooked up in a restarted FFTF on the shores of our Columbia River.

2427-5 — Build a new medical isotope reactor somewhere else, somewhere nowhere near one of the largest rivers on the Continent, please, if you must, but don't restart the FFTF.

Response to Commentor No. 2427

2427-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.

2427-2: See response to comment 2427-1.

2427-3: FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram funds designated for Hanford cleanup, regardless of the alternative(s) selected.

2427-4: The only missions being considered for FFTF at this time are those analyzed in the NI PEIS, which are the production of isotopes for medical research, and industrial uses; plutonium production for future NASA space exploration missions; and U.S. nuclear research and development needs for civilian application. No component of the proposed action is for the purpose of producing tritium. The commentor's reference to materials testing associated with extension of commercial nuclear power plant license renewals falls under the mission of nuclear research and development needs for civilian application, as discussed in Section 1.2.3 of Volume 1.

2427-5: If selected in the Record of Decision, Alternative 4, Construct New Research Reactor, would result in the construction of a new reactor at an as yet unidentified DOE site. If this alternative were selected, additional NEPA review would evaluate site location.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2428: Anonymous

2428-1 — My sister-in-law, she's on the Board of Directors for Citizens for Medical Isotopes. Now when I heard this, when she told me that she was trying, working hard to restart FFTF I thought that she had lost all her moral values. I was very angry. Now please listen to me, please, okay, because I've been down, I've taken this journey.

For the first time in my anti-nuclear life I opened my ears just a little tiny bit to listen, just a little bit because she was my sister-in-law and she was sitting in my front room, okay? I began to realize from her facts that can be substantiated by the U.S. Department of Energy, I would only listen to that, that's all she had to share with me. Only facts.

Response to Commentor No. 2428

2428-1: Thank you for your comment on the NI PEIS.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2429: Anonymous

2429-1 — This is a complex topic that you're talking about and complex information that you're giving us tonight, but I'm beginning to get the idea that the bottom line here is something about restarting a nuclear energy program for the supply of energy, even though nuclear energy is really not what the people want.

2429-2 — I would much rather you see the amount — use the amount of money that you have talked about tonight to do two things. One, to clean up the mess in Hanford to the best of your ability, . . .

2429-3 — . . .secondly, to use that money for research and development of wind energy and solar energy.

Response to Commentor No. 2429

2429-1: The only missions being considered for FFTF at this time are those analyzed in the NI PEIS, which are the production of isotopes for medical research, and industrial uses; plutonium production for future NASA space exploration missions; and U.S. nuclear research and development needs for civilian application. Restart of a nuclear energy program for the supply of energy is not within the scope of the NI PEIS. However, clean, safe, reliable nuclear power has a role today and in the future for our national energy security. In recognition of this need, nuclear energy research and development programs have been initiated to address potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) and to ensure that current nuclear power plants can continue to deliver adequate and affordable energy supplies. Because it is unlikely that existing facilities could fully and effectively support these nuclear energy research and development initiatives without disturbing their existing missions, DOE is proposing to enhance its nuclear facility infrastructure to also support these activities. Further information on the need for nuclear energy research and development is provided in Section 1.2.3 of Volume 1.

2429-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

2429-3: DOE notes the commentor's interest in solar and wind energy sources, although issues of research and development of alternative energy sources are beyond the scope of this Nuclear Infrastructure PEIS. The DOE missions to be addressed in this EIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2429: Anonymous (Cont'd)

Response to Commentor No. 2429

development, can currently only be met using nuclear reactor or accelerator technologies.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2433: Anonymous

2433-1 — But I want to talk about something that I saw when I was there at the FFTF site when someone was doing some testing on the IVHM which is the in vessel handling machine that pulls these 2,000 pound, 20 foot long fuel pins from the core. The guy overrode some of the safety systems. He picked the pin up too high and broke the chain off which dropped this pin down into the core, buckling up some of the reflector shields and after the repair was done, I heard the number that it cost was somewhere around \$1 million. And I think these people should be able to have to take a look at this report and all the pictures that were taken if they're going to consider restarting this reactor. They really need the right to see the damage that happened to this core.

Response to Commentor No. 2433

2433-1: This incident occurred during construction testing in about 1978, prior to loading sodium or fuel into the reactor. As part of the testing, all of the IVHM safety systems were overridden which, coupled with an error in judgement by the test engineer, resulted in damage to the IVHM and a few baffle plates (which are outside of the core region). The baffle plates were repaired, and the damaged IVHM was replaced with the spare. Additionally, design changes were made to the IVHM to prevent this type of accident from reoccurring. Subsequent testing demonstrated full acceptability of these systems, which were successfully operated for more than 10 years without any indication of problems emulating from this construction accident. In retrospect, the design improvements that resulted from the incident actually increased the safety of IVHM operation.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2435: Anonymous

2435-1 — I'm also here to speak out for closing down — for Alternative 5.

2435-2 — And cleanup. Please start to clean up the goo.

Response to Commentor No. 2435

2435-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2435-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2440: Anonymous

2440-1 — That's a tough act to follow. Unlike a lot of you in this room I had 16 nuclear free years. I was 16 years when we dropped the bomb on Hiroshima. Six years later I was down at the Nevada test site and you dropped a bomb on me. I've listened to the lies of the AEC and the DOE told these many years. I remember the Atoms For Peace Program. In many ways, this resembles the Atoms For Peace Program because this is going to do everything. This is going to cure cancer. Atoms For Peace, they were going to dig a canal to cross Nicaragua. They were going to mine diamonds with it. The Russians even tried it. Killed off a lot of miners. So I'm here to tell you the DOE in my opinion is not a bastion of credibility or truth. I don't believe anything you people say. And that's unfortunate.

The insulation between the people and the government, much of it began at the advent of the nuclear program for the Manhattan Project because it became legitimate to lie to the people because it was in the people's best interest and that program and that attitude has persisted to this day. And I for one am really not sorry I'm as old as I am because I don't see anything bright about the future for this world, for this nation or this world because of the sword of Damocles that hangs over our heads.

2440-2 — And I want to register my opposition to the restart of the FFTF. . .

2440-3 — I want you to honor your obligation to shut it down. . .

2440-4 — I want you to honor your obligation to . . .clean it up.

Response to Commentor No. 2440

2440-1: DOE notes the commentor's concerns.

2440-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

2440-3: See response to comment 2440-2.

2440-4: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2442: Anonymous

2442-1 — I don't know if you'd call me patient. It's a misnomer. Actually, I've been sort of pondering this whole pull out the number process and I think that there's a tremendous amount of time wasted and thus we have a very empty place compared to a lot of eloquent speakers we had here who are willing to come out for tonight, so something is wrong with this process. It didn't quite work like you had hoped.

So reasons against restart of the FFTF. First of all, and you I believe have heard from me, Colette, the process is flawed. A late cost analysis and a missing nonproliferation analysis make this the usual DOE piecemeal process. And so you brought your cost analysis tonight. We've all had a lot of time to read it and make comment on it.

2442-2 — The FFTF would add at least 16 tons of waste to the most polluted site in the Western Hemisphere. Unacceptable.

2442-3 — Production missions undermine clean up efforts at Hanford...

2442-4 — We already have agreements with Russia and Canada to supply us with isotopes and Pu-238. This is a quiet changing of policy by people inside the DOE and beholden to them to those who stand to benefit financially from a restart of the production at Hanford. One of the points that I'd like to make there is that PNNL, Pacific Northwest National Laboratory which sits up on Hanford land and makes a lot of money doing all sorts of research and very little of which has to do with clean-up, has written — has had a lot of input into this EIS and they have lobbied. The labs have a tremendous lobby in Congress for this kind of thing and also with the DOE Headquarters. And they're the ones who stand to benefit by restarting the FFTF. They're the ones who are going to get the jobs. They're the ones who are going to get more research, etcetera, etcetera. So Nancy was exactly right when she said there are different motives here and motive always lies in money and power.

2442-5 — This PEIS does not give a detailed analysis of the suitability of the use of the FFTF. You haven't really done a good analysis there. It is woefully inadequate in its analysis of the environment and socioeconomic-economic impacts. The use of the 300 Area buildings as support for operating FFTF was recently a complete surprise. Keith Klein, the manager of the Richland office of the DOE, who had been making up this wonderful clean up plan that's back there on the wall and he didn't know that you guys in D.C. were planning to use some buildings in the 300 Area which is laden with uranium. He was stunned when he mentioned it at a meeting recently.

Response to Commentor No. 2442

2442-1: The costs and nuclear nonproliferation impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such ancillary documents need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed these documents to more than 730 interested parties on August 24 and September 8, 2000, respectively. Both reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided summaries of the Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment in Appendixes P and Q, respectively in the Final NI PEIS.

2442-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. In full recognition of DOE's position to take expeditious action in regards to Hanford cleanup, the NI PEIS evaluated the maximum cumulative radiation exposure to the public from all reasonably foreseeable Hanford Site activities over the 35 year time-frame. These activities include future waste management (as estimated in the Hanford Comprehensive Land Use Plan), tank waste remediation, K Basin spent nuclear fuel management, decommissioned naval reactor plant disposal, and Plutonium Finishing Plant Stabilization (see section 4.8.3.3). As shown in Table 4-173, the dose to the maximally exposed individual would be expected to remain well within regulatory limits. Based on an exposure period of 35 years, 0.21 (<1) latent cancer fatalities would be expected to occur among the local population over the 35-year period as a result of Hanford related radiation exposure. The cumulative impact assessment also determined that the incremental annual radiation dose to the maximum exposed public individual from the NI-PEIS proposed operations at FFTF and FMEF or RPL, including the impact of storing the 16 metric tons of heavy metal of spent FFTF nuclear fuel (see section 4.3.1.1.14) that would be generated in the 35 year nuclear infrastructure operation period, would be 0.0054 mrem. This assessment also determined that

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2442: Anonymous (Cont'd)

2442-6 — I also would like to say that the policies or lack thereof are the cause of the tremendous number of cancers we humans are suffering from. The governmental policies, the lack of health care, the fact that the corporations run rough shot over us in getting loopholes to protect us, that's all part of this whole scene.

2442-7 — So those are my basic comments right now and I hope you get flooded of thousands of cards. I hope you take them all into consideration and I'm really sick of this, my third FFTF hearing. I'm sick of this. It has taken up a tremendous amount of time away from our efforts to get Hanford cleaned up.

Response to Commentor No. 2442

0.0045 latent cancer fatalities would be expected to occur among the local population as a result of the NI PEIS related radiation exposure over the 35 year period. Also note that in section 4.3.1.1.14, it is stated that upon cessation or reactor operation, or earlier, this spent fuel inventory would be shipped offsite to a geological repository for disposal. The annual doses to the public from the Hanford site and proposed NI PEIS activities above are insignificant. For perspective, the radiation dose the average American receives from natural sources is about 300 mrem each year. Based on the same 35 year time period used above, approximately 2,000 latent cancer fatalities would be expected among the same population as a result of this natural (non-Hanford related) radiation exposure. In that same 35 years, about 19,000 cancer fatalities from all causes would be expected in the same population.

2442-3: The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

2442-4: DOE notes the commentor's views. The United States currently purchases approximately 90 percent of its medical isotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily Molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs. DOE could also purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2442: Anonymous (Cont'd)

Response to Commentor No. 2442

2442-5: The commentor's concerns regarding the adequacy of the assessments of impacts associated with FFTF restart are noted. DOE has performed a detailed environmental analysis of the suitability of the potential restart of FFTF. The results of the impact assessments presented in Section 4.3 of the NI PEIS demonstrate the environmental suitability of restarting FFTF. Operation of FFTF would result in releases of materials to the environment via airborne and liquid pathways. However, all air emissions and wastewater discharge would be in accordance with applicable permit and regulatory requirements. The release of criteria air pollutants would result in concentrations well below Federal and state air standards (Table 4-13). The release of radioactivity and hazardous chemicals into the atmosphere would have a negligible effect on human health (Tables 4-17 and 4-19). There would be no discernible impacts to groundwater or surface water quality (Section 4.3.1.1.4) or to ecological resources (Section 4.3.1.1.6). The management of all wastes associated with restart and operation of the FFTF is addressed in Section 4.3.1.1.13 of the NI PEIS. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. The management of these wastes would be well within management capacities and would not be expected to adversely affect the environment. Impacts on people and ecological resources would be small. The generation of spent nuclear fuel from 35 years of FFTF operations would represent less than 1 weight-percent of the total spent nuclear fuel inventory presently stored at Hanford (Section 4.3.1.1.14). For the socioeconomic analysis, the PEIS includes the socioeconomic impacts of the Region of Influence, which is the area in which 90 percent of the Hanford workers live. This assessment looks at the impacts on population, housing, and public services. It also includes a broader evaluation of the Regional Economic Area, defined as those counties that will be economically impacted by actions at the Hanford site. All socioeconomic impacts are shown to be small. Section G.8 provides an in depth discussion of the impact assessment method. Hanford 300 Area facilities included in options under consideration for nuclear infrastructure activities are the Radiochemical Processing Laboratory (RPL) and Building 306-E (refer to Volume 1, Section 2.3.2.4 of the NI PEIS). These facilities have never been precluded from supporting future DOE missions. There are no current plans to close down the RPL. However, Building 306-E is listed in the 300 Area accelerated closure plan (300 Area Initiative), with closure activities scheduled to begin in May, 2003. If a decision were made to implement an alternative option that utilizes Building 306-E, the building would be removed

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2442: Anonymous (Cont'd)

Response to Commentor No. 2442

from the list of facilities to be closed until its part of the activity were completed.

2442-6: The Department notes the concerns and views expressed in the comment.

2442-7: It is DOE policy to encourage public input on matters of regional, national and international importance as part of its commitment to facilitate a public participation process that is open and unbiased. In preparing the Final PEIS, DOE has assessed and considered both oral and written comments received on the Draft PEIS during the public comment period and has responded to these comments in the Final PEIS. Volume 3 of the NI PEIS contains public comments received on the NI PEIS and DOE responses to those comments. These comments are summarized, tabulated, and cross-referenced by commentor, category, and method of submission. A summary discussion is also provided of the overall prevailing issues raised during the public comment period.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2443: Anonymous

2443-1 — You cannot even talk about having an Environmental Impact Statement, let's not even talk about all that at Hanford. You can't even talk about this without adequate clean up of the waste produced there. There is no detailed outline of how waste produced in your proposed thing will be dealt with and how much that will cost and where it will be.

2443-2 — I haven't really read the whole thousand pages, but I don't need to. You should be embarrassed. Any person who is doing an EIS statement should be embarrassed of such an inadequate EIS statement. One other thing, EIS statements in general do not adequately consider the externalities and that includes people's health, environment, water, land and this is just no exception. This is just another waste of trees, basically.

Response to Commentor No. 2443

2443-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

2443-2: The NI PEIS is adequate. This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS. Further, DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives. This was accomplished through review and evaluation of site-specific information on the environmental conditions prevailing at ORR, INEEL, and Hanford to include a comprehensive analysis of the associated environmental and health risks of each alternative. DOE made every effort to obtain, analyze and disclose all required information to make a decision on expanding nuclear infrastructure.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2444: Anonymous

2444-1 — How can you even think about doing more when we don't have materials that are capable of lasting the half life of what it's storing?

Response to Commentor No. 2444

2444-1: The environmental impacts associated with managing the additional FFTF spent nuclear fuel at Hanford are discussed in Section 4.3 of Volume 1. As discussed in Section 4.3.1.1.14, the incremental impact associated with managing the additional FFTF spent nuclear fuel is extremely small and would have no discernible impact on the existing Hanford spent fuel management over NI PEIS evaluation period (see section 4.8.3.5 for cumulative impact). The currently used FFTF-specific spent nuclear fuel storage system designs (i.e., facility storage vessels and dry storage casks) are the key contributors for determining that the incremental radiological and environmental impacts are small. This section also states that the "spent [FFTF] nuclear fuel would be packaged in acceptable containers and shipped to a geologic repository for ultimate disposal." Disposal of DOE spent nuclear fuel is within the scope of a separate EIS titled, "Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada" (DOE/EIS-0250D, July 1999).

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2449: Anonymous

2449-1 — I keep hearing 54 million gallons, 54 million gallons of concentrated hot garbage? I mean — I hope it's separated. I mean at least there's enough water in there to keep it from getting very hot. I mean that's what the water is for is to separate the atoms that are breaking down.

I mean there's just — 54 million gallons. This is only going to produce what, 8 barrels a year of waste? That's assuming that it doesn't have hot gloves, hot coveralls. I don't know what else, people who handle the material get exposed to. Hot boxes if they're in there separating the material out of the targets. There's going to be isolator boxes that people are working in and some of those are going to be exposed to other material and they can use it again and again. But you're also going to create a chemical separation facility and that's proposed to be built on buildings that are already hot.

You're already going to have to build another chemical separation facility to deal with those 54 million gallons. So you're going to build this great big chemical separation facility to pump lots of fluid into and separate it and put it into glass so that rather than being separated by little atoms of water, all this hot stuff that's separated by atoms of glass. I kind of like that idea a little bit.

2449-2 — Should we get insurance on a 25-year-old nuclear reactor that somebody dropped a big part of it? A million dollars to repair the damage of one person overriding the safety features. A million dollars is nothing. I don't know. I think a million dollars is quite a bit and I hope they fixed it.

2449-3 — But I hope they shut it down.

Response to Commentor No. 2449

2449-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. Milestones for vitrification of the wastes from the high-level waste tanks are included in this agreement. As discussed in Section 4.3 of Volume 1, none of the proposed alternatives would add waste to the high-level waste tanks at Hanford.

2449-2: The incident referenced by the commentor occurred during construction testing in about 1978, prior to loading sodium or fuel into the reactor. As part of the testing, all of the In-Vessel Handling Machine (IVHM) safety systems were overridden which, coupled with an error in judgement by the test engineer, resulted in damage to the IVHM and a few baffle plates (which are outside of the core region). The baffle plates were repaired, and the damaged IVHM was replaced with the spare. Additionally, design changes were made to the IVHM to prevent this type of accident from reoccurring. Subsequent testing demonstrated full acceptability of these systems, which were successfully operated for more than 10 years without any indication of problems emulating from this construction accident. In retrospect, the design improvements that resulted from the incident actually increased the safety of IVHM operation.

2449-3: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2453: Anonymous

2453-1 — It was said that the risks from the Hanford — or from the fast flux restart would be from the processing, not from the irradiation. I have a problem believing that seeing how one of the major waste products is not even mentioned in this waste generation at Hanford, a handout that I received. It's footnoted as D and D says in part, "The inventory of bulk metallic sodium, Section 4.4.1.2.13 is not included because alternative sponsors and/or users will be found for its disposition." That seems kind of like a pipe dream to me, seeing how sodium, to the best of my understanding is a highly explosive material that explodes on contact with air.

I don't now anybody that would want to sponsor or use this material, especially in a radioactive form.

2453-2 — As far as NASA, I don't trust NASA. I don't think they should get any uranium whatever. The Cassini probe which they sent out and flew around Jupiter came back at a high rate of speed and circled the earth at 300 miles above the earth's surface before continuing its journey. That Cassini space probe had the uranium on board and they estimated that the chances of it actually striking the earth if they made some error were only 1 in 100, so I don't think that NASA should be allowed any more uranium to play with.

2453-3 — As far as the isotopes for curing cancer, I think that we should find another way besides restarting the fast flux reactor. According to what I heard the statement by Kitzhaber, there are other sources and it seems to me that the cure may be worse than the disease in this case because you may cure some individual cancers with the radioactive isotopes, but the radiation that is produced doing this will last for millions and millions and millions of years and probably or conceivably cause an incalculable number of additional cancers in other people. It seems a little selfish to insist on restarting a reactor that produces more harmful radioactive waste in order to fix a problem that has other sources of fixing. But anyway that concludes my statement. I'll yield back the remainder of my time.

Response to Commentor No. 2453

2453-1: If FFTF is deactivated, a site integrated approach has been identified for disposition of the sodium coolant from FFTF. The FFTF sodium could be converted to sodium hydroxide and then used in the planned caustic washing high-level waste pretreatment process. In addition to reducing costs for both FFTF and the tank waste program, this would result in a major waste minimization and chemical recycling achievement. This planned use of the sodium is documented in the Tri-Party Agreement milestones (M-81-00 and M-20-00 series) that were established for deactivation of FFTF (currently in abeyance pending the final NI PEIS decision). If the planned use of the sodium for the tank waste program does not materialize, the sodium would be converted to a stable form suitable for land disposal at Hanford.

2453-2: DOE notes the commentor's opposition to NASA's use of nuclear materials for space missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch. The Cassini fly by occurred exactly as planned, with no release of nuclear material.

2453-3: Cancers are believed to be caused by a combination of hereditary and environmental factors, including radiological and chemical agents. In ongoing clinical testing, therapeutic radioisotopes have proven effective in treating cancers and other illnesses while minimizing adverse side effects, making their use an attractive alternative to traditional chemotherapy and radiation treatments. The NI PEIS provides an estimate of waste generation and potential human health impacts associated with each of the alternatives proposed for the production of medical, industrial and research. Any additional wastes generated in support of these missions would be managed (i.e., treated, stored, and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws, regulations, and applicable DOE orders. In terms of potential human health impacts, the NI PEIS analysis indicates that the most likely impacts would not result in additional cancer fatalities among the population surrounding the DOE facilities that may be selected for use. The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it

*Comments from the Portland, Oregon, Public Hearing (August 29, 2000)**Commentor No. 2453: Anonymous (Cont'd)**Response to Commentor No. 2453*

does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs. Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions (basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2458: Anonymous

2458-1 — ...FFTF should be closed.

2458-2 — I mean it's deja-vu. We hear it tonight, over and over. Deja-vu. So I'm going to deja-vu to last year and read you from one of these handouts. It commences "To the Hanford Advisory Board" last month, "Dr. David Johnson, a physicist who worked on the FFTF nuclear reactor in the 1970s recommended against restarting the reactor. A specially designed accelerator would make more isotopes than the FFTF, but without the large number of wastes of — nuclear wastes, without the large costs and without the large safety issues. FFTF is incapable of producing a diverse and economical supply of medical isotopes." And I underline this, "The real purpose of the medical isotope proposal is revealed in a memo from ANMS, a contractor, once interested in running the nuclear reactor." This memo says, "Focus all PR efforts on the humanitarian mission of the FFTF. Medical isotopes and materials research. Do not mention" and this is in large print, "Do not mention any proposals for increasing reactor activity. The humanitarian mission must be highlighted and exploited to the maximum."

2458-3 — Did you say that you had added another sixth alternative? Did I hear you say that?

2458-4 — I think the whole thing should be cleaned up. We've had too much and everybody has heard it tonight and over and over and over again and we're all tired of it and I'm sure you're tired of it.

Response to Commentor No. 2458

2458-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2458-2: DOE notes commentor's remarks.

2458-3: DOE has not added a sixth action alternative. However, if the No Action Alternative is included along with the 5 action alternatives, there are a total of 6 alternatives presented in the NI PEIS.

2458-4: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2459: Anonymous

2459-1 — For years we have had hearings and from the first ominous rumblings of the idea of restarting the FFTF, the project has been plagued with controversy and unsavory manipulations first advanced by, you remember, the Advanced Nuclear Medical Systems. These were the folks that wanted to and I quote, “focus all immediate planning and PR effects on the humanitarian mission of the FFTF and do not mention any proposals for increasing reactor activity or future breeder reactor and the undeniable worthiness of the humanitarian mission must be highlighted and exploited to the maximum sensitivity of our society.”

You see, they succeeded. Here we are tonight in having everybody embroiled in an emotional debate over medical isotopes.

2459-2 — . . . we are opposed to the restart of the FFTF for this mission [isotopes].

2459-3 — The Department of Energy wrote to Senator Kennedy on December 22, 1995. A quote from that letter from DOE says, “The FFTF has not produced medical isotopes since 1990 and it is not necessary to DOE isotope production mission.” DOE’s ATR and HFIR provide most all of the DOE’s reactor based commercial and medical isotope production and they have significant additional capacity to produce isotopes well into the next century if future market demands development. And furthermore, in April 2000, your Medical Advisory Panel recommended against the use of FFTF for medical isotopes and their alternatives and purchase from Canada ought to be considered.

2459-4 — The FFTF is a reactor in search of a mission and now they’ve tried tritium. That didn’t work. Now let’s consider plutonium-238. NASA will probably use other technologies for some of the missions and plutonium-238 is now available from Russia to purchase.

2459-5 — What about the third proposal, to support civilian nuclear energy research and development activities? New nuclear fuel forms and new reactor designs. To me, this is the crux of the matter. The FFTF was built to support the development of the liquid metal fast breeder reactor program. Supposedly, that program was closed. But in an August 8, 2000 Environmental News Service, we find that the experimental breeder reactor 2 in Idaho has not yet been closed as Congress directed in 1994. Why isn’t it closed DOE?

In July 1999 officials also associated with the breeder reactor program in France and Japan showed an interest in maintaining the FFTF as a fast reactor research facility. What a coincidence. The nuclear industry is desperate to survive in spite of the fact that wind and solar energy development and aggressive conservation can and will meet energy demands.

2459-6 — The industry lies outright to us, promoting nuclear as clean and ignoring the thousands of tons of spent fuel with no place to go and lethal forever.

Where is the detailed explanation of what happens to the spent fuel produced by FFTF?

Response to Commentor No. 2459

2459-1: DOE notes the commentor’s views and remarks.

2459-2: DOE notes the commentor’s opposition to Alternative 1, Restart FFTF.

2459-3: Subsequent to the time period of the letter noted by the commentor (i.e., 1995), DOE has sought independent analysis of trends in the use of medical radioisotopes, and of its role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert committees. In 1998, an Expert Panel convened to forecast future demand for medical isotopes estimated that the expected growth rate of medical isotope use during the next 20 years will range between 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by DOE’s Nuclear Energy Research Advisory Committee (NERAC), established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. The growth projections were also adopted by DOE as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE’s role in fulfilling the U.S. research and commercial isotope production needs. The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: “In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production.” In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to

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Commentor No. 2459: Anonymous (Cont'd)

Do not insult us either by saying that the amount is small and insignificant by Hanford standards. We will tolerate no more waste producing operations at Hanford. Our City Councils have said so. Our State legislatures have said so. Our Governor has said so and the people have said so. We are adamantly and unalterably opposed to more waste production at Hanford.

2459-7 — We are even more so opposed to the use of HEU or MOX fuels. We will not tolerate that which is more than nuclear madness.

2459-8 — We don't believe you have — sufficiently addressed the waste disposal issue, the fuel transport issue, the condition of the fuel stored to use, the real long term cost issues, the risk issues, the proliferation issues.

2459-9 — The values of the people in this region, we want all attention to focus on the major dilemmas of the tank wastes in K basins and the mission of clean up.

Response to Commentor No. 2459

support projected needs could be accomplished without impacting the existing missions of these facilities. There currently is little room for growth of medical isotope production at either ATR or HFIR. At ATR the neptunium-237 targets for plutonium 238 production will compete for space in the reactor. There are potential negative impacts to the private company that leases reactor space for the production of radioisotopes due to being assigned less desirable irradiation space. At HFIR, the ability to expand medical isotope targets into additional reactor locations is limited by the potential impacts that the targets have on the primary experiments in the reactor. Medical isotope targets and neptunium-237 targets are not in competition for the same locations in at HFIR.

2459-4: Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium 238, DOE's ability to support future NASA space exploration missions may be lost. DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

2459-5: Other than the missions discussed in the NI PEIS, no alternate uses for FFTF are being considered at this time. None of the alternatives in the NI PEIS include using FFTF to support the development of the liquid metal fast breeder reactor program. In January 1997, President Clinton tasked his Committee of Advisors on Science and Technology (PCAST) to evaluate the current national energy research and development portfolio and to provide a strategy that ensures the United States has a program to address the Nation's energy and environmental needs for the next century. In its November 1997 report responding to this

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Commentor No. 2459: Anonymous (Cont'd)

Response to Commentor No. 2459

request, the PCAST Energy Research and Development Panel determined that restoring a viable nuclear energy option to help meet our future energy needs is important and that a properly focused research and development effort to address the potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) was appropriate. The PCAST panel further recommended that DOE reinvigorate its nuclear energy research and development activities to address these potential barriers. Further information on the need for nuclear energy research and development is provided in Section 1.2.3 of Volume 1.

- 2459-6:** The NI PEIS assumes, for the purposes of analysis, that Yucca Mountain Nevada, would be the final disposal site for DOE's high-level radioactive waste and spent nuclear fuel. As directed by the U.S. Congress through the Nuclear Waste Policy Act, as amended, Yucca Mountain is the only candidate site currently being characterized as a potential geologic repository for high-level radioactive waste and spent nuclear fuel. DOE has prepared a separate EIS, "Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High Level Radioactive Waste at Yucca Mountain, Nye County, Nevada" DOE/EIS-0250D, July 1999), which analyzes the environmental impacts from construction, operation and monitoring, related transportation, and eventual closure of a potential geological repository.
- 2459-7:** The commentor's opposition to the use of HEU or MOX nuclear fuel in FFTF and nuclear technology is noted.
- 2459-8:** The NI PEIS addresses all issues identified by the commentor that are within its scope. These include waste disposal (Section 4.3.1.1.13), fuel transport (Section 4.3.1.1.11 and Appendix J), and human health risk Sections 4.3.1.1.9 and 4.3.1.1.10 and Appendixes H and I). Nuclear nonproliferation impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. However, DOE prepared a separate Nonproliferation Impact Assessment which is available on the NE web site (<http://www.nuclear.gov>) and in public reading rooms. That document assesses the potential nonproliferation impacts associated with nuclear infrastructure activities. A summary of it is included in Appendix Q of the final NI PEIS. Assessments of the costs associated with nuclear infrastructure activities are also not required by NEPA and CEQ regulations to be included in a PEIS. However, a cost report was issued separately by DOE, which is available at the same locations as the nonproliferation report. A

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Commentor No. 2459: Anonymous (Cont'd)

Response to Commentor No. 2459

summary is included as Appendix P of the final NI PEIS . Also not within the scope of the NI PEIS is, an assessment of the conditions of the MOX fuel stored at Hanford. This fuel is being maintained in a safe standby condition such that it could be utilized in the FFTF core if the FFTF Restart alternative were chosen for implementation.

2459-9: DOE notes the commentor's concerns regarding K Basin tank wastes and the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2462: Anonymous

2462-1 — Why aren't you accessing your students and why aren't you accessing the knowledge that's out there to take care of these problems and to look for innovative ways to do it? I know there are a lot of people put work into this and I don't understand why it's not being used. I'm one of paranoia conspiracy people. I've Tesla and just on that note, I know it's a little freaky, but I don't understand why you don't apply those type of things in understanding and why you always ignore those capacities.

2462-2 — So I guess I just wanted to say no [to restart]...

Response to Commentor No. 2462

2462-1: DOE notes the commentor's interest in innovative technologies and human capabilities, which are outside the scope of this PEIS. The PEIS is required to evaluate a range of reasonable alternatives. Approaches and technologies that are considered innovative could, if promising, be examined in other government and private programs.

2462-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2464: Anonymous

2464-1 — I have a suggestion. Maybe the DOE people and the Washington people should be the ones to speak last.

I liked that part. I just wanted to add that maybe everybody from Washington could be respectful of Oregonians. We try to when we go up there.

2464-2 — What's the half life of the plutonium that's going to be created?

2464-3 — Space Magazine was running an ad by one of the aerospace industries and the guy was saying our whole goal — and these people are talking to investors — our whole goal is to have our launches be as safe and as predictable as a truck driving down the road.

Now just recently we've had several truck accidents that caused major spills and killed fish and areas around here. So think about launching plutonium into space. Maybe we should start waiting a little bit until they are more safe than a truck. Has anybody considered this issue?

2464-4 — What's going to happen when funding that is desperately needed to clean up Hanford that's been diverted to clean up — to keep FFTF running is now needed to feed people so that they won't be rioting in the streets?

Think about it. Here we've got plutonium being produced. We've got waste being produced. We've got Hanford lighting up and being on fire. Those tanks have got flammable liquids in them. Alone on their own merits they're toxic. Add radioactive waste to it and you're going to have the equivalent of nuclear bomb blasts going off and drifting down to wherever the wind is going. Think about it. It took humans 50 thousand years, give or take a few, to evolve. What's going to happen when we've got long life radioactive waste circulating in vast quantities than we've got it now?

2464-5 — So I'm going to vote for the proposal that we just simply close down the FFTF.

Response to Commentor No. 2464

2464-1: DOE notes the commentor's views for the order of speaking position at DOE public hearings. The purpose of DOE's presentation at the Portland Oregon, public hearing and at all of the NI PEIS public hearings was to provide an overview of the Draft NI PEIS as a basis for facilitating relevant discussion and public input. Therefore, it is customary to present this background information before the start of the formal comment process. DOE works to ensure that the hearing format used serves to promote open and equal representation by all individuals and groups, regardless of the motivation for attending. One means used by DOE in trying to ensure equal representation at public hearings is by selecting the order of speakers through a random number drawing.

2464-2: Plutonium-238, the plutonium isotope intended for production in this EIS, has a half life of approximately 87 years.

2464-3: DOE notes the commentor's opposition to NASA's use of nuclear materials for space missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch.

2464-4: DOE notes the commentor's concerns regarding the high-level waste tanks at Hanford. The last Hanford underground waste storage tanks with organic loadings were recently removed from the Watch List indicating an explosion is no longer a credible accident. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As discussed in Section 4.3, Volume 1, no high-level radioactive waste would be added to the high-level waste tanks at Hanford. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE,

*Comments from the Portland, Oregon, Public Hearing (August 29, 2000)**Commentor No. 2464: Anonymous (Cont'd)**Response to Commentor No. 2464*

which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

2464-5: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2467: Anonymous

2467-1 — Well, so I'm going to register against it [FFTF].

2467-2 — If you need energy, Nevada has enough solar energy to power the whole West Coast, so there's biomass fuels, there's solar, wind energy. If you need alternatives, do you know what I mean? So there's alternatives.

Response to Commentor No. 2467

2467-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2467-2: DOE notes the commentor's interest in alternative energy sources. Issues of research and development of alternative energy sources are beyond the scope of this Nuclear Infrastructure PEIS. Despite advances in many energy technologies, America's future energy security will depend on a robust mix of energy sources which necessarily includes nuclear power generation. It is the current United States policy that clean safe, reliable nuclear power continue as a viable component of the United States' energy portfolio. In recognition of this need, the government has initiated nuclear energy research and development programs to address potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) and to ensure that current nuclear power plants can continue to deliver adequate and affordable energy supplies. An enhanced DOE nuclear facility infrastructure is required to support such nuclear energy research and development for civilian applications.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2452: Jezreela Anderson

2452-1 — I am horrified that we have not already learned our lessons from over 50 years of radioactive contamination.

I am horrified that we are wasting our time and your time, even considering restarting the FFTF when the government does not have the technology, funds or political will to clean up the current mess.

I think that the blue ribbon panel that recently came saying that it will never be cleaned up, I thought, okay, there it is, we're done. It's never going to be cleaned up, so they'll never have to consider making more mess, right? Because we know it's never going to be cleaned up adequately, so let's put everything we have into clean up and this issue will go away, but here I am. So obviously, it hasn't gone away.

2452-2 — I do not believe that conversation tonight about restarting FFTF has anything to do with curing cancer. I believe it has everything to do with DOE and the U.S. military seeking something to do with all of the resources that we had basically siphoned off of our other programs for the last 50 years or more and put into the military industrial complex.

In the post-Cold War Era, the military industrial complex is looking for a purpose and what better purpose than curing cancer. And that's what this is really about. It's not about science. It's not about cancer. It's a big sham and it's really appalling.

2452-3 — I support alternative 5. I believe that FFTF should never be restarted, that the area should be cleaned up.

Response to Commentor No. 2452

2452-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2452-2: Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. The NI PEIS evaluates a range of reasonable alternatives for accomplishing the proposed action, one of which includes use of FFTF. However, no component of the proposed action is for the purpose of supporting any defense or weapons-related mission. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

2452-3: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2476: Elizabeth Atly

2476-1 — I think we should clean up Hanford and close it down. We don't need any more of this kind of pollution. I believe that Hanford has caused more cancers than possibly could be cured by the isotopes that are being proposed.

2476-2 — So shut it [FFTF] down.

Response to Commentor No. 2476

2476-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2476-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2480: Paul Beck

2480-1 — My confidence is very low. My ignorance is my burden and I guess that's what I need to work on, but just in the outset, being part of the ignorant masses, I don't see how we can continue to go on with what they're proposing if we can't keep in order what we already have [at Hanford]. And it seems to me it needs at least stopped at the very base so we can reconsider some alternatives as one angry gentleman had stated earlier.

Response to Commentor No. 2480

2480-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. FFTF can be operated safely to accomplish the stated missions. The environmental impacts associated with operation of the FFTF and support facilities at Hanford during normal operations and from postulated accidents are presented and discussed in Section 4.3 of the NI PEIS. All impacts to human health and to ecological resources would be small in the immediate area of the Hanford Site and negligible at all distant locations.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2420: Mary Lou Blazek
Oregon Office of Energy

2420-1 — And the Oregon Office of Energy just concluded 20 focus groups with the help and support of DOE to gain additional public input on the programmatic environmental impact statement. The process we designed was to encourage dialogue to get further Oregon input on the question of FFTF restart. Participants were chosen to represent a broad variety of backgrounds and interests. A high percentage of the participants who participated in the groups have reviewed the environmental impact statement summary and a few participants have reviewed part or all of the environmental impact statement. We are compiling the results of the opinions expressed by 76 participants in six communities into a report. The results, along with participant questions and concerns, will be forwarded to DOE.

It should be noted that this public involvement process was an informal sampling. We did not use traditional academic methods to select focus group participants. One group was selected at random by a market research firm. The remaining participants were chosen to provide a broad cross section of interests and approaches to issues.

We do not suppose that this process represents views of all Oregonians. We do believe the diversity of those involved in the discussion fairly represents a broad spectrum of opinion and gave the Oregon Office of Energy and will give DOE valuable insight into FFTF issues that concern Oregonians.

The Oregon Office of Energy staff prepared six opinion statements designed to gain specific public input on the environmental impact statement alternatives and cost information. The statements were designed to address issues raised in the Oregon Office of Energy scoping comments and to answer the questions on which DOE is seeking comment.

The following findings reflect the highest percentage of responses for each opinion.

The programmatic environmental impact statement demonstrates a compelling for all proposed missions. Sixty percent of the participants disagreed.

The programmatic environmental impact statement contains sufficient information to determine the best alternative. Forty-seven percent disagreed.

DOE should pursue alternative methods for meeting the missions. Eighty-one percent of the participants agreed.

DOE should identify the best alternative for each mission separately. Eighty-six percent of the participants agreed.

The public should have early access to cost analysis and nonproliferation study. Eighty-five percent agreed.

Response to Commentor No. 2420

2420-1: DOE notes the preliminary results stemming from community focus group polling compiled by the Oregon Office of Energy, Nuclear Safety Division. All comments documented in the Oregon Office of Energy report, "The Oregon Approach: Involving the Public in DOE's Nuclear Infrastructure Proposals Including Use of the Fast Flux Test Facility," dated September 2000, have been responded to in the final NI PEIS (see Commentor No. 2019).

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2420: Mary Lou Blazek (Cont'd)

We then asked the participants to choose an option that best supported their views.

Restart FFTF received 18 percent of the opinion.

Inadequate information to make a decision, 33 percent.

Shut down the FFTF reactor and use other facilities and shut down FFTF reactor were 45 percent of the participants we polled and only 4 percent did not answer. We'll be completing this report and providing it to DOE within the next two weeks.

Response to Commentor No. 2420

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

*Commentor: Earl Blumenauer
U.S. House of Representatives, OR*

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 210.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2473: Jay Bodzon

2473-1 — Leaving aside for the moment the ethical debates over the value of democracy in today's society, it seems critical that the public be permitted an active role in its decision making process such as this one. It is a sad fact of our political life though that in these complex times this means people will sometimes be deciding issues on which they have relatively little understanding. This necessarily opens this up to the potentials for rule by mob paranoia and hysteria.

I am a senior nuclear reactor operator at a local nuclear research facility and I feel safer handling radioactive and highly reactive fuel than I do expressing a pro-nuclear sentiment in that room.

That said, I don't know whether or not the Fast Flux Test Facility should be reopened. It seems that there are compelling arguments on both sides. I do know that medical isotopes present a miracle of science and we would be fools not to pursue them and that space exploration is truly the highest aspiration of our human achievement. Anything that furthers these developments is, in my opinion, worthwhile, but I think it is far more important that we allow these decisions to be made by public opinion, but an informed public opinion. Institutional causes of public ignorance are a daunting problem which I can't even begin to get into right now, but if we are to continue having meetings like this and be taken seriously, it is important that people be informed on the issues that they're commenting and not driven by stories and sound bytes.

Response to Commentor No. 2473

2473-1: DOE notes the commentor's views including the need for education as a prerequisite for informed public participation. It is DOE policy to encourage public input on matters of regional, national and international importance as part of its commitment to facilitate a public participation process that is open and unbiased. In doing so, DOE has established reading rooms near DOE sites to provide easy access to information about DOE programs and encourages the use of this source of information. Further, DOE has numerous web sites, including one for NE (<http://www.nuclear.gov>), that provide up-to-date-information complete with fact sheets, news releases, and other materials. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments in preparing the Final NI PEIS.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2493: Matthew Brener

2493-1 — I would just like to make this point to say that I am in favor of the mission that was laid out in this document that says that they need the isotopes and they need the plutonium. I support that entirely. I support whatever program that the DOE thinks would be the most, would be the best to carry out that mission, to get the isotopes and to make the plutonium-238. The most — the best and cost effective. If that's starting up the FFTF, I'm all for it. If there's a better way to do it, I'm all for that.

I would like the FFTF started up for research purposes to develop and to test and to have more information on the sodium aspect of it, liquid sodium reactor.

Response to Commentor No. 2493

2493-1: DOE notes the commentor's support for its missions as stated in the NI PEIS, and for their support for Alternative 1, Restart FFTF.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2486: Kelly Caldwell

2486-1 — I think that it [NI PEIS] doesn't adequately address, in particular, cleanup of the materials that will be generated. I mean not to mention all the existing cleanup issues. It doesn't adequately document how anything that will be created in the future will do with cleanup. And that's completely unacceptable.

Response to Commentor No. 2486

2486-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored, and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2475: Chris Carbine

2475-1 —...I wanted to thank Colette Brown and the Department of Energy for being courageous enough and open minded enough to gather information from the people that this affects.

2475-2 — I don't know enough information either about the process of what's involved, but I do know that I favor progress and I favor searching other alternatives, the possibility of looking to those who are already producing the isotopes and can we get them to produce enough to help us out, you know.

2475-3 — There seems to be a strong sentiment about Hanford cleanup and I agree that's necessary and important ...

Response to Commentor No. 2475

2475-1: DOE notes the commentor's support of the public participation process.

2475-2: A number of facilities, including those already producing isotopes, were considered but were dismissed from further consideration (see Volume 1, Section 2.6). Among the reasons that some were dismissed was the fact that they lacked sufficient neutron production capacity, were fully dedicated to existing missions, were not capable of steady-state neutron production, had insufficient power to sustain adequate steady-state neutron production, were unable to produce a constant, reliable source of neutrons due to dependency on operating schedules of their primary missions, are under construction with capacity fully dedicated to other planned mission, or have been permanently shut down

2475-3: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2455: Katherine Chuttie

2455-1 — I add my voice to those who tonight call for deactivating the FFTF and created no new missions.

Response to Commentor No. 2455

2455-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

*Commentor: Michael Contini
National Association of Cancer Patients*

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 1700.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2434: Stephen Curley

2434-1 — And there is uranium-238 in the ground at Hanford and it is leaching into the groundwater right now. You folks from Richland, you folks have a vested interest in this whole program. The start up is your salaries. It's your pensions. It's your jobs. It's your economy. It depends on it.

If I was up there, I'd probably be down here speaking for the darn thing too. Dr. Kitzhaber, our fine Governor, is a doctor. Vera Katz, the Mayor here in Portland, City Council, Brian Baird up in Washington, Ron Wyden, they're all against this start up. There is goo up there in Hanford. Lots of goo. It's the most toxic goo on this planet. It's up there at Hanford. I think you folks are familiar with that.

This is not just cow poop that you can just wash off of your arm if you get some cow poop on your arm. This toxic goo, we really don't know how to store. It's leaking and it's heading toward the second largest river in the United States, that would be the Columbia River.

It's leaking towards Umatilla. It's leaking towards the Dalles. It's leaking Hood River, Portland and then Astoria.

Do you want to water your crops with this goo, with this goo water?

Do you want to eat the fish that lives in this toxic goo water? Or throw the ball for your dog to go fetch in the Columbia, like I do with my little dog who has a tumor on her adrenal gland. Who knows where that came from?

Or maybe even windsurf in this toxic goo. I don't think you do because I know I don't. I don't think you want to drink this toxic goo water.

Clean up your toxic, deadly mess.

Response to Commentor No. 2434

2434-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2479: Jamaica Daras

2479-1 — All I'd really like to say is that I am a 22-year-old student and that basically my generation has been handed what the previous generations have created and couldn't stop and that is an environment and a home that is close to utter chaos and as I look around me as the next generation who is to step up and to come into power, I'd just like to say it's frustrating to be handed such a pile of #*\$! and to say now you have to fix your home and my home and the home of those around you and the home of the rest of the globe that are around you because basically we endure this human endeavor together and maybe this is one small corner and pocket of the world, but it is the point that a change needs to occur due to the fact that the way that we have been doing things hasn't produced a better environment and a better home.

Response to Commentor No. 2479

2479-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2490: Betty Davenport

2490-1 — I am in support of restarting FFTF for the production of medical isotopes. I feel it's unconscionable for a group of people to suppress technology that can save thousands and thousands of lives.

2490-2 — Much of the testimony that we've heard here in Hood River and in Portland evolves around false information. They feel that this is going to put more waste into the river when they don't seem to understand that FFTF is three miles away from the river and 20 miles away from the wartime reactors which has caused the leaking, the problem of pollution.

They don't seem to understand that whether or not FFTF started, it's not going to change the amount of funding relegated to the cleanup. I implore you to please make a decision based on facts, not through rhetoric that we've been hearing. I understand people fear what they don't know, but they just aren't willing to listen and visit the site and understand things.

Response to Commentor No. 2490

2490-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

2490-2: DOE notes the commentor's views and observations. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2466: Les Davenport

2466-1 — In terms of going to each other's meetings, I'd like to point out that the Richland meetings are well attended, in particular by Seattlites and some Oregonians. The last meeting a year ago we had about a third of the people there that came to speak in opposition to the FFTF. Why can't we attend your meetings if you attend ours or if you're going to keep Washingtonians out, you better start with the Heart of America Northwest.

The additional oral comments were submitted in written form and are addressed in the responses to Commentor No. 1788.

Response to Commentor No. 2466

2466-1: DOE notes the commentor's views and observations. It is DOE policy to encourage public input on matters of regional, national and international importance as part of its commitment to facilitate a public participation process that is open and unbiased.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2456: Vera Defoe

2456-1 — This one, of course, we're supposed to address the draft environmental impact statement so I will do that and say, of course, that I support alternative 5.

2456-2 — Many people spoke tonight with quite a lot of emotion and didn't actually address the EIS and I'm hoping that it was obvious that they were supporting alternative 5 if they would so be counted. I don't know how you tally it up, but then again, of course, this is not some sort of an election, how many votes for or against are going to matter anyway. I sort of wonder whether it even matters if we're here at all because of course this is one of the steps you have to do in the whole NEPA process.

2456-3 — Nonetheless, I will say what I said the last time I was at one of these hearings which is no. Don't do it [startup].

2456-4 — There can't be any other reason here. They've created this massive, massive amount of contamination, pollution. They seem unable to clean it up. It's leaking with increasing speed into the Columbia River. Everybody thinks it's a pretty big river and spread out and it probably doesn't matter all that much, but it does matter.

Response to Commentor No. 2456

2456-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.

2456-2: Comment noted. DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and holding public hearings is an essential and required part of the NEPA process. In preparing the Final PEIS, DOE has assessed and considered both oral and written comments received on the Draft PEIS during the public comment period and has responded to these comments in the Final PEIS. Volume 3 of the NI PEIS contains public comments received on the NI PEIS and DOE responses to those comments. These comments are summarized, tabulated, and cross referenced by commentor, category, and method of submission. A summary discussion is also provided of the overall prevailing issues raised during the public comment period. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

2456-3: See response to comment 2456-1.

2456-4: DOE notes the commentor's concerns regarding the migration of contaminants to the Columbia River. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2438: Barbara Drageux
Women's International League for Peace and Freedom

2438-1 — I would like to express my opposition and the opposition of Women's International League for Peace and Freedom, Portland Branch, to the restart of the Fast Flux Test Facility at Hanford Nuclear Reservation.

2438-2 — While we have not been given the facts about how much plutonium-238 NASA requires for its proposed space missions, we have learned that the need is little more than the United States already has on hand. The rest can easily be obtained from Russia through the agreement we have with that nation at close to the cost of keeping FFTF on hot standby for two years.

2438-3 — The additional benefit would be that of keeping weapons-grade plutonium out of circulation.

2438-4 — We understand that the FFTF is 25 years old and believe that in the Year 2000 when our personal computers need to be updated almost annually, FFTF can hardly be capable of operating adequately and economically. The cost of bringing it up to Year 2000 standards would be prohibitive and constitute a supreme disregard for those who are paying the bill.

2438-5 — The Department of Energy has a commitment to clean up Hanford, including some of the facilities proposed for the plutonium-238.

How can you suggest that the DOE budget be spread even further, just reducing the dollars available for cleaning up the mess left so irresponsibly by the nuclear programs of the United States?

2438-6 — How can a plan [restart FFTF] that will increase high level nuclear waste be justified?

Response to Commentor No. 2438

2438-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2438-2: DOE notes the commentor's concern about NASA's need for plutonium 238 for space missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium 238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium 238, DOE's ability to support future NASA space exploration missions may be lost. DOE could purchase plutonium-238 from Russia; however, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

2438-3: The plutonium-238 which NASA uses as an electric power source for deep space missions is not used in nuclear weapons. Therefore, purchase of plutonium-238 from Russia would not keep weapons grade plutonium out of circulation.

2438-4: As stated in EIS Section 2.3.1.1.2, several upgrades would be implemented if a decision to restart FFTF was made by DOE. These upgrades would improve efficiency and reliability, minimize waste, and conform to current industry standards. Although the FFTF is 20 years old it is DOE's newest reactor, it is in excellent condition and evaluations have been performed to show that it has sufficient life remaining to fully support the proposed 35 year mission. The separate cost report accounts for costs associated with expected FFTF facility modifications. Throughout the life of FFTF, the FSAR has been maintained via approved change control and engineering change notices. All updates and revisions have had the required reviews and approvals. No deficiencies in the FFTF design, analysis, facility condition, or operations have been identified or recognized that would prevent FFTF from meeting the safety objectives and

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2438: Barbara Drageux (Cont'd)
Women's International League for Peace and Freedom

Response to Commentor No. 2438

intent of commercial nuclear safety regulations for equivalent facilities. In the event that FFTF restart is selected in the Record of Decision, a new Safety Analysis Report, including a Probabilistic Risk Assessment (PRA), will be prepared and it will address any changes in plant configuration, operating conditions and procedures. The revised safety analyses will be subjected to a thorough independent review process.

- 2438-5:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.
- 2438-6:** As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. High-level radioactive waste would not be generated from merely operating FFTF. It is DOE's policy that all wastes be managed (i.e., treated, stored, and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2460: Andrew Eisman

2460-1 — It's totally absurd that we are talking about this. How can any intelligent person be talking about the creation of more nuclear waste?

I cannot understand it.

Response to Commentor No. 2460

2460-1: DOE notes the commentor's concern regarding the generation of wastes. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored, and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2487: Shamu Fenervesia

2487-1 — I'm for Alternative 5 against — for the recommissioning of the FFTF.

2487-2 — I think it's a terrific misappropriation, a misuse of funds considering where the cleanup is at and I think that money and that effort should be spent on cleanup.

2487-3 — I think there's an inadequate address of waste generation and other issues in the PEIS.

Response to Commentor No. 2487

2487-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.

2487-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

2487-3: In the NI PEIS, DOE has evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow for a fair comparison among the various alternatives. This was accomplished through review and evaluation of site-specific information on the environmental conditions prevailing at ORR, INEEL, and Hanford to include a comprehensive analysis of the associated environmental and health risks of each alternative, including waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored, and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2468: Ken Ferguson

2468-1 — I'm in complete favor of complete deactivation of FFTF. Shut it down. It's old, unsafe. It's expensive. It detracts from and is contrary to Hanford's mission of clean up.

Response to Commentor No. 2468

2468-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. Although the FFTF is 20 years old, it is DOE's newest reactor. It is in excellent condition and evaluations have been performed to show that it has sufficient life remaining to fully support the proposed 35-year mission. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2431: Len M. Ford

2431-1 — I also want to speak in favor of Alternative 5.

2431-2 — Even so, given the other problems of Hanford, given the fact you fired two people last week for falsifying and creating safety records on this reactor, given the stories about releases from the fire which changed almost as fast as the winds did out there, even so, the fact that under the most terrible assessments the total failure, inability to come anywhere close to even what the Department of Energy has stated they would try to do as far as cleanup, you know, most notably recently with the debacle with the BNFL and the vitrification plant, they're so far behind with that to expect to be trusted with anything remotely close to this is just, you know, I guess you should be a martyr for audacity.

Response to Commentor No. 2431

2431-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2431-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. In regards to the Hanford wildfire of 2000, the DOE Richland Operations Office, the State of Washington Department of Health, and U.S. Environmental Protection Agency performed environmental monitoring on and around the Site to assess potential radiological impacts. The wildfire did not cause a release of radioactive materials from any Hanford facilities but did result in resuspension of radioactive materials which were already in the environment. The very low levels of radioactive materials that were resuspended were slightly above natural background levels and required several days of analysis to quantify. Information on this event has been made available to the public and can be accessed at <http://www.Hanford.gov/envmon/indes.html>. This site also provides a link to information on the independent offsite air monitoring that was conducted by the U.S. Environmental Protection Agency.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2432: Joyce Fullington

- 2432-1** — Thank you for listening to Oregonians tonight and to consider my testimony to see the closure of the FFTF as an alternative course of action.
- 2432-2** — I would like to register my no vote regarding the start up of the FFTF.
- 2432-3** — The PEIS has revealed nothing that convinces me that the FFTF is needed.
- 3432-4** — We, the people, were given promises by the DOE in 1995 that they would shut down the FFTF and used the money saved for high priority cleanup. Instead, the DOE has spent over \$100 million of cleanup money to keep FFTF on hot standby.
- It is time to return to the initial mission and close the FFTF and focus on cleanup of Hanford.
- Most of us know that Hanford's high level nuclear waste tanks are leaking radioactive waste into the groundwater, close to the Columbia River.
- The cleanup must be our first priority.
- We are living at a time of prosperity and if we don't clean up Hanford now, it won't get done. It is our moral duty to each of our children to do nothing that diverts our attention from the clean-up of Hanford.
- In my visit to Hanford one year ago, I saw environmental disaster after environmental disaster as I visited the K-basins, stood on the shores of the Columbia where the stench of 90 leaks into the river every day, saw the tank farms that are leaking and in danger of explosion and saw the frustration of workers who admit there's not much that they understand about cleaning up this mess at Hanford in regards to the K-basins and so forth.
- 2432-5** — It is wrong to create more high level radioactive waste at the FFTF as we cannot contain the waste at Hanford now and we have no technology yet to permanently and safely store our nuclear waste.
- 2432-6** — My understanding is that NASA has stated that they have no need to purchase Pu-238 for the space missions at this time and yet this has been used to justify the restart of FFTF for about 90 percent of the mission. Thus, I feel this is not a reason to start FFTF.
- 2432-7** — It has been stated that 10 percent of the time and money spent on FFTF start up would be for medical isotopes. However, medical isotopes would be produced for much less money if an accelerator was built
- 2432-8** — . . .this option [accelerator] would be safer due to the ability of an accelerator to shut down immediately.

Response to Commentor No: 2432

- 2432-1:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.
- 2432-2:** See response to comment 2432-1.
- 2432-3:** Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. The NI PEIS evaluates a range of reasonable alternatives for accomplishing the proposed action, one of which includes use of FFTF. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.
- 2432-4:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Prior public meetings were held on this formal milestone change. FFTF restart would not impact ongoing cleanup missions at Hanford. Hanford tank waste issues are not within the scope of this PEIS. Implementation of the alternatives described in Section 2.5 of Volume 1 would not add waste to the high-level waste tanks at Hanford. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2,

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2432: Joyce Fullington (Cont'd)

2432-9 — Also, the production of high level radioactive wastes would not be produced [in accelerators] such as in the FFTF.

2432-10 — In addition, DOE's experts from the Subcommittee for Isotope Research and Production Planning concluded that FFTF was not a viable source for medical research isotopes. The Washington State Medical Association says there's no need for FFTF as an additional source of isotopes.

2432-11 — Medical history tells us that there was a time in recorded history where there were no cancers. John Gothen has recently produced two new books showing that many forms of radiation are causing cancers including breast cancer and ischemic heart disease.

2432-12 — You said in your presentation that the risk to the public and workers are highest if there's accidents by air or by land transport. You said the risk is less than background levels for radiation. That doesn't make sense. The person that's involved in that plane crash or that truck crash or the shipping accident has a much greater background radiation risk. Accidents have happened at the FFTF. The workers of Hanford have been sprayed with americium and have been victims of accidents.

I say let's not take the risks to public and to the workers.

Response to Commentor No. 2432

implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

2432-5: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. High-level radioactive waste would not be generated from merely operating FFTF. It is DOE's policy that all wastes be managed (i.e., treated, stored, and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

2432-6: A May 22, 2000, correspondence from NASA to DOE identified that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium 238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

2432-7: DOE notes the commentor's views. As identified in the Cost Report, the listed cost for each alternative is, by itself, not sufficient information to provide a mission decision. Each of the irradiation facility alternatives under consideration can meet various portions of DOE's identified need for expanded isotope production and nuclear research and development. The capability of

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2432: Joyce Fullington (Cont'd)

Response to Commentor No. 2432

each irradiation facility to support the proposed expanded mission areas would determine the extent that DOE would be able to meet its stated objectives. For example, the low-energy cyclotron is sized to produce moderate quantities of diagnostic isotopes, biomedical tracers, and a few types of therapeutic isotopes. Because of the 200 MeV energy threshold required for neutron spallation, the low-energy cyclotron cannot produce neutrons for the production of the neutron-rich isotopes which make up the bulk of the therapeutic market. FFTF has the largest target volume of the alternatives under consideration for the production of isotopes. It also has a high flux and flexible neutron spectrum suitable for large scale production of both diagnostic and therapeutic isotopes. Each facility has its own technical advantages and disadvantages. The relative capabilities of each alternative, the degree to which each alternative satisfies policy and programmatic objectives, as well as the relative cost of alternatives will be factors in the Record of Decision.

2432-8: Nuclear reactors and accelerators will shut down immediately when the electrical power is removed.

2432-9: See response to comment 2432-5.

2432-10: The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities. Currently, approximately 50 percent of DOE's isotope

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2432: Joyce Fullington (Cont'd)

Response to Commentor No. 2432

production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions (basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term (less than 5 years).

2432-11: The commentor's concern about cancer rates is noted. Cancers are believed to be caused by a combination of hereditary and environmental factors, including radiological and chemical agents. Statistics from the National Cancer Institute indicate that the rate of cancer incidence and the rate of cancer mortality has dropped during the 1990's [NCI webpage (as of 10/19/2000) - <http://cancernet.nci.nih.gov/statistics.shtml> article entitled "Cancer Death Rate Declined in the 1990s for the First Time Ever"]. A survey sponsored by the National Cancer Institute and published in the Journal of the American Medical Association in 1991 (JAMA 1991:1403-1408) detected no general increase in the risk of cancer death for people living in 107 counties adjacent to or containing 62 nuclear facilities. The Hanford Site, Idaho National Engineering and Environmental Laboratory, and Oak Ridge Reservation were included in the survey. The study used cancer mortality data from Benton, Franklin, and Grant Counties in the survey for the Hanford Site (See Section 3.4.9.3 of Volume 1). This PEIS has provided an estimate of the incremental potential human health impacts associated with a reasonable range of alternatives (including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

2432-12: DOE notes the commentors concern about the risks to the public and workers. The NI PEIS transportation activity with the highest risk is the air shipment of medical isotopes. The analysis conservatively assumes that every isotope

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2432: Joyce Fullington (Cont'd)

Response to Commentor No. 2432

shipment is by air, and that each shipment requires an intermediate stop, for a total of about 500 shipments per year. The risk to the public from these shipments is far lower than the risk from background radiation. However, the risk from this transportation is in addition to the risk from background radiation. The NI PEIS analysis, summarized in Table J-7, shows that it is unlikely that the transportation activities covered by the NI PEIS will cause an additional latent cancer fatality. This risk is very small. For comparison, as discussed in section H.2.1.2 of the NI PEIS, the risk to a population of 100,000 people exposed only to natural background (0.3 rem per year, not including any manmade or Hanford-related sources) would be 15 latent cancer fatalities per year. Over the 35 year NI PEIS period, this would equate to 525 cancer fatalities.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2451: Patrick Garten

2451-1 — People haven't spoken much about the particular reactor and the particular type reactor and how unusually dangerous it is. I consider this a menace, even without its nuclear core.

Just the cooling system alone is an incredible environmental menace and it is both extremely expensive and extremely dangerous to maintain this condition

2451-2 — . . .some other things about the time frame of the radioactive waste at Hanford, both that's likely to be produced. The FFTF, if you restart it and the stuff that's already there which is just incredible in its dangerousness and its lifespan. A lot of it is going to be around further into the future than our history of the past.

2451-3 — It's an extremely emotional issue for me and I think it's ridiculous you keep calling us back here and I think it's a big show that you come and you listen to our comments and we say no and you come back a few months, a few years later and you say we're thinking of doing this again, different reason.

Response to Commentor No. 2451

2451-1: The FFTF meets all safety requirements established by DOE and the DOE requirements are consistent with those established and applied by other regulatory agencies such as the Nuclear Regulatory Commission. Analyses presented in the PEIS show that the risks associated with operation of the FFTF are extremely small, see Section 4.3. The FFTF operated safely and successfully from the time it started in 1980 until April 1992, when it was shutdown for a refueling outage. It has been safely maintained in a standby condition since that time. If a decision is made to restart FFTF, the status and condition of all safety systems will be addressed and appropriate action taken, as necessary, prior to startup to assure safe operation.

2451-2: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. High-level radioactive waste would not be generated from merely operating FFTF. It is DOE's policy that all wastes be managed (i.e., treated, stored, and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

2451-3: DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and holding public hearings is an essential and required part of the NEPA process. DOE policy encourages effective public participation in its decision-making process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

*Commentor: Mike Grainey
[for] Governor John A. Kitzhaber, OR*

The oral comments were submitted in written form by Governor John A. Kitzhaber and are addressed in the responses to Commentor No. 1648.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

***Commentor: Charlie Hales, Commissioner,
City of Portland***

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 2019.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2437: Carrie Halstein

2437-1 — I don't remember my first nuclear power protest, but I remember the first time I took my four children, it was November of 1971, I remember the day exactly, it was one of my sisters' birthday, November 3rd and there are two people in the room here tonight that were at that same protest. It was Amchitca Nuclear Underground Blast and my girl was a little, little girl then. My kids had conferences at school and they came home at 11 a.m. and I said gee, guess what we're going to do today? We're going to go protest nuclear power and that's where I met Lloyd. And 29 years later, here we still are.

So my message is simple. Clean up , clean up, clean up. No more waste. No more waste. And this is not a NIMBI, not in my background issue. No nuclear waste anywhere

2437-2 — Number 5, deactivation and your mission is not our mission.

Response to Commentor No. 2437

2437-1: The commentor's opposition to generating nuclear waste and support of cleanup is noted. The primary DOE mission at Hanford is cleanup. DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Public meetings were held on this formal milestone change. The alternatives delineated in the NI PEIS, including FFTF restart, would not have an impact on Hanford cleanup activities.

2437-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

*Comments from the Portland, Oregon, Public Hearing (August 29, 2000)**Commentor No. 2485: Colleen Hanson*

2485-1 — I being in the past very anti-nuclear, but in the last couple of months I have listened to facts given to me by these folks and they are just folks. They're not these nuclear fat cats that we all think they are. They're just folks and they tell me these facts and I know, I know that's what they are because they all begin to add up.

So I listened and by listening I started to not be afraid of nuclear energy any more and these people with their fears, it's because of their lack of information and it angers me so much that our State officials will stand up there and feed us these half truths and that's what they are. Each one. Even a lay person, such as myself in just the amount of time that I have been learning these different details I have seen that they were speaking in half truths. And at the very least we should be given — both should go on the table, both sides of the story. Finally, let's set a precedent. Let's just get it on the table. Not this one, but maybe a bigger forum, but just get it on the table and you know what? I am the person that tried to coordinate the media.

Response to Commentor No. 2485

2485-1: DOE notes the commentor's views.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2492: Karen Harding

2492-1 — I am very much opposed to the FFTF start up.

2492-2 — I feel that it's a dangerous signal to the powers that be that they can restart the nuclear industry in a time when the earth needs to put its research and development toward alternative energies. If they were given half a chance, they would be able to go and far surpass the poisons that are caused by the nuclear industry.

2492-3 — I would prefer a shutdown of the FFTF.

2492-4 — I would prefer that money be spent on the cleanup which sounds to me is realistically in the billions of dollars and not the millions.

The DOE has budgets for cleanup that don't even begin to cover what the real cleanup would cost. They do sort of a flat year by year budget which is maybe realistic to what they can get, but not realistic to what the cleanup is and the money is wasted and keeping that [FFTF] on hot standby.

2492-5 — I appreciate the comment period being extended to the public and I would hope that the next time there are some accounting for the number of comments that are opposed and for, I suppose, so that it's more of a tally and there can be more of a sense that the vast majority of comments are against this reactor.

Response to Commentor No. 2492

2492-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

2492-2: DOE notes the commentor's interest in alternative energy sources. Issues of research and development of alternative energy sources are beyond the scope of this Nuclear Infrastructure PEIS. Despite advances in many energy technologies, America's future energy security will depend on a robust mix of energy sources which necessarily includes nuclear power generation. It is the current United States policy that clean, safe, reliable nuclear power continue as a viable component of the United States' energy portfolio. In recognition of this need, the government has initiated nuclear energy research and development programs to address potential long-term barriers to expanded use of nuclear power (e.g., nuclear waste, proliferation, safety, and economics) and to ensure that current nuclear power plants can continue to deliver adequate and affordable energy supplies. An enhanced DOE nuclear facility infrastructure is required to support such nuclear energy research and development for civilian applications.

2492-3: See response to comment 2492-1.

2492-4: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

2492-5: In preparing the Final PEIS, DOE has assessed and considered both oral and written comments received on the Draft PEIS during the public comment period and has responded to these comments in the Final PEIS. Volume 3 of the NI PEIS contains public comments received on the NI PEIS and DOE

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2492: Karen Harding (Cont'd)

Response to Commentor No. 2492

responses to those comments. These comments are summarized, tabulated, and cross-referenced by commentor, category, and method of submission. A summary discussion is also provided of the overall prevailing issues raised during the public comment period.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2482: Keith Harding

2482-1 — My opinion is to immediately do the cleanup job ...

2482-2 — ... don't restart [FFTF] ...

Response to Commentor No. 2482

2482-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2482-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2488: Leonard Harville

2488-1 — I'm here tonight to express my support for the restart of the Fast Flux Test Facility ...

2488-2 — At the minimum, I believe the costs of electrical power and the capacity available need to be considered for all the options.

Response to Commentor No. 2488

2488-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

2488-2: As presented in the Cost Report, utility costs were considered in the operating costs of all alternatives. Electrical costs were specifically broken out for Alternative 3, Construct New Accelerator(s) and Alternative 4, Construct New Research Reactor, as a factor in the preconceptual design estimates (see Appendixes A and B, respectively of the Cost Report). DOE acknowledges that Alternative 3, Construct New Accelerator(s) will place a high electrical demand on the local electrical grid. The impact assessment of the electrical demands of Alternative 3 on the local electrical grid is a site specific assessment and will be evaluated during subsequent NEPA review if the Record of Decision selects Alternative 3.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor: Harold Heacock

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 353.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

***Commentor: Suzanne Heaston
[for] U.S. Senator Slade Gorton, WA***

The oral comments were provided in greater detail at the Seattle, Washington, hearing. For responses, see Commentor No. 2497 (Suzanne Heaston).

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2439: Robert Hedlund

2439-1 — My Name is Robert Hedlund and I live in Portland. I also worked around Echo when I was a kid over there, when you guys were releasing double the amount of atomic energy that was released at Chernobyl. You don't experiment on people.

You know, Slade Gorton ought to be ashamed of himself. Sixteen families around that place up there, their kids have died. Their cattle, 80 out of 200 were defective. These bimbos talking about it doesn't affect you, hey, I don't have any #*\$! hair on my legs, no teeth. My frigging hair fell out because of Trojan and your nuclear #*\$!, you know, up there.

The people of Oregon want the #*\$! mess cleaned up. They wanted the river cleaned up. We got to dredge this river, the Columbia River. How much of your crap is going to be put on the banks so our kids can go and play in it and die? I've had two #*\$! kids die because of the #*\$!, because of the crap between the St. John's Bridge and the Fremont Bridge. They knew the #*\$! was in the ground. They didn't tell us. Four of my friends are dead.

2439-2 — You talk about isotopes. We've got enough #*\$! medical isotopes and the rest of this stuff. The minute Bechtel blew into town I knew exactly what the hell you guys were up to. They're the key player and stuff.

Response to Commentor No. 2439

2439-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1. The commentor's concerns regarding contamination of the environment is noted. Radiological impacts on populations residing within potentially affected areas surrounding the Hanford Site are addressed in Section K.5.3 of Appendix K. Models for estimating radiological health impacts discussed in Appendixes H and I assumed that all locally grown food supplies would be subject to radiological contamination throughout the project duration, and that all locally grown food supplies would be consumed by residents in the potentially affected area. The analysis of radiological effects that would result from implementation of the nuclear infrastructure alternatives indicates that the radiological risk to persons residing in the potentially affected area would be so small that no credible pattern of food consumption (or other ingestion pathways) would be expected to result in a latent cancer fatality. Implementation of the nuclear infrastructure alternatives would not be expected pose a significant risk of radiological contamination of land within the potentially affected area.

2439-2: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE

*Comments from the Portland, Oregon, Public Hearing (August 29, 2000)**Commentor No. 2439: Robert Hedlund (Cont'd)**Response to Commentor No. 2439*

has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs. Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions (basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term (less than 5 years).

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2436: Nancy Hendrix

2436-1 — I'm here to ask that you do decommission the FFTF

2436-2 — . . .use all the monies for cleanup at Hanford and I won't be thanking you for this until that is done.

2436-3 — And what I'd like to talk about briefly, there have been many reasons, very well written, very well reiterated over and over again why this reactor should be shut down. I find it unfortunate that the powers that be and when I speak about the powers that be we all know what this about and that is about money and it is only about money. And what is happening with the Pacific Northwest National Lab is a weapons lab. We all know how money works and how power works and how it pits people against each other, people who would be joining forces and how it uses that and that's exactly what's happening with anybody who has cancer. I mean you can't help but feel for them and want what's best for them. But there is such a thing, as first of all, as this has been addressed in the past, the fact is there are other ways to get those radioisotopes. It does not have to be here. And what is being done is you're being used whether you know it or not, and you're being used by money, not by who you think you're helping or what you think you're doing, but you are being used by the powers that be that have other agendas, but the agenda is the real issue.

2436-4 — If it isn't so damn economical some other way, then do it some other way, but not here and not now and frankly, the amount of cancer that has been caused and will be caused in millennium and millennium and millennium by nuclear power, by the by-products of the reactor is so much more than any cancer that could be cured through promulgating it.

Response to Commentor No. 2436

2436-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2436-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

2436-3: DOE notes the commentor's concerns. However, DOE has no hidden agenda for weapons production or use of FFTF for military missions. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. The NI PEIS evaluates a range of reasonable alternatives for accomplishing the proposed action, one of which includes use of FFTF. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

2436-4: The commentor's concern for cancers associated with the entire nuclear industry is noted. This PEIS has provided an estimate of the incremental potential human health impacts associated with a reasonable range of

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2436: Nancy Hendrix (Cont'd)

Response to Commentor No. 2436

alternatives (including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2469: Phillip Hiller

2469-1 — ... I think very strongly that we ought to open FFTF again for this production of medical isotopes.

Response to Commentor No. 2469

2469-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2447: Chuck Johnson

2447-1 — I personally do believe that there needs to be additional research into the use of some of these radioisotopes for cancer treatments and I think it's very important. It has the potential, as some people have said, to reduce the amount of radiation exposure to people who have cancer and to target that cancer treatment, specifically to the cells that need to be targeted. That doesn't mean that we need to produce those isotopes at Hanford and at FFTF. I believe that until we're certain that we're going to need the quantity of isotopes that we're talking about, there's no reason to go ahead. It's being speculated upon. There's no reason to go ahead with the restart of the FFTF merely on the speculation that we might need enormous amounts of isotopes.

We have other reactors that already exist that are operating that can produce those isotopes.

2447-2 — Some of these isotopes can be produced in linear accelerators, so it's premature, it seems, to make a decision of that type to run that facility merely for that purpose, particularly because this type of reactor, a liquid cooled metal reactor, cooled by sodium is a hazardous reactor, more hazardous if an accident occurs than some other designs of reactor.

The configurations that would be used in that reactor for producing the isotopes would be varied, would — there would need to be different configurations used to produce different types of isotopes and the complexity involved in that increases the chance that an error may occur with operators. You're not going to have that kind of a danger with an accelerator because you can simply switch off the electricity if you have a problem.

If you use more plutonium in that reactor, it's harder to control the chain reaction of a nuclear reactor that has a higher amount of plutonium in it because the fluctuations in heat happen much more rapidly than they do with uranium.

This could be an extremely dangerous reactor ...

2447-3 —...another thing that's not included in the cost estimate is the cost of decommissioning the reactor. It's included in the other options, in the options of using other alternatives that cost to decommissioning is added, but the cost of decommissioning is not added in the option for operating the FFTF reactor.

Are you anticipating to operate that reactor indefinitely and never close it down? And never have a cost for shutting it down? I think you need to look at that. That's an obvious mistake that you've made in your calculations for cost right there.

2447-4 — And I also think that you need — there needs to be some sort of basic estimate as to how long you anticipate this reactor could operate. Other reactors that have used higher concentrations of plutonium have had trouble with melting and have had to close down their reactors early.

Response to Commentor No. 2447

2447-1: DOE acknowledges the difficulty in reliably predicting isotopic needs for future uses in research and medicine. DOE has sought independent analysis of trends in the use of medical radioisotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it has established two expert committees. The first, a thirteen-member Expert Panel convened in 1998 to forecast future demand for medical isotopes, included academicians from leading medical universities and schools of public health, and professional affiliations ranging from the National Cancer Institute to manufacturers of radiopharmaceuticals. The second consists of a subcommittee of DOE's Nuclear Energy Research Advisory Committee (NERAC), established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. The members of this Subcommittee were selected based upon their expertise and experience in the production, processing, distribution, and application of stable and radioactive isotopes in the biological and physical sciences, and in medicine. The members included basic and clinical scientists, administrators, and users of isotopes from academia, industry, and the federal government. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs. The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs. Currently, approximately 50 percent of DOE's isotope production

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2447: Chuck Johnson (Cont'd)

If we put all our eggs in this one basket for these isotopes, what are you going to tell all these people who need cancer treatments if that thing melts and they can't get those isotopes that you say are so important?

2447-5 — I think you need to consider all of these things in your environmental impact statement and I would urge you to consider finding alternative sources Pu-238, avoiding the cost and the need for running a reactor or an accelerator for that and consider building a linear accelerator to meet the medical isotope needs.

Response to Commentor No. 2447

capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions (basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term.

2447-2: FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small. Prior to an FFTF restart, a revised safety analysis report and a probabilistic risk assessment would be prepared which would address any changes in plant configuration, operating conditions, and procedures. The revised safety analyses would be subjected to a thorough independent review process.

2447-3: While the Cost Report evaluates the cost of permanently deactivating FFTF as described in the NI PEIS, it does not consider the costs of ultimate decontamination and decommissioning of the facilities evaluated for the proposed actions. FFTF would be permanently deactivated should a decision be made to select any alternative other than Alternative 1 (Restart FFTF) or the No Action Alternative and those costs are appropriately applied to the other alternatives. Decommissioning FFTF, including associated costs, is not within the scope of the NI PEIS. Before decommission activities were undertaken, DOE would prepare the appropriate environmental documentation to address the associated environmental impacts. Cost assessments would also be prepared. DOE remains committed to cleaning up the Hanford Site independent of ultimate decision on FFTF. The amounts of wastes associated with decommissioning FFTF would be small. The schedule for cleaning up these other wastes would not be affected if FFTF were restarted.

*Comments from the Portland, Oregon, Public Hearing (August 29, 2000)**Commentor No. 2447: Chuck Johnson (Cont'd)**Response to Commentor No. 2447*

- 2447-4:** The FFTF can be operated safely to accomplish the stated missions. Evaluations have shown that FFTF has sufficient life remaining to fully support the 35 year mission proposed in the NI PEIS. As stated in EIS Section 2.3.1.1.2, several upgrades would be implemented if a decision to restart FFTF was made by DOE. These upgrades would improve efficiency and reliability, minimize waste, and conform to current industry standards. The age and condition of the FFTF facility infrastructure will be considered by DOE in its decision making process. The separate cost report accounts for costs associated with expected FFTF facility modifications. Throughout the life of FFTF, the FSAR has been maintained via approved change control and engineering change notices. All updates and revisions have had the required reviews and approvals. No deficiencies in the FFTF design, analysis, facility condition, or operations have been identified or recognized that would prevent FFTF from meeting the safety objectives and intent of commercial nuclear safety regulations for equivalent facilities. Included in the PEIS are the results of analyses that show that the risks associated with operating the FFTF are very small. If the Record of Decision concludes that FFTF should be restarted, a Probabilistic Risk Assessment would be completed and a new FSAR would be prepared in accordance with applicable regulations.
- 2447-5:** DOE notes the commentor's support for finding an alternative source for plutonium-238 and Alternative 3, Construct New Accelerator(s) (for medical isotope production only). The commentor should note that the No Action Alternative provides for the possible purchase of plutonium-238 from Russian. However, the stated goal of the NI PEIS is to enhance U.S. capabilities in this area.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2441: Kathleen Jurgens

2441-1 — Like many, many people here, I've been coming to these hearings year after year, hearing after hearing on the same subject and I'm getting really, really sick of saying the same thing over and over again and having you folks ignore it. What the people of Oregon and what I have been saying for years on this subject can be boiled down to one sentence and that is what part of no don't you people understand?

2441-2 — Shut down that damn reactor. . .

2441-3 — . . .start cleaning up the land.

Response to Commentor No. 2441

2441-1: DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and holding public hearings is an essential and required part of the NEPA process. DOE policy encourages effective public participation in its decision-making process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

2441-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2441-3: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2454: Matthew Kenega

2454-1 — The FFTF reactor is not wanted in this area. I think that's been made very clear. It's very emotional.

2454-2 — I'm not so sure that we need to expand at Hanford. We can't handle what we've got. We don't understand what we've got. Hanford, in particular, we have these tens of thousands of gallons of waste. We don't even know what a third of it is, let alone how to store it for the next several thousand years. Who is to say in a thousand years that we'll even know it's there? Let alone how to treat it. And by adding to that all of our facilities, anywhere, is irresponsible.

2454-3 — Perhaps we should change the mission statements to clean up in general of all the nuclear facilities in the whole world.

The French have been very strong in their research because they have complete reliance on nuclear power. The Soviets don't have any money or infrastructure for research and perhaps we need to put our money over there and take over their facilities, of what can be allowed at least. Maybe their waste needs to be handled by us because they certainly aren't able to do it. Everybody is going to end up with the net effect of this poorly developed program that we've done in the last 60 years.

Response to Commentor No. 2454

2454-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2454-2: DOE notes the commentor's concerns regarding the high-level waste tanks at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. As discussed in Section 4.3, Volume 1, no high-level radioactive waste would be added to the high-level waste tanks at Hanford.

2454-3: DOE notes the commentor's interest in cleanup activities, although issues of waste cleanup activities are beyond the scope of this Nuclear Infrastructure PEIS. As discussed in Chapter 4 of Volume 1 (e.g. sections 4.3.1.1.13, 4.3.2.1.13, 4.3.3.1.13), waste will be generated by all of the alternatives, including the No Action Alternative. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. DOE activities associated with this program would not impact the schedule or available funding for existing cleanup activities at candidate sites for implementation of the nuclear infrastructure alternatives.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

*Commentor: Wayne Kenny
[for] U.S. Senator Ron Wyden, OR*

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 158.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2446: Toby Kentine

2446-1 — I want to find out if the mind of those who are making the decision or have you already made up your mind? I hope you haven't. I hope you're willing to look at all the things that are being said. I'm assuming that's the case.

2446-2 — The concern I have is how do we know, how do we know for sure that the radiation coming from the reactor is safe? If someone can say well a certain amount is safe, well, how do we know that for true absolute fact? A certain kind of safe, but there's evidence that it's accumulative, it's has a cumulative effect. In other words, you can get a little bit, a little bit more, a little bit more and gradually the body will build up. Do you follow what I'm saying?

How do we know how much is safe? Is it really proven absolutely true that a certain amount is safe? I don't think there's anybody who can actually say that a certain amount is safe and until it has been proven that it's safe, it's dangerous. There's the potentiality of tremendous serious negative things happening to us. And there's evidence — now, one of the things about the effects of radiation that the possible radiation will not get us now and then 30 to 40 years in the future is when people start getting the cancers or when they get the negative effects.

If you don't know that having radiation will or will not cause cancer, then why are we taking the risk with ourselves and with our children and with our future?

Response to Commentor No. 2446

2446-1: DOE policy encourages effective public participation in its decision making process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public. No final decisions have been made with regard to the facilities and locations evaluated to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238 for NASA space missions, and nuclear research and development. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

2446-2: Ongoing research into the effects of low level doses of ionizing radiation has the potential to impact the way in which low dose health effects are modeled. As indicated in Appendix H, the linear no threshold model utilizes dose to cancer conversion factors based upon studies of individuals who have received relatively large individual doses or have been members of groups who have received large population doses. This model assumes that any radiation dose, no matter how small, has the potential to result in the development of cancer. The current research is an attempt to develop a better health impacts model to based upon health impacts to groups who have been exposed to lower level doses. However this research has not yet yielded sufficient information to justify modification of the linear no threshold model. The linear no threshold model remains the currently accepted approach to modeling low level radiation health impacts. The research done to date does take into account the fact that many cancers appear long after the initial exposure to a carcinogen. Surveys of people exposed to radiation used as the basis for radiation dose to cancer conversion factors have been performed many years after the initial radiation exposure. This PEIS has provided an estimate of the incremental potential human health impacts associated with a reasonable range of alternatives including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2446: Toby Kentine (Cont'd)

Response to Commentor No. 2446

that radiological and nonradiological risks associated with restarting FFTF would be small.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2491: Chris Kerchum, et al.

2491-1 — I think that 20 years is long enough to have had Hanford tanks at least begun to be pumped and stored in a safe manner. We haven't been able to do that. We don't have any business starting up the Fast Flux Test Facility again. They can't fix what's already been broken. I think it's extremely dangerous to give more waste to this pile and as a Portland area resident I'm very sure that DOE would never tell me if there was an accident that threatened my life, much less my property values. They've lied to me in the past and they continue to lie. They continue to misrepresent the threat that this plant faces.

2491-2 — It's not a safe plant. It's 20 years old.

2491-3 — It [FFTF] should have been decommissioned and put out of service. I understand it takes years to do that even if you were to tell them to shut it down today it would take at least three to five years to fully shut it down.

2491-4 — ...we, the undersigned want the DOE to not restart the Fast Flux Test Facility nuclear reactor. And it's signed Chris Kerchum, Nancy Powell, Paul Almond, I think — I can't read his writing — Helen Warren, Bill Warren, Craig Barber, Art Thomas, Christina Lindstrom, Jeff Pegman, Keith Shaw, F.C. Poundstone, Elbadia Schultz, Jean Ann Dryer, Irene Williams who also share my belief that this is a plant that should be shut down.

Response to Commentor No. 2491

2491-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The environmental impacts associated with operation of the FFTF and support facilities at Hanford during normal operations and from postulated accidents are presented and discussed in Section 4.3 of the draft NI PEIS. All impacts to human health and to ecological resources would be small in the immediate area of the Hanford Site and negligible at all distant locations.

2491-2: This NI PEIS has examined the risks associated with the operation of the FFTF for 35 years for the purpose of producing isotopes for medical use, research and development, and for the production of radioactive heat sources for power supply systems. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. (Accident analysis is described in Appendix I and the normal operations risk analysis is described in Appendix H.) The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small. Based upon these analyses, as well as the previous safe operation of the facility, FFTF can be operated safely to accomplish DOE missions. Additionally, in the event that FFTF restart is selected, a new Safety Analysis Report will be prepared and subjected to a thorough independent review process. The facility reanalysis as part of the Safety Analysis Report update process would ensure that the analyses bound the reactor-operating envelope for the duration of FFTF operation. The Safety Analysis Report would be routinely reassessed and updated when required to address any changes in plant configuration or changes in plant operation procedures. This continuing safety analysis updating would include analysis of changes that may occur as a result of facility aging during the 35 years of operation.

2491-3: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF. Figure 2-35 presents the implementation schedule for Alternative 5.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2491: Chris Kerchum (Cont'd)

Response to Commentor No. 2491

2491-4: See response to comment 2491-3.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2461: William J. Kinsella

2461-1 — Assumption 1, that an expansion of the nuclear infrastructure along the lines proposed is necessary and mandated. In fact, the proposed expansion may well run counter to the public interest while serving the Office of Nuclear Energy's own institutional agenda. In this regard, the PEIS document is not a disinterested scientific study. Rather, it's a marketing tool which advocates for its authors' interests under the guise of scientific objectivity.

2461-2 — Restarting FFTF would contaminate buildings and areas that are not yet contaminated and would directly interfere with the existing clean up plan for the 300 Area.

Introducing any new waste to the site is unacceptable and would undermine the Department of Energy's own stated mission, to clean up Hanford and regain public trust.

The additional oral comments were submitted in written form and are addressed in the responses to Commentor No. 2046.

Response to Commentor No. 2461

2461-1: DOE notes the commentor's concern. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives.

2461-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor : Bruce Klos

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 406.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2465: Nancy Korbin

2465-1 — First, there is no medical need to restart FFTF for the production of isotopes. Telephone calls to local hospitals, clinics and isotopes suppliers all verify ample supplies of isotopes. We get iodine-131 and Xenon from Canada; iodine-123 and gallium-67 comes from St. Louis, Missouri; and 18 FDG which is used for PET scanning, that's not pet scan as in dogs and cats, that's positrons emission tomography, a little ahead of CAT scanning. That's being produced in Seattle and being brought to the Portland area at the present time.

The restart of the FFTF reactor to produce medical isotopes is unwarranted and much too expensive. There's no medical need and that is verified with both the Washington Medical Association and the Department of Energy's own blue ribbon committee. The DOE must include their subcommittees' recommendations against FFTF in the final EIS.

2465-2 — Second, restart of the FFTF, that may require the importation of plutonium to the Pacific Northwest ports which would traverse our highways. People in the Northwest have made it abundantly clear they do not want these radioactive shipments on their highways by a vote of 65 percent on Initiative 383. Washingtonians have spoken. We don't want any radioactive shipments coursing our highways.

2465-3 — Third, restart of the FFTF means there will be more nuclear waste to deal with and we have no means of doing that at Hanford. The plutonium finishing plant and the plutonium reprocessing plant are both closed down and inoperable.

We can't deal with the waste we already have at Hanford and that is the best reason not to create any more.

2465-4 — Fourth, restart of the FFTF violates the Tri-Party Agreement. According to the agreement entered into by the U.S. Department of Energy, the Washington State Department of Ecology and the U.S. Environmental Protection Agency, the FFTF is to be deactivated and decommissioned. The State of Washington and the EPA will have legal recourse against such action. When DOE's own internal documents recommend against restart, why is anyone even discussing any possibility of restarting FFTF.

In closing, the Department of Energy needs to put all its effort into what is legally required to do and that is to clean up the horrendous amount of radioactive waste at Hanford.

2465-5 — Ms. Brown, I was very disappointed to hear that Secretary Richardson was not informed of the fact that the Washington Medical Association opposes restart of the FFTF. I think that's an organization that carries a great deal of respect and I think that the Secretary needed to have piece of information and I do hope that you will convey that to him.

2465-6 — As if it's not obvious, I support Option 5. Shut it down.

Response to Commentor No. 2465

2465-1: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1 2.1 of Volume 1 was revised to incorporate this information. The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities. DOE has taken the Expert Panel and NERAC report recommendations under consideration in developing the range of alternatives evaluated in the NI PEIS. These reports were made available to the public at the NI PEIS public information centers and on the Internet at www.nuclear.gov. The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2465: Nancy Korbin (Cont'd)

Response to Commentor No. 2465

only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs. Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions (basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term (less than 5 years).

2465-2: DOE notes the commentor's opposition to the shipment of radioactive materials on Washington highways. Washington State Initiative Number 383 (Shall Washington ban the importation and storage of non-medical radioactive wastes generated outside Washington, unless otherwise permitted by interstate compact?) was approved in the General Election of 1980. No radioactive wastes generated outside the state of Washington will be imported into the state as a result of activities covered by the NI PEIS. Mixed oxide fuel is not a radioactive waste. Alternative 1 does postulate that DOE might decide at some point to import mixed oxide fuel from Europe to fuel FFTF. At this time, however DOE has not proposed to import this fuel through any specific port. If DOE ultimately decides to import fuel from Europe, it would perform a separate NEPA analysis to select a port. This review would address all relevant potential impacts of overseas and inland water transportation, shipboard fires, package handling, land transportation, as well as safeguards and security associated with the import of SNR-300 mixed oxide fuel through a variety of specific candidate ports on the east and west coasts. It would consider all public comments, including local resolutions, concerning the desirability of bringing mixed oxide fuel into the proposed alternative ports. In the event that DOE decides to enhance its nuclear infrastructure, it would not expose any population to high, unacceptable risks under any alternative. Any transportation activities that would be conducted by DOE would comply with U.S. Nuclear Regulatory Commission and U.S. Department of Transportation

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2465: Nancy Korbin (Cont'd)

Response to Commentor No. 2465

regulations. Associated transatlantic shipment would comply with International Atomic Energy Agency requirements. In Section J.6.2, DOE reviewed the potential maximum impacts from the marine transportation of mixed oxide fuel from Europe to a representative military port, Charleston, South Carolina, and overland transportation to Hanford. Also in that section, a bounding analysis demonstrates that the maximum potential radiological risks to the surrounding public from mixed oxide fuel shipments would be extremely small (e.g., less than 1 chance in a trillion for a latent cancer fatality per shipment from severe accidents at docks and in channels and less than 1 chance in 50 billion for a latent cancer fatality per shipment from overland highway accidents).

2465-3: Management of wastes that would be generated under implementation of Alternative 1 (Restart FFTF) is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

2465-4: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding violation of the Tri-Party Agreement. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. A Tri-Party Agreement change was approved by all signatories to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2465: Nancy Korbin (Cont'd)

Response to Commentor No. 2465

needs. Prior public meetings were held on this formal milestone change prior to its adoption. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

2465-5: DOE notes the commentor's viewpoint. The Secretary of Energy has been informed of the comments relating to the organizations and members of the public who oppose the restart of FFTF.

2465-6: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor: Lloyd K. Marbet

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 230.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2489: Wayne Marshall

2489-1 — The most important thing is that I am here to voice the opinion that the FFTF restart option should be the preferred alternative.

2489-2 — I believe the EIS did a pretty good job of identifying how minor the environmental impacts are. After tonight's meeting though I have a new understanding of the concerns, the anxiety, the fear and the governmental distrust that is common, at least in Portland here and perhaps Hood River and Seattle. Clearly, that needs to be addressed with outreach, education programs, but I don't believe that should color the decision, the technical decision about the path forward.

2489-3 — I believe there is a misunderstanding about the supporters of FFTF, that they disregard the potential contamination of the river or the desire for cleanup. We, too, have those desires and those concerns, but the FFTF option needs to be selected and pressed forward and DOE needs to champion the funding necessary to clean-up Hanford as well as operate the FFTF.

2489-4 — I wonder, after hearing the concern for government funding, if the PEIS should address funding issues or should address how the funding issues can be separated or would be separated from Hanford cleanup costs and the performance. That seemed to be a major sticking point here, a concern that FFTF is robbing funds. Perhaps the PEIS could address it.

Response to Commentor No. 2489

2489-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

2489-2: DOE notes the commentor's views that environmental impacts as identified in the NI PEIS are minor and that public outreach and education are needed to address fear, anxiety, and mistrust in the public participation process. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

2489-3: DOE notes the commentor's support for Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

2489-4: While cost is an important factor that will be considered in the final record of decision, costs are beyond the scope of the NI PEIS. A cost report for the NI PEIS alternatives was prepared and made available to the public. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

***Commentor: Bill Mead
Public Safety Resources Agency***

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 2027.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2450: Bill Michtom

2450-1 — First of all, the pages that were posted from the Hanford site by this man here talk about a funding shortfall, what is referred to as a compliance gap and that there will need to be trade offs. Well, we've been trading off for a long time, for 60 years at Hanford and I think that's where that statement comes from. It may be inaccurate, but if FFTF at its cheapest is going to be \$300 million and we have funding shortfalls, where there's \$300 million would go to cleaning up that we're using for something else.

2450-2 — Two, looking at the handouts and I think in the PEIS, one of the things that it talks about is the cancer latency rates at the three reactors at Hanford, Oak Ridge and Idaho, among the workers. Among the workers at Hanford the cancer latency is more than five times greater than it is at Oak Ridge and more than four times greater than it is at Idaho. And this is where you want to add more stuff, rather than cleaning it up. This seems to me flawed.

2450-3 — Another thing from talking with one of these folks here, I think this man here, but I can't remember now, was that the clean up is going to put the reactors and the nuclear stuff in cocoons that have a life span of 75 years and yet the half-lives of the two major radioactive items that are going to be in there range up to 90 years. So even the way you're protecting them doesn't even meet the requirements you know about right now which once again seems like what we've been dealing with for 60 years.

2450-4 — But the man I spoke to said that using the Fast Flux Test Facility to create nuclear radioisotopes for medical reasons is like using a sledge hammer to kill a flea. And that most of what's being produced is not medical isotopes. So there's something of a scam going on here.

2450-5 — It [FFTF] should be not started up...

2450-6 — ...the medical benefits that we can derive from radioisotopes can clearly be done differently, cheaper and better and more safely for the workers than what's happening at Hanford.

Response to Commentor No. 2450

2450-1: The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

2450-2: The commentor's concern regarding the estimated total workforce dose (cumulative impact) for Hanford workers is noted. The estimated cumulative worker dose at Hanford is in part a result of the activities planned for waste management and tank remediation. These potential impacts are far greater than the incremental impact from the activities associated with the range of reasonable alternatives considered in the NI PEIS. There is little difference in the small incremental impact at all three sites; as shown in Sections 4.8.1.3, 4.8.2.3, and 4.8.3.3.

2450-3: The comment appears to be related to the cleanup of reactors and the nuclear material (i.e., the decommissioning of the nuclear reactor). The concern is that the nuclear reactor and nuclear materials associated with the nuclear reactor operation may be "cocoons," such as safe storage or entombment, and the nuclear materials have long half-lives for the storage. In the Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities (see discussion in Section 4.6.1.3.9 of the NI PEIS), the Nuclear Regulatory Commission determined that the health impacts to the public from the decommissioning of reactors was "negligible." The NI PEIS does not involve site-specific issues in the decommissioning of nuclear reactors. For site-specific nuclear reactor, the decommissioning action at that time would be under a separate and appropriate environmental review process.

2450-4: DOE agrees that the FFTF's large size and configuration are not particularly well suited for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of the FFTF for the production of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the Nuclear Energy Research Advisory Committee (NERAC) report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2450: Bill Michtom (Cont'd)

Response to Commentor No. 2450

production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production". In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates use of the FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without disturbing the existing missions of these facilities. Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions (basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term (less than 5 years).

2450-5: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2450-6: DOE has examined a total of 6 alternatives, including the No Action Alternative, in the NI PEIS. Alternatives to the use of FFTF for the production of medical isotopes include continued production at existing facilities (all alternatives), construction of a new accelerator(s) (Alternative 3), and construction of a new research reactor (Alternative 4). It is also possible that DOE could decide on a combination of 2 or more alternatives in the Record of Decision. Thus, DOE has examined a number of different ways to produce medical isotopes other than the use of FFTF. Costs associated with the different alternatives are covered in a separate cost report. Worker safety (radiological protection) is a key element of the DOE's Radiological Health and Safety Policy (DOE P 441.1, April 26, 1996). This policy states in part that DOE facilities must "conduct radiological operations in a manner that controls the spread of radioactive materials and reduces exposure to the workforce and the general public and that utilizes a process that seeks exposure levels as low as reasonably achievable." Each DOE site, including Hanford, is required to implement a radiological control program with the intent to meet this policy goal. Based on the assessment of worker health impacts for all of the alternatives and options that make use of facilities at Hanford, the most likely impact of the use of these facilities for purposes addressed in the NI PEIS is no

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2450: Bill Michtom (Cont'd)

Response to Commentor No. 2450

increase in cancer fatalities among the facility workers. This assessment is based on operational data collected at the facilities during recent operation. For example, in Alternative 1, Option 1, all of the activities (target irradiation and processing) occur at Hanford facilities FFTF and the RPL [Area 300 Buildings]). As shown in Table 4-18 of the PEIS, the expected consequences are less than one additional fatal cancer among the workforce; that is, no additional fatal cancers are expected.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2495: Martin Mijal

2495-1 —...I don't want to see the reactor [FFTF] started again.

2495-2 — I want you to honor your 1993 or 1995 agreement to abolish the reactor. I think it's just terrible to create nuclear waste. It's not going to go away. It's going to be a problem for many, many eons, centuries in the future. So I think it just should stop making more nuclear waste and close down the Hanford — close down all nuclear sites and clean it up, although there's no real cleanup.

Response to Commentor No. 2495

2495-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2495-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF (with No New Missions), and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Public meetings were held on this formal milestone change. The alternatives delineated in the NI PEIS would not have an impact on Hanford cleanup activities.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2474: Mary Morgan

2474-1 — I came tonight as a request of a friend who was interested on the behalf of the medical isotopes and just as a member of the community and a citizen and a mother and a daughter and a wife and a sister and everything that many of the people are saying in there, I'm grateful and truly that's just what I want to express right now, is I'm grateful to the DOE for providing the opportunity for people to voice their opinion. I have yet, I think, to develop an opinion on this. I just wanted to express my gratitude, I guess, to the DOE for following the process and also for this great nation that we're a part of. I'm grateful that is such educational viewpoints or educated viewpoints from both points and thank you.

Response to Commentor No. 2474

2474-1: DOE notes the commentor's support of the public participation process.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2494: Bruce Noordhoff

2494-1 — I am very pleased with the quality, the professional quality of this document. I was distressed in only one area and that has to do with the degree of discussion concerning the consensus that appeared to be there at Hood River and Richland and Seattle and Portland and so on. It didn't seem to me that it was appropriate for an EIS, but it might be if you look at the various factors to be considered.

The EIS is essentially complete. I think it lacks little, somewhat, but not significant amounts. I think it's time now for it to go to a recommendation to the decision-makers. The past judgment on these findings I have two comments that I would like to address pertaining to the decision, offering this to the decision makers. First, I ask that they stay focused on the long-term needs of this country and avoid letting short term simplistic options govern their decision. This will be a decision that will affect our leadership role in the world for generations to come. The decision needs to provide capacity for the probable trend lines and the growth that is projected for the various needs in the nuclear area there. So I encourage them to take the long term perspective.

Secondly, I ask that this decision be reached with convictions based on technical merit and not on the consensus of meetings like this or unrelated pressures from the outside.

2494-2 — In closing, let me remind that 10 years ago the pressures from the opponents caused a premature shutdown of the Pulex facility before the heel of material was processed through and as a result of that heel of material now being stored in the K Basins, we have a concern for the City of Richland to the contamination of the river. We are spending \$1.5 billion of money that might be put on to the cleanup of the facility to move that heel of material away from the river, not to dispose of it permanently, but to babysit it in a facility forever. So it is a matter of concern that pressures cause decision makers to make wrong mistakes occasionally, wrong decisions and I implore this agency to hang tough and make the decisions based upon the technical factors and the guts decisions that they have come to with regard to the needs of the country.

Response to Commentor No. 2494

2494-1: DOE notes the commentor's views regarding the quality and completeness of the NI PEIS and for the need to base decisions on technical merit. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

2494-2: Comment noted.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2481: Gabriel Pettyjohn

2481-1 — I think there's a lot to be considered here and it really disappoints me that this is not as much in the public eye as I think it should be. The past failings of the Energy Department to manage Hanford have been egregious and I don't think that they've done really what's necessary to resurrect public trust and I think that's something that needs to be addressed.

2481-2 — Also, I think there's something inherent and this is on a philosophical note, inherent in the technology of nuclear power and its expansion, that's the continued centralization of power and I think the question needs to be asked who will benefit from this. It's being marketed as a benefit for individuals undergoing cancer therapy and also for scientific space exploration, but I have not seen any information or any report covering the contractors which will financially benefit from this. The lobbying process that they have undergone, there is no research or information that I've seen exactly who are the medical contractors who would benefit from this or their contributions to political campaigns in relation to this issue. Basically what I'm concerned about is that this decision will not be reflecting public safety or public interest, but private and corporate interest and private and corporate profit.

Response to Commentor No. 2481

2481-1: DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to “ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use.” The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission. DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and to providing ample opportunity for public comment on those actions. DOE provided notice of scheduled public hearings in accordance with the requirements of CEQ and DOE regulations (i.e., 40 CFR Parts 1503.1 and 1506.6 and 10 CFR Part 1021.313, respectively). This included announcement of the hearings in the Federal Register as well as in the local media. In addition, copies of the Draft NI PEIS and/or the Summary (including the public hearing schedule) were sent to each individual or group listed to receive it at the address on record. DOE policy encourages effective public participation in its decision-making process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS DOE carefully considered comments received from the public.

2481-2: Selection of facilities and site locations for accomplishing expanded civilian nuclear energy research and development and isotope production missions is not being driven by special interests working on behalf of any corporate, institutional, or other nongovernmental entity with a stake in the decisions to be made. The facilities and locations evaluated in this NI PEIS represent a range of reasonable alternatives for accomplishing the DOE missions and serve to enable DOE to meet its responsibilities under the Atomic Energy Act. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2445: Laurel Piippo

2445-1 — You are obligated to clean up the mess at Hanford whether FFTF is restarted or not. Am I correct?

The additional oral comments were submitted in written form and are addressed in the responses to Commentor No. 410.

Response to Commentor No. 2445

2445-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2457: Gerald Pollet Heart of America Northwest

2457-1 — Let me start with the fact that in the scoping hearings we suggested that a reasonable alternative with a clear environmental benefit is for the Department of Energy to honor its 1996 promise and the words of the Secretary of Energy at the time “commitment” to end self-regulation of its reactor operations and nuclear processing. And under that commitment, the FFTF reactor, if restarted, and plutonium-238 operations and medical and industrial isotopes would all be independently externally regulated and there are clear differences between the external regulatory standards and their level of scrutiny and the Department of Energy’s. All that we need to do is examine what would happen at Hanford if we use the Nuclear Regulatory Commission requirements for a safety-conscious workplace. One example is that at Hanford we have incident after incident, of contractor retaliation against whistle-blowers. The NRC’s new standards say one, and you’re closed. And they’ve shown they’ve been serious about this with the Millstone Plant in Connecticut.

There are clear environmental benefits from external regulation and it is an example not just of a failure of the EIS, but another broken commitment of the Department of Energy.

2457-2 — Another environmental commitment that was broken was the one that said in 1995, signed by the Department of Energy that when the reactor is shut down the funds saved shall be used for higher priority clean up activities.

You have a \$200 million clean up compliance gap forecast for 2002. I would call that a higher priority environmental cleanup priority and it’s a clear environmental benefit to meet your TPA commitment from 1995 and I know this is boring, Colette, I’m sorry. Maybe some other people from the Department should have come as well to hear several hundred people, but you also failed to include in this environmental impact statement and in your letters to us, you’ve clearly shown that you do not understand what the possible environmental impact and benefit is of meeting the commitments to use \$30 million a year that was transferred away from NE at the request of the Department of Energy — excuse me, away from the environmental managements account to the NE account for the benefit of keeping the FFTF reactor on stand-by.

2457-3 — Going back to safety and the benefits of external regulation, throughout this document the Department of Energy assumes incorrectly that the maximum exposed public individual is four miles away from the site. Yesterday, a Republican candidate for Governor in what may have been illegal use of a federal facility, supported by the facility staff, which I assume you’re going to look into, held a news conference at the front gate, illustrating the fact that the public is currently invited to go by the front gate and it is quite likely that the maximum exposed individual is not four miles away, but instead under current plant Hanford site

Response to Commentor No. 2457

2457-1: FFTF meets all safety requirements established by DOE. Furthermore, DOE requirements are consistent with those established and applied by other regulatory agencies such as the Nuclear Regulatory Commission. On February 19, 1999, Secretary Bill Richardson sent a letter to the Senator John Warner, Chairman of the Committee on Armed Services to inform him of DOE’s efforts in exploring a potential move toward the external regulation of DOE’s nuclear facilities. Secretary Richardson reported that, based on DOE’s analysis, many of the potential benefits that were expected from external regulation had not been demonstrated, and appear to be outweighed by associated costs and difficulties raised in the pilot projects. As a result, DOE determined that submittal of legislation to exempt certain facilities from Departmental regulations was premature.

2457-2: DOE notes the commentor’s concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

2457-3: Under the current regulatory framework, the facility safety bases are evaluated at uncontrolled locations outside the legal site boundary (or the most highly exposed location over which DOE has no control). Although the public has been allowed road access around FFTF and the 300 Area for many years, DOE can quickly control access in the event of an emergency. The accident analysis presented in the NI PEIS provides a basis for making comparisons between the consequences and risks of accidents associated with facilities identified in each of the alternatives and options presented in the NI PEIS. The accident analysis evaluated the consequences and risks to maximally exposed individuals, both workers and members of the public, during postulated accident scenarios. It

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Commentor No. 2457: Gerald Pollet (Cont'd)
Heart of America Northwest

guidelines, actually invited and encouraged to be standing in the parking lot. In fact, you held a bicycle race staged in the parking lot recently. That's not four miles away.

2457-4 — The EIS ought to be analyzing the risks of using hydroxylamine nitrate in the plutonium-238 processing. This ought to be considered as a likely explosion risk because we've had an explosion, therefore we know it is likely to occur. But there's no mention of a hydroxylamine nitrate explosion, nor is there a calculation or consideration of the risk of what we call red oil explosion which is why the public in this region — would not allow you to restart the plutonium finishing plant.

2457-5 — In the early and mid-1990s there was a fight over the restart of Hanford's plutonium finishing plant and in 1994, the Department agreed to shut it down after admitting that it had to prepare an environmental impact statement if it wished to resume operations and that EIS would have to consider the risk of an explosion involving a self-catalytic exothermic reaction involving an organic liquid phase with plutonium nitrate and tributyl phosphate which is exactly the operation that will be used in plutonium-238 operations.

Furthermore, we discovered that an unresolved safety question had been declared and administrative controls put on it in place on the plutonium finishing plant and because of the possibility of such a reaction occurring at relatively low temperatures, far lower than the calciners were designed to operate at and we don't see in the EIS exactly what temperatures you're going to use for the calciners, but it's described as the same process, therefore one would expect that this would be analyzed.

The data is all there and failure to analyze it when you admitted that you had to analyze it in the early 1990s to restart the similar process of the PFP is certain to be a violation of analysis of all reasonable impact, foreseeable impacts.

2457-6 — You also have ignored the consequences of fires in 306 and 325 at Hanford and there is data published by Hanford about the consequences of those fires and the likelihood of those fires including in your own risk data sheets that is not referenced at all in this Environmental Impact Statement. The consequences of fires in those buildings can be horrifying and the public under the new plan of Keith Klein is to be invited into the 300 Area with no access restrictions. I believe that plan was posted on the wall earlier tonight.

2457-7 — Now if you are operating 306 and 325 and there are no access restrictions for the public, then you have highly contaminated facilities, facilities where there's out of facility contamination detected and you are going to (a) increase the cost of cleaning up the 300 Area by trying to maintain operations

Response to Commentor No. 2457

would not be necessary to conduct further analyses to determine the specific consequences and risks to an individual member of the public located closer to the source of an accident than that already evaluated in the NI PEIS. Any individual member of the public located in close proximity, regardless of distance, would be expected to experience consequences of a postulated accident that are more severe than the consequences to the general public. In fact, the closer an individual gets to the accident the more severe the consequence. However, the probability that a member of the public would be in close proximity to the facility would be relatively low and the associated risk to that individual would be bounded by the MEI risk. The use of the Hanford facilities, such as the use of the parking lot for a bicycle race or the front gate area for a news conference, would not impact the determination of the location for the maximally exposed individual from exposures related to normal operations. The determination of the maximum exposed individual takes into consideration the amount of time an individual is expected to be located at a particular location. The maximally exposed individual is assumed to be located at the most highly exposed location over which DOE has no control for the entire year (Exposure parameters used in the assessment of the dose to the maximally exposed individual are provided in Appendix H. Section H.2.2.2.) Short term exposures received while attending events in the facility parking areas or at the front gate would yield doses that are significantly smaller than the dose calculated for the maximally exposed individual. Additionally, the maximally exposed individual receives part of the dose from ingestion of food grown in the area, this is not necessarily true for the participants and spectators at the bicycle race or at the news conference. The PEIS has evaluated the risks to members of the public under normal operating conditions and found that over the 35-year operational period no fatalities would be expected among workers or in the general public in the vicinity of Hanford or at distant locations. (See for example sections 4.3.1.1.9, 4.3.2.1.9, and 4.3.3.1.9.)

2457-4: The plutonium-238 fabrication/processing facilities evaluated in the NI PEIS can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. The accident evaluation specifically accounted for the chemical processes likely to be used and considered a spectrum of accidents including internal events, external events, natural phenomena, and sabotage and terrorist activities. Sections 4.2-4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from implementation of the alternatives, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that the radiological and nonradiological risks associated with each of the

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there; and (b) you cannot meet your own requirements and emergency response planning guidelines if the public is now at the front door of the facility instead of at the site boundary.

Throughout the analysis, in fact, today, the public is available to be at the front door of FFTF and at the front door of these buildings, but they're not invited to the front door of anything in the 300 Area, but there's no security badge actually required for the public to go in.

2457-8 — That is going to change under DOE's current proposal. Throughout the EIS regarding accident calculations and doses for Hanford, the EIS refers to the GENII computer code and the referenced used is 1988. In 1989, an unusual occurrence was declared on site and for the discovery that the GENII air dispersion models to calculate environmental impacts of routine accidental releases of radiation from the Hanford site had a serious error in that it calculated wind directions for exposed public 180 degrees in the wrong direction.

I don't know if you used a changed version but the reference to 1988 version of GENII throughout this document seems to be that you used something with a hypothetical release with an error factor off by two, according to the unusual occurrence.

2457-9 — Finally, I want to close with much has been said about the fact that a final safety analysis report was done for this reactor before it was started and no reference is found in the environmental impact statement and I'm wondering — if the Secretary of Energy knows about this and who else probably doesn't, the findings of the Natural Research Council 1988 in safety issues at the DOE test and research reactors, page 67, "severe accidents in FFTF have not been assessed using state of the art methods built since the reactor began operation. Uncertainties in post-accident, heat removal and evolution of fission products from molten core debris are given as an example."

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alternatives would be small. The solvent extraction process involving the use of tributyl phosphate in hydrocarbon to separate and produce plutonium nitrate solution has been used extensively for years in the United States as well as in Japan, England, and Germany. Under a combination of off-normal conditions, there can be a reaction between nitric acid or nitrates and tributyl phosphate degradation products at higher than normal operating temperatures. Such a reaction could only occur in a heated evaporator or concentrator if there is excess tributyl phosphate impurity or residual in the plutonium nitrate liquid. This scenario will be analyzed as a potential design basis accident in developing the safety authorization basis and associated technical safety requirements for the chemical processing option chosen by DOE.

2457-5: The solvent extraction process involving the use of tributyl phosphate in hydrocarbon to separate and produce plutonium nitrate solution has been used extensively for years in the United States as well as in Japan, England, Germany, etc. Under a combination of off-normal conditions, there can be a reaction between nitric acid or nitrates and tributyl phosphate degradation products at higher than normal operating temperatures. Such a reaction could only occur in a heated evaporator or concentrator if there is excess tributyl phosphate "impurity" or residual in the plutonium nitrate liquid. This scenario will be analyzed as a potential design basis accident in developing the safety authorization basis and associated technical safety requirements for the chemical processing option chosen by DOE.

2457-6: RPL/306E can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. The accident evaluation considered a spectrum of accidents including internal events, external events, natural phenomena, and sabotage and terrorist activities. Section I.1.4.2.1 presents a postulated fire accident during medical isotope processing and describes the site historical fire data on which the accident frequency is based. Sections 4.3, 4.5, and 4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected from implementation of the alternatives which incorporate RPL/306E. The environmental analysis showed that radiological and nonradiological risks associated with these alternatives would be small.

2457-7: The 300 Area has access restrictions and security badges are required for access to the 306-E and 325 Buildings. The 306-E facility is not contaminated and is

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Commentor No. 2457: Gerald Pollet (Cont'd)
Heart of America Northwest

Response to Commentor No. 2457

being proposed as a location to conduct activities that do not involve radioactive materials. While the 325 Building has a large inventory of radionuclides associated with ongoing activities at the facility, the building is not contaminated in worker accessible areas. Operations at the 325 Building are conducted in accordance with applicable federal and state regulations and appropriate DOE Orders. The 300 Area Revitalization Plan (DOE 1999) provides for continued multi-program R&D operations in the 300 Area, including operation of various laboratories, office facilities, and services. It also provides for consolidation (but not complete elimination) of radiological operations, with support for Hanford Site facility transition and environmental restoration efforts. The plan does not require closure of the 325 and 306 E buildings as long as they are needed for active research projects. Operation of these facilities would not violate any existing agreements between DOE and stakeholders or other legal obligations, nor would it affect ongoing or planned environmental restoration and facility transition activities. Under the current regulatory framework, the facility safety bases are evaluated at uncontrolled locations outside the legal site boundary (or the most highly exposed location over which DOE has no control). Although the public has been allowed road access around FFTF and the 300 Area for many years, DOE can quickly control access in the event of an emergency. The PEIS has evaluated the risks to members of the public and found these risks to be below the "level of concern". It is not illegal for members of the public to tour Hanford facilities. Tours of the 300 Area facilities can be arranged by contacting DOE-RL. Visitors are required to attend radiological safety training and to wear dosimeters during the tours. All visitors are escorted by personnel familiar with the facility being toured and trained in facility alarms and emergency responses.

- 2457-8:** The 1988 reference to the GENII code is a reference to the documentation associated with the code, i.e., the code description and user's manual. The version of the code used in the analysis is Version 1 485 dated December 1990.
- 2457-9:** The initial safety analysis report for the FFTF was driven by U.S. Nuclear Regulatory Commission Requirements. Any change in operating missions for the FFTF would require a revised safety analysis report (current format and methods) to be developed.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2463: Lynn Porter Hanford Watch

2463-1 — I've been working with Hanford Watch and going to these horrible meetings.

Some suggestions for improving the process next time we could bring in some cots. We could have DOE speak last and we could all leave before they speak.

Or I'd like to suggest that the next time we don't allow anyone from the State of Washington to speak at meetings in Portland. You know, they have their own meetings and they are not entitled to come here and take up time that should be going to Oregonians.

We shouldn't have to stay here this late to have our voice heard. But anyway, regardless, I think we all know that this is just the last stop in this process before we get to the lawsuit and the legislation to cut off their funding. That's the next step.

2463-2 — I think what we're really talking about here is a need for small amounts of isotopes for research and a possible larger need for isotopes for treatment later, if the research pays off. It seems we need to do the research first and DOE's own advisory committee said FFTF is not suited to produced isotopes for research.

2463-3 — I've been told that a sufficiently powerful accelerator could produce all of the desired medical isotopes. An accelerator produces very small amounts of short-lived nuclear waste.

2463-4 — FFTF would produce 16 tons of spent fuel which is high level radioactive waste, dangerous to human and other life for hundreds of thousands of years. And yet this environmental impact statement only evaluates environmental impacts for 35 years. How can you generate immoral waste and only evaluate the environmental impacts for 35 years. To me, that alone means that this environmental impact statement is invalid.

We have nowhere to put this 16 tons, no safe way to dispose of it, no sure way to contain it for the time in which it will be dangerous. Producing high level, long-lived nuclear waste is a bargain with the devil, a burden we have no right to place on our descendants.

2463-5 — If we really want to use medical isotopes as a weapon against cancer, we should build an accelerator powerful enough to produce them

2463-6 —...shut down FFTF.

Response to Commentor No. 2463

2463-1: It is DOE policy to encourage public input on matters of regional, national and international importance as part of its commitment to facilitate a public participation process that is open and unbiased. It is not uncommon or illegal under CEQ regulations for individuals and special interest groups, who may be for or against a particular proposed action or alternative, to attend multiple meetings including those outside their "home" area. However, DOE strives to ensure that the hearing format used serves to promote open and equal representation by all individuals and groups, regardless of the motivation for attending.

2463-2: The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

2463-3: A sufficiently powerful accelerator can produce many of the desired isotopes. No one single irradiation device, nuclear reactor or accelerator, can produce all of the desired medical isotopes. Wastes generated by the construction and operation of the accelerators evaluated for Alternative 3, Construct New Accelerators, are presented in the Draft NI PEIS on Tables 4-118 and 4-125 respectively.

2463-4: The NI PEIS assumes, for the purposes of analysis, that Yucca Mountain Nevada, would be the final disposal site for DOE's high-level radioactive waste

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2463: Lynn Porter (Cont'd)
Hanford Watch

Response to Commentor No. 2463

and spent nuclear fuel. As directed by the U.S. Congress through the Nuclear Waste Policy Act, as amended, Yucca Mountain is the only candidate site currently being characterized as a potential geologic repository for high-level radioactive waste and spent nuclear fuel. DOE has prepared a separate EIS, "Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High Level Radioactive Waste at Yucca Mountain, Nye County, Nevada" (DOE/EIS-0250D, July 1999), which analyzes the environmental impacts from construction, operation and monitoring, related transportation, and eventual closure of a potential geological repository.

2463-5: DOE notes the commentor's support for Alternative 3, Construct New Accelerator(s), and Alternative 5, Permanently Deactivate FFTF.

2463-6: See response to comment 2463-5.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2484: Grant Raven

2484-1 — I feel a contradiction about testifying before the Department of Energy because it seems there's clear evidence that it has lied to the citizens again and again about Hanford and what it is doing, but I'm giving this testimony just to add another voice.

2484-2 — I support Alternative 5 of shutting down and not restarting the fast flux test reactor.

Response to Commentor No. 2484

2484-1: DOE assumes the commentor is concerned about the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2484-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2477: Carlos Reyes

2477-1 — I think we should give all our efforts to cleaning it [Hanford] up...

2477-2 — I think we should give all our efforts to...shutting it [FFTF] down.

Response to Commentor No. 2477

2477-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2477-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2614: Ann Richardson
[for] U.S. Congressman David Wu, OR

2614-1 — Like you, I believe that not only is the FFTF a burden to taxpayers, but it is also an environmental hazard waiting to happen. We should not spend limited resource dollars restarting an experimental reactor upriver from hundreds of thousands of people who depend on the Columbia River.

2614-2 — ... we need to insure that clean water is protected by devoting resources to restore the already damaged Hanford environment.

Response to Commentor No. 2614

2614-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF. Included in the PEIS are the results of analyses that show that the risks associated with operating the FFTF are very small. FFTF is located approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to the groundwater. Analyses presented in Chapter 4 of the NI PEIS (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4) indicate that there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

2614-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford and the risk of contamination to the Columbia River. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities. The stated missions delineated in the NI PEIS would not have an impact on Hanford cleanup activities. Also, no water quality impacts would be expected as a result of permanent deactivation of FFTF (Section 4.4.1.2.4). The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. Implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2471: David Rosoff

2471-1 — As a reactor operator I would just like to say that I'm grateful for this process existing. I'm grateful for the fact that the DOE comes out to gather public opinion. My only regret is that there's so much emotional outbursts and so many people who to my mind are clearly uneducated about the topics on which they're speaking.

I would just urge the DOE to please make the decision ... which seems the best to it and which will be most effectual in the missions most important to our country.

Response to Commentor No. 2471

2471-1: DOE notes the commentor's support of the public participation process. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

*Commentor No. 2448: Don Segna
Nuclear Medicine Research Council*

2448-1 — Now that is why this thing got started. It is not DOE. It's for a group of citizens just like you and I guess you want to say sitting on the other side of the fence and having cancer and they saw the results of this and Fred Hutchinson was the first really tests were done that shows the remissions. And there's been improvement since then.

Now I'd like to agree with this clean up and I like the context that sign does not equate and I think I've already talked to the gentleman over here. FFTF restart kills clean up. I think that's a separate issue.

Response to Commentor No. 2448

2448-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

**Commentor No. 2483: Kathryn Thomason
Physicians for Social Responsibility**

2483-1 — I'm a member of the Physicians for Social Responsibility, Oregon Chapter which is solidly behind Alternative 5, shutting down the plant FFTF.

2483-2 — Again in the statement that's been produced today, there is no accounting for where you're going to put the high level waste and I think until people come up with a plan, the Department of Energy comes up with a plan for what to do with these wastes and how to store them safely, it's totally irresponsible to continue to create more.

2483-3 — The second major point I have to say is that we don't trust the word of the Department of Energy. Leaks are occurring. Leaks continue to occur. The cleanup [at Hanford] is not being met in the order and fashion that it ought to be met in and we aren't getting good answers for that ...

2483-4 — The third thing is the money. It's expensive. I think there are viable alternatives for medical isotopes. I think that the whole issue of the cost of medical isotopes is a whole other department that you guys don't need to worry about because there are resources for it and this does not need to be created for that. The cost of cleanup is going to skyrocket and there was a recent report that you guys had to take out the people who were cleaning it up now because they're not doing the job. So the costs are incredible and so we don't want to incur more of these types of costs.

Response to Commentor No. 2483

2483-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2483-2: The DOE Manual 435.1. Radioactive Waste Management defines high level radioactive waste as "the highly radioactive waste material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid material derived from such liquid waste that contains fission products in sufficient concentrations; and other highly radioactive material that is determined, consistent with existing law, to require permanent isolation." DOE has prepared an implementation guide to DOE M 435.1 to assist in implementing the requirements contained in that manual. For this particular "requirement," the definition of high-level radioactive waste, the guide is intended to facilitate the classification of indefinite waste as to whether or not they are high-level radioactive waste. It is recognized that the definition of high-level radioactive waste is not precise and is essentially a source-based definition that also alludes to concentrations of a given waste stream. Page II-8 of this guide notes that "For the purpose of managing high-level waste under DOE M 435.1-1 [sic], spent nuclear fuel includes spent driver elements and/or irradiated target elements that contain transuranium elements." This statement was included in the guide because the concentrations of long-lived isotopes are likely to be somewhat high during reprocessing and it also meets the source-based definition. As a result of reviewing this guide and to address the comments raised, DOE is considering whether the waste from processing of irradiated neptunium-237 targets should be classified as high-level radioactive waste and not transuranic waste. As a result, the Waste Management sections (Sections 4.3.1.1.13; 4.3.2.1.13; 4.3.3.1.13; and 4.4.3.1.13) of this NI PEIS have been revised to reflect this different classification from what was assumed in the draft NI PEIS. As discussed in these revised sections, irrespective of how the waste is classified (e.g., transuranic or high-level radioactive waste), the composition and characteristics are the same and the waste management (i.e., treatment and onsite storage) for this NI PEIS would be the same. In addition, even if the waste is managed as high-level radioactive waste it would have no impact on the existing high-level radioactive waste management infrastructure (e.g., high-level waste storage tanks), since the high activity waste from processing of the targets would be initially stored and vitrified within the processing facility (i.e., FMEF, REDC, or FDPF).

2483-3: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

*Commentor No. 2483: Kathryn Thomason (Cont'd)
Physicians for Social Responsibility*

Response to Commentor No. 2483

restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2483-4: The costs of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2470: Kelly Tkachenko

2470-1 — I plead with you, you and your wisdom to shut down FFTF reactor ...

2470-2 — ... put the money back into the cleaning up of Hanford and Hanford Nuclear Reservation.

Response to Commentor No. 2470

2470-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2470-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

**Commentor No. 2430: Amber Waldref
Heart of America Northwest**

2430-1 — And the main thing for me that I find that would be in the environmental impact statement that's lacking is the lack of information on where the waste is going to go that's produced with the emissions of plutonium-238 and the medical isotopes.

So I'm concerned about that because more waste to Hanford is not anything any of us want with already leaky tanks. . .

2430-2 — . . .other problems I have with the EIS is that the Department of Energy waited until this last Friday to disclose the costs of restarting FFTF. It was not included in the original study and also the nonproliferation study which hopefully will be coming out soon that would give us all a better chance to make informed comments during this public hearing process, because without access to this, we're unable to have full disclosure and give our public comment.

2430-3 — And then finally what I wanted to talk about was that in the — last fall during the scoping hearings one of the issues that people brought up was that they wanted more information on the tri-party agreement on Hanford and that be included in the environmental impact statement and supposedly it is, but I was unable to find it, any substantial information on it, so I would again remind the Department of Energy what this agreement was and that it's a covenant that was signed the Department of Energy, the EPA and the Washington State Department of Ecology that said in force we'll clean up deadlines for Hanford and in 1995 the clean up milestones were added that the FFTF would be deactivated and decommissioned, i.e., shut down, start the cleanup of the reactor and then we could use this money which was at that time \$30 million a year on cleanup. And now the Department of Energy says that with its current budget and the target budgets for the next coming years for cleanup, that they don't have enough money. The budgets are too low to meet the cleanup agreement. . . using the money for cleanup, because we want the Department of Energy to honor this agreement and hopefully move towards full cleanup of Hanford and no more missions.

2430-4 — So in my mind, I would advocate for Alternative 5 which is shutting down FFTF,

Response to Commentor No. 2430

2430-1: The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste treatment, storage, and disposal facilities for the wastes expected to be generated are identified in Chapter 4 of Volume 1 under the Waste Management sections of the NI PEIS, including the waste expected to be generated from the processing of irradiated targets. The cumulative impact tables for waste management in Section 4.8 of Volume 1 have been revised to include the individual site's storage, treatment and disposal capacities for comparison. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored, and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

2430-2: The costs and nuclear nonproliferation impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such ancillary documents need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed these documents to more than 730 interested parties on August 24 and September 8, 2000, respectively. Both reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided summaries of the Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment in Appendixes P and Q, respectively in the Final NI PEIS.

2430-3: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. A previous change to the Tri-Party Agreement removed the planned milestone for total deactivation of

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

*Commentor No. 2430: Amber Waldref (Cont'd)
Heart of America Northwest*

Response to Commentor No. 2430

the FFTF until its ultimate fate was assessed. That proposed TPA milestone change was the subject of previous public meetings. DOE notes the commentor's support for deactivation of FFTF.

2430-4: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2478: Jim Walling

2478-1 — The fact that I am here and still do not feel informed on the subject is illustrative of the lack of information available for the public. It is your responsibility to inform the people you intend to put at risk about the nature of that risk. Until you do that, you do not have the right to restart this reactor.

2478-2 — There's also the issue of trust. Due to the current state of Hanford and the hopeless task of cleaning up the mess that has been made, I simply do not trust those of you who are proposing to restart the FFTF reactor.

2478-3 — We need another process of evaluating the idea. As it stands, I cannot support it.

Response to Commentor No. 2478

2478-1: DOE is committed to discharging its responsibilities in an open and unbiased manner and providing the public with comprehensive environmental reviews of its proposed actions. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

2478-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., the Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2478-3: This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR 1500 through 1508 and 10 CFR 1021, respectively). The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS. Further, DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives. This was accomplished through review and evaluation of site-specific information on the environmental conditions prevailing at ORR, INEEL, and Hanford to include a comprehensive analysis of the associated environmental and health risks of each alternative. DOE made every effort to obtain, analyze and disclose all required information to make a decision on expanding nuclear infrastructure.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2422: Grace Weinstein

2422-1 — As taxpayers and citizens, you're asking a great deal of us. I'd like to turn it around and ask as a taxpayer and as a grandmother that you do some things for us.

Instead of spending money on treating cancer, spend that money on cleaning up the environment so we have less cancer in the environment.

And as taxpayers you ask us to send more missions into space. And I ask you to use that money to give everybody a health insurance plan in the United States.

And you ask us to spend taxpayer money to do research that might be used for weapons. And I ask you to demilitarize the United States.

Response to Commentor No. 2422

2422-1: DOE notes the commentor's interest in funding for environmental cleanup national health insurance, and demilitarization, although these issues are beyond the scope of this Nuclear Infrastructure PEIS. NASA establishes the need and requirements for space missions. Medical isotope requirements, benefits, and applications are determined by the medical community. The DOE missions to be addressed in this EIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies. The three missions are civilian nuclear energy missions and are not defense-related.

Comments from the Portland, Oregon, Public Hearing (August 29, 2000)

Commentor No. 2472: John Young

2472-1 — I think the FFTF is probably a bad idea. Not for radiological damage as far as public opinion and people you face here. It's just going to compound your problem if you start this reactor up again.

2472-2 — I do believe that there needs to be some resource of medical isotopes whether it be the new accelerators or new reactors, but I don't know how far the accelerators would go and to affecting the public and endangering them, but from what I know about accelerators is that even though the cost is greater, I think this would be a good way to retain medical isotope production and allay some fears of the public here in Northwest.

Response to Commentor No. 2472

2472-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2472-2: DOE notes the commentor's support for Alternative 3, Construct New Accelerator(s), or Alternative 4, Construct New Research Reactor for the production of medical isotopes. Public and occupational health and safety impacts from both normal operations and accidents of these and all other alternatives are presented in Chapter 4.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2499: Anonymous

2499-1 — ... the DOE is forced to hold public hearings where they trick-up with their overheads and expand on statistics that are skewed, and all of it with a straight face. And we sit and listen, and sometimes we clap. ... and they [DOE] can leave things out of their statement and make us dig for them ...

2499-2 — ... the DOE tells the public that fires and explosions don't release any harmful material to the atmosphere, and then we find out it has been harmful.

2499-3 — ... the DOE can disregard its own subcommittee recommendations about isotopes not being suitable for production at FFTF ...

Response to Commentor No. 2499

2499-1: DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and holding public hearings is an essential and required part of the NEPA process. DOE policy encourages effective public participation in its decisionmaking process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public. No pertinent information has been overtly omitted from the NI PEIS. This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS. All references used in preparing the NI PEIS are cited in the reference section of each chapter and appendix. DOE has made these references and other material relevant to review of the NI PEIS and supporting the decisionmaking process available to the public in the designated public reading rooms. DOE made every effort to obtain, analyze, and disclose all required information to make a decision on expanding nuclear infrastructure.

2499-2: DOE notes the commentor's concern over reliability of information provided by the DOE in recent publicized events at the Hanford site. No radioactive materials were "released" in the Hanford Wildfires of 2000. Wildfires did resuspend some materials already in the environment. The resuspended materials were low, slightly above natural background levels. Real-time measurement instruments cannot detect very low levels in the field. The low levels required several days of analysis to quantify. DOE released information to the public as it became available. Based on information to date, this wildfire did not provide environmental releases harmful to the general public or the environment.

2499-3: The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2499: Anonymous (Cont'd)

Response to Commentor No. 2499

report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities. DOE has taken the NERAC report recommendations under consideration in developing the range of alternatives evaluated in the NI PEIS. This report was made available to the public at the NI PEIS public information centers and on the Internet at www.nuclear.gov.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2500: Raging Grannies of Seattle

2500-1 — Stop wasting money on FFTF and clean, clean, clean. Cleanup the messes you've already made and don't make any more.

2500-2 — ... shut down FFTF for once and all ...

2500-3 — ... we're not allowed — I had a sign in the back, and we are not allowed to have signs, either. How come the people in the back get to have signs? Look; they've got them.

The additional oral comments were submitted in written form and are addressed in the responses to Commentor No. 284.

Response to Commentor No. 2500

2500-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2500-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2500-3: Comment noted. Any use of signs or props at the Seattle, Washington public hearing was beyond the control of DOE. DOE had no control over nor provided oversight of security personnel deployed in the Washington State Convention and Control Center.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2511: Anonymous

2511-1 — I wasn't really expecting so many pro-FFTF people here. I just didn't think — it was, you know, really kind of a no-brainer for me, because nuclear waste doesn't go away. That's the biggest thing in my mind. Ten thousand years, 20,000 years, pretty much forever, as far as we human beings are concerned. We're not going to live that long, and it's always going to be there. And so we got to put it somewhere. Well, we put it in a bunch of tanks in Hanford, and we hoped that they didn't leak, and — well, some of them didn't and some of them did. And now, as far as — you know, it's like three kilometers away from the Columbia River in groundwater. And you just can't get rid of it.

2511-2 — And the one thing I guess I'd like to say about cancer is that a hundred years ago we didn't have near the cancer rate. We also didn't have nuclear waste, and we also didn't have toxic waste at near the level. There is a correlation.

Response to Commentor No. 2511

2511-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

2511-2: The commentor's concern about cancer rates is noted. Statistics from the National Cancer Institute indicate that the rate of cancer incidence and the rate of cancer mortality has dropped during the 1990's [NCI webpage (as of 10/19/2000) - <http://cancernet.nci.nih.gov/statistics.shtml> article entitled "Cancer Death Rate Declined in the 1990s for the First Time Ever"]. A survey sponsored by the National Cancer Institute and published in the Journal of the American Medical Association in 1991 (JAMA 1991:1403-1408) detected no general increase in the risk of cancer death for people living in 107 counties adjacent to or containing 62 nuclear facilities. The Hanford Site, Idaho National Engineering and Environmental Laboratory, and Oak Ridge Reservation were included in the survey. The study used cancer mortality data from Benton, Franklin, and Grant Counties in the survey for the Hanford Site (See Section 3.4.9.3 of Volume 1). This PEIS has provided an estimate of the incremental potential human health impacts associated with a reasonable range of alternatives including the restart of FFTF for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2516: Anonymous

2516-1 — One [of my concerns] is the waste material. I am interested in the isotopes if it does help individuals to live a more — a more comfortable life, I suppose, or a life that has more — I don't know; I can't find the right word right now. But for me, it's about the waste material. And if it does have a half-life of 100,000 years, 20,000 years, what does that mean we're leaving behind for our children, our grandchildren, and so forth and so on.

2516-2 — The other thing that I was thinking about is the idea that if there is a possibility of these — of us being affected by radiation in the universe or in the world, then that's okay, but it's a matter of the concentration as it becomes more and more and more. That would concern me once again, not just the fact that we get this from the world already. But what happens when it's concentrated into a particular point? How does that affect us, as it was with Hiroshima and bombing that country or whatever.

2516-3 — Why is Germany giving this to us, giving it to us for no cost? I mean, I'm thinking to myself "Why are they doing that? Is it political, for political reasons, or is it because they are no longer building nuclear facilities any more? Why are they not pursuing something like this at all?" And that, to me, is a concern. Is it for a political favor that we'll have to repay at some point in time, even though it's at no cost? Because I think that in politics nothing is without a cost, and that's the unfortunate part about it.

2516-4 — My other thing is, when we're talking about statistics, I think of two particular missions that deal with space, the space shuttle Challenger, which if I'm not mistaken, it was either the third or fourth time that it — they were trying to get that space shuttle — or you know, tried to get it back and forth — and it blew up. And that, to me, is a concern, if it was the third or fourth time. Granted, there was an opportunity afterward to correct whatever deficiencies there were. But the fact that it was the third or the fourth time is something that needs to be looked at. And then you're talking about Apollo- 13, if I'm right about that one as well, the one that ended up going around the moon, and they weren't certain if those astronauts were able to come back. And granted, it may be only a few lives in the — in the effort of promoting the United States of America in its space mission. But the fact that it happened, and it was — it wasn't a million times, it was only like ten or thirteen or twenty or however many. That is a concern for me.

Response to Commentor No. 2516

2516-1: DOE notes the commentor's concern regarding waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. The environmental impacts associated with managing additional FFTF spent nuclear fuel are discussed in Subsection 4.3.1.1.14 of the NI PEIS. Under this section, it is stated that about 16 metric tons of heavy metal spent nuclear fuel would be generated in the 35-year nuclear infrastructure operation period. As discussed, the incremental impact associated with managing the additional FFTF spent nuclear fuel is extremely small and would have no discernible impact on the existing Hanford spent nuclear fuel management over NI PEIS evaluation period (see section 4.8.3.5 for cumulative impact). The currently used FFTF specific spent nuclear fuel storage system designs (i.e., facility storage vessels and dry storage casks) are the key contributors for determining that the incremental radiological and environmental impacts are small. This section also states that the "spent [FFTF] nuclear fuel would be packaged in acceptable containers and shipped to a geologic repository for ultimate disposal." Disposal of DOE spent nuclear fuel is within the scope of a separate EIS titled, "Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada" (DOE/EIS-0250D, July 1999).

2516-2: DOE strives to minimize public exposure to nuclear radiation resulting from its activities. Each site, including the Hanford Site is required to implement a radiological control program to meet the policy goal to: "conduct radiological operations in a manner that controls the spread of radioactive materials and reduces exposure to the workforce and the general public and that utilizes a process that seeks exposure levels as low as reasonably achievable." (DOE's Radiological Health and Safety Policy [DOE P 441.1, April 26 1996]). Section 3.4.9.1.1 of Volume 1 describes the natural background radiation environment in the vicinity of the Hanford Site. As described in Chapter 4 of Volume 1, radiation doses to the public and workers that would result from implementation of one of a range of reasonable alternatives (described in Section 2.5) would be at least a factor of 100 less than that due to the natural background. Radiation due to manmade sources in the potentially affected areas, including that due to implementation of the

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2516: Anonymous (Cont'd)

Response to Commentor No. 2516

alternatives, would add a small risk to the radiological risk due to the natural background. The amount of radiation risk that would be attributable to implementation of the alternatives is summarized in Section 2.7.1 of Volume 1.

2516-3: DOE notes the commentor's viewpoint.

2516-4: DOE notes the commentor's concern over the safety of NASA's space missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2522: Anonymous

2522-1 — The most important thing that I want to say tonight is that we are all individuals who are very important here, and everything that we have to say is extremely important and should be heard.

2522-2 — The thing that is not being heard is that our environment and our population is going to die off because of man. Man has created cancer to a huge extent. I have a lot of family who have died of cancer.... So you can say that medical isotopes are probably going to be the cure-all of cancer, but do you realize that making medical isotopes is causing cancer in a huge amount every day? And it's getting worse and worse. And like this wonderful man that was sitting over here earlier said, that there wasn't cancer a hundred years ago. That's true. Cancer has been created as much as we keep creating new technology, more pollution, nuclear pollution, nuclear waste, hazardous waste.

2522-3 — A huge polluter is the FFTF nuclear reactor. It is the second-largest polluted area in the world.

2522-4 — I am definitely against the restart of the FFTF, if not for myself, for my child's future.

Response to Commentor No. 2522

2522-1: Comment noted. It is DOE policy to encourage public input on matters of regional, national and international importance as part of its commitment to facilitate a public participation process that is open and unbiased. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS DOE carefully considered comments received from the public.

2522-2: This PEIS has provided an estimate of the incremental potential human health impacts associated with a reasonable range of alternatives (including the restart of FFTF) for accomplishing the proposed action. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small. The NI PEIS identifies (in Chapter 3 of Volume 1) endangered species that live on or near all of the candidate sites, as well as aquatic and wetlands areas that may be impacted by operations at candidate locations. According to an International Atomic Energy Agency (IAEA) publication (IAEA Technical Report Series No. 332, Effects of Ionizing Radiation on Plants and Animals at Levels Implied by Current Radiation Protection Standards), a dose rate of 100 millirem per year to the most exposed human will lead to dose rates to plants and animals of less than 0.1 rad per day. The IAEA concluded that a dose rate of 0.1 rad per day or less for animals and 1 rad per day or less for plants would not affect these populations. The largest individual dose for any of the nuclear infrastructure alternatives under normal operations would be less than 0.1 millirem, which is three orders of magnitude less than the IAEA threshold for adverse effects. Therefore, implementation of any of the range of reasonable nuclear infrastructure alternatives analyzed would not be expected to result in adverse impacts on plants and animals living in potentially affected areas around the candidate sites. As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2522: Anonymous (Cont'd)

Response to Commentor No. 2522

the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposal) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed.

2522-3: The commentor's concerns about pollution from FFTF are noted. Environmental impacts associated with operation of the FFTF and support facilities at Hanford during normal operations and from postulated accidents are discussed in Section 4.3 of Volume 1. Impacts to human health and to ecological resources would be small in the immediate area of the Hanford Site and negligible at distant locations. Waste generated under the nuclear infrastructure alternatives would result in a small burden on the Hanford Site waste management infrastructure. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement.

2522-4: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2523: Anonymous

2523-1 — I notice that you commented on vitrification, or the ideas to melt this into silicon logs. The melting point of silica is 1,410 degrees centigrade. Of the ten elements listed in the radiation dose estimates from the Hanford radioactive releases to the air and the Columbia River declassified between 1944 and 1971, all of them melt below 1,410 degrees centigrade. And five of them are completely above the boiling point, which means that the element would be a vapor which would escape into the atmosphere. This is iodine-131, strontium-90, sodium-24, zinc-65, phosphorus-32, and arsenic-76. So vitrification cannot possibly contain any element which has a boiling point above the melting point of silica; it would have to go to vapor. The phase transition is the same as in ordinary life with an ice cube So to vitrify radioactive waste is to ignore the physical reality of physical chemistry. This cannot possibly work.

2523-2 — I noticed many statements about radioactive isotopes for use in medical purposes, and nowhere did I notice certain kinds of comments. The — I've read newspaper articles about implanting radioactive pellets next to a tumor or in a tumor in order to kill the tumor. But the radioactive pellet is shooting radioactive particles in all directions, which means it is also affecting the normal tissue. The energy of the radioactive decay is sufficient to break chemical bonds, which means that exposure to radioactivity damages DNA, which — and if you damage DNA, you can cause cancer.

2523-3 — I've heard several statements about plutonium low-level waste. I don't believe that it's possible to redefine plutonium as not a high-level waste.

2523-4 — If you were to have a meltdown of this mix of oxide/plutonium fuel, and the mixed oxide, whatever it may be, is a different density than the plutonium, surely the plutonium would separate and reach critical mass and blow up. I'm curious if these risk assessments mention such things.

The Encyclopedia Britannica lists sodium as readily oxidizable. Liquid sodium is readily oxidizable. So presumably, this means that if you heat it hot enough, it can burn in the presence of oxygen. If you've lost containment or some other accident, this seems like an unreasonable risk also.

2523-5 — At the last meeting [scoping] you said that you would send a response form to comments, and I received my response form, and there was no response to my comment on vitrification.

2523-6 — How many people died downwind of Hanford?

Response to Commentor No. 2523

2523-1: DOE notes the commentor's concern regarding vitrification of radioactive waste.

2523-2: Medical isotope production has been identified as one of the purposes and needs (Section 1.2.1 of Volume 1) for which DOE action is necessary. The NI PEIS addresses the environmental impacts that would be expected from the production of medical isotopes. Although the 12 million medical procedures a year utilizing radioisotopes would be expected to benefit public health, the evaluation of the impact of medical procedures is outside the scope of the NI PEIS.

2523-3: The DOE Manual 435.1. Radioactive Waste Management defines high level radioactive waste as "the highly radioactive waste material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid material derived from such liquid waste that contains fission products in sufficient concentrations; and other highly radioactive material that is determined, consistent with existing law, to require permanent isolation." DOE has prepared an implementation guide to DOE M 435.1 to assist in implementing the requirements contained in that manual. For this particular "requirement," the definition of high-level radioactive waste, the guide is intended to facilitate the classification of indefinite waste as to whether or not they are high-level radioactive waste. It is recognized that the definition of high-level radioactive waste is not precise and is essentially a source-based definition that also alludes to concentrations of a given waste stream. Page II-8 of this guide notes that "For the purpose of managing high-level waste under DOE M 435.1-1 [sic], spent nuclear fuel includes spent driver elements and/or irradiated target elements that contain transuranium elements." This statement was included in the guide because the concentrations of long-lived isotopes are likely to be somewhat high during reprocessing and it also meets the source-based definition. As a result of reviewing this guide and to address the comments raised, DOE is considering whether the waste from processing of irradiated neptunium-237 targets should be classified as high-level radioactive waste and not transuranic waste. As a result, the Waste Management sections (i.e., Sections 4.3.1.1.13; 4.3.2.1.13; 4.3.3.1.13; and 4.4.3.1.13) of this NI PEIS have been revised to reflect this different classification from what was assumed in the draft NI PEIS. As discussed in these revised sections, irrespective of how the waste is classified (i.e., transuranic or high-level radioactive waste), the composition and characteristics are the same and the waste management (i.e., treatment and on-site storage) for this NI PEIS would be the same. In addition, even if the waste is managed as high-level radioactive waste it would have no impact on the existing high-level radioactive waste management infrastructure (e.g., high-level waste storage tanks), since the high

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2523: Anonymous (Cont'd)

Response to Commentor No. 2523

activity waste from processing of the targets would be initially stored and vitrified within the processing facility (i.e., FMEF, REDC, or FDPF).

2523-4: Mixed-oxide fuel is a homogeneous mixture of uranium dioxide and plutonium dioxide. Mixed oxide fuel has the same general characteristics as uranium dioxide fuel, such as a high melting point, irradiation stability, compatibility with metals and with reactor coolants, and ease of preparation. The NI PEIS accident analysis considered a spectrum of accidents, including fuel melting scenarios, criticalities, and liquid sodium releases. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected from implementation of Alternative 1. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

2523-5: It appears that the commentor is making reference to public participation proceedings under the Tri-Party Agreement (TPA) Community Relations Plan (CRP). The conduct and outcome from public hearings and meetings on matters that are unrelated to these DOE missions are beyond the scope of this NI PEIS. Specifically, the TPA, and its associated public involvement process, and NEPA, under which this NI PEIS is being prepared, are legally and functionally independent of each other. The TPA's public involvement process, as per the TPA CRP, is not required for NEPA reviews and public involvement, including public scoping meetings and Draft NI-PEIS public hearings.

2523-6: The commentor's concern for the current severe health impacts is noted. Prevailing winds at the Hanford Site blow toward Grant County, Washington from the south (14.2 percent of the time) and south southwest (11.5 percent of the time) directions. Hence Grant County would be expected to bear the major burden of wind borne contamination from the Hanford Site. A survey sponsored by the National Cancer Institute and published in the Journal of the American Medical Association in 1991 (JAMA 1991:1403-1408) detected no general increase in the risk of cancer death for people living in 107 counties adjacent to or containing 62 nuclear facilities. The Hanford Site, Idaho National Engineering and Environmental Laboratory, and Oak Ridge Reservation were included in the survey. The study used cancer mortality data from Benton, Franklin, and Grant Counties in the survey for the Hanford Site. The methodology used in the survey did not attempt to estimate actual exposures to ionizing radiation or hazardous chemicals and did not allow identification of areas within a given county that might have increased or decreased cancer rates relative to the county as a whole. If any excess cancer mortality risk was present in Grant County, it was too small to be detected with the methods employed in the survey. As discussed in Chapter 4 of Volume 1, no latent cancer fatalities among populations surrounding the Hanford site would be expected to result from implementation of Alternative 1, Restart FFTF.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2543: Anonymous

2543-1 — I am in support of the restart of FFTF.

2543-2 — I think you are doing things right and I think you're looking at it very technically and with concern for the American public.

Response to Commentor No. 2543

2543-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2543-2: DOE notes the commentor's support for its execution of the NEPA process.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2549: Linda Alexander

2549-1 — A restart of the FFTF would assure high quality isotopes are available for use more than just the select few for studies and the options you protect, or save, may some day be your only option left.

Response to Commentor No. 2549

2549-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor: Dan Arrigoni

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 282.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2537: India M. Bauer

2537-1 — I oppose the startup.

2537-2 — I think that the cost is prohibitive [for FFTF restart] and the funds, even though they come from a different agency, they could be used for clean-up [at Hanford].

2537-3 — I think for the doctors and businesses who argue in support of this [FFTF restart], I think they have a big incentive for doing that since it's their livelihood and I think the so-called treatment and prevention of cancer it's a big business and people are making a lot of money from it.

2537-4 — I think that even though you say it's low level toxic waste that we'll get, it's still toxic waste and we still don't have the technology to get rid of it.

Response to Commentor No. 2537

2537-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2537-2: The commentor's positions on the cost of Alternative 1, Restart FFTF, and funding for Hanford cleanup are noted. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. Funding is allocated by Congress and is not interchangeable between EM programs and NE programs. As stated in Section N.3.2 of Appendix N, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

2537-3: The NEPA process provides a number of opportunities for the public to participate in the preparation of an EIS irrespective of their views. DOE takes this participation seriously. In preparing the Final Nuclear Infrastructure PEIS, DOE carefully considered comments received from the public.

2537-4: DOE notes the commentor's concern regarding waste generation. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor: Brian Berglin

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 281.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor: Greg Bergquist

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 270.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2545: Gary Bozanke

2545-1 — The FFTF is the quickest and safest way to begin producing high quality isotopes needed by the medical and research communities while our national long term prediction strategy is finalized, and we citizens of Washington should be proud to be able to play a vital part in serving this growing need.

2545-2 — I've worked in commercial industry including shipyards and can assure those with concerns about waste that by design and proven after ten years of excellent operation ratings, there's no waste problem at FFTF.

Response to Commentor No. 2545

2545-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

2545-2: DOE notes the comment.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor: Shirley Breitenstein

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 269.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2513: John Brown

2513-1 — I haven't looked at the entire PEIS. I have looked at the summary you mailed me — thanks. I found something while I was sitting here listening, that stated that reactors operating in Canada were considered for supplying the radiation services for Pu-238. But since the use of the CANDU reactors does not meet — and this is the part that interested me — “the programmatic issue being addressed in the PEIS” — that is, “the enhancement of the United States infrastructure to support the proposed missions,” meaning that we're not looking for solutions, we're looking for “our” solution.

2513-2 — In the next paragraph down [in the Summary] it says, “Numerous existing U.S. processing hot-cell facilities possess the capabilities and capacity to support the proposed missions. Given this general availability, only existing processing facilities that are co-located at DOE's candidate irradiation facility sites,” like Oak Ridge, ARCO - or what do you call it now, the place in Idaho — and Hanford, “were evaluated in the PEIS.” What you call that in a card game is a stacked deck, or eliminating the outcome of non-preferred outcomes. And I'd like to say right off the bat that this is, on the surface, a draft programmatic environmental impact statement, and I'd like to say that it's one heck of a selling job.

2513-3 — I wondered about the expert panel that was mentioned in here a number of times. I didn't see the — any NERAC group was identified by name.

2513-4 — . . .with regard to the cancer patients, if they're playing politics by restricting the scope of this thing to derive a certain outcome that's based on our good national interest, whether we have to import the Pu-238 from Germany or not, just like our oil, they're playing politics with cancer patients. It isn't a question of trying to help everybody by doing this the right way; this is politics. And if you do build it that way and you do restrict these things, what if the Canadians come down and say, “Hey, we have a treaty, NAFTA, you know; we're supposed to have free trade. This is an item of trade.” What about the WTO? They can come in and say, “Hey, listen, you can't — you know, we can provide this cheaper. What are you guys building this for and keeping us out? Because it's related to your national security interest? Because it's nuclear?” Yeah, you could say that, and we could have a big argument and go to court.

Response to Commentor No. 2513

2513-1: Existing, operational commercial facilities were evaluated in the NI PEIS for supplying irradiation services. These were domestic commercial light water reactors, as opposed to foreign reactors. Although the CANDU reactors were not specifically evaluated as an alternative in the NI PEIS, the environmental impacts associated with transporting the nonirradiated and irradiated neptunium-237 targets between the CANDU reactors and the target fabrication and processing facilities in the United States are bounded by the evaluations presented in the NI PEIS for the commercial light-water reactor options of Alternative 2, Use Only Existing Operational Facilities. Environmental impacts from the operation of a CANDU facility does not fall under the National Environmental Policy Act and would not be evaluated in an environmental impact statement.

2513-2: As discussed in Section 2.6.2 of Volume 1, there are numerous hot cell facilities in the United States with the capabilities and capacity to support the DOE missions. Candidate processing facilities not collocated at one of the DOE irradiation facility sites were dismissed from further consideration. DOE's primary reason for this was to narrow the universe of alternatives and alternative-option combinations down to a manageable number that could be adequately and meaningfully assessed in this NI PEIS. Thus, the facilities remaining form part of the range of reasonable alternatives required by NEPA and CEQ regulations (see 40 CFR 1502.14) to be addressed and that are evaluated in this NI PEIS to accomplish the proposed actions.

2513-3: Information on the Nuclear Energy Research Advisory Committee (NERAC) is provided in Section 1.2 of the NI PEIS. The Nuclear Energy Research Advisory Committee (NERAC) was established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. The members of the NERAC Subcommittee for Isotope Research & Production Planning were selected based upon their expertise and experience in the production, processing, distribution, and application of stable and radioactive isotopes in the biological and physical sciences, and in medicine. The members included basic and clinical scientists, administrators, and users of isotopes from academia, industry, and the federal government, with several possessing a background in reactor production of isotopes.

2513-4: DOE notes the commentor's viewpoint.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2514: Tom Burke

2514-1 — Several people have suggested that a major issue in this decision is jobs. I can tell you, I work at FFTF. I'm interested in restarting FFTF, not for my job. I believe I will have a job at FFTF even if DOE decides today to shut FFTF down. It will take long enough that I will have a job until I decide to retire.

2514-2 — The reason that I support FFTF restart is that it is the best facility available to do the three very important missions that are described in the NI PEIS.

Response to Commentor No. 2514

2514-1: DOE is not considering restarting FFTF for the purpose of creating jobs, although socioeconomic impacts (e.g., number of new jobs created) are addressed in Sections 4.3.1.1.8, 4.3.2.1.8, and 4.3.3.1.8 for Alternative 1, Restart FFTF, Options 1 and 4, 2 and 5, and 3 and 6, respectively. The Record of Decision for the PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

2514-2: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2518: Norm Buske
Nuclear-Weapons-Free America

2518-1 — . . . basically, FFTF is the wrong facility for its mission. It's terribly expensive to produce neutrons at quarter-throttle on a reactor. In this PEIS it says that — the PEIS postulates that the FFTF would operate — would operate at a nominal power level of 100 megawatts, one quarter of the reactor design power level, to meet the irradiation requirements of the proposed missions.

2518-2 — Periodic increases in power level [at FFTF] between 100 and 400 megawatts may be required to support nuclear research and development activities. That's basically code words for clandestine bomb plant. The way this works is, the FFTF has to be restarted on a civilian mission. So the mission statement cannot and never will include bombs. It's restarted on a civilian mission, and then it basically goes into a clientele arrangement with DOD and DOE to produce super-fissile materials. I ask that in the final environmental impact statement, that the use of the reactor in what you call excursion be included, along with the product, its deployment, and use of the nuclear weapons that will be the ultimate product and consequence of this facility.

2518-3 — I also ask that the FFTF be shut down.

Response to Commentor No. 2518

2518-1: The operation of FFTF at 25 percent of its design power level of 400 megawatts (i.e., 100 megawatts) for the missions described in this EIS is not more expensive than 400 megawatt operation. A separate cost report evaluates the cost of each EIS alternative. The operation of FFTF at 100 megawatts requires less new nuclear fuel and discharges less spent nuclear fuel over the 35 year time period of the mission than if it operated at 400 megawatts.

2518-2: DOE has no hidden agenda for weapons production or use of FFTF for classified missions. The only missions being considered are those analyzed in the NI PEIS, which are the production of isotopes for medical research, and industrial uses; plutonium production for future NASA space exploration missions; and U.S. nuclear research and development needs for civilian application.

2518-3: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

**Commentor No. 2519: Tom Carpenter
Government Accountability Project**

2519-1 — We're concerned about the proposed operation and restart of the FFTF facility, simply from the perspective of the fact that if you look at what Hanford is, it's awash in radioactivity. And it's got radiation and contaminated soils beneath the Hanford waste tanks in unknown quantities — at least a million gallons is estimated, but it may be more, according to studies by Los Alamos. And the thing is that this waste has migrated through the groundwater, through the soils to the groundwater, and is either in the Columbia River right now or is heading that way. And this is a process, of course. It's not all there now, but it's happening. So the response of Hanford to this situation is "Well, we'll remove the waste from the tanks and classify that waste someday, if we can find a contractor and if it's technically feasible, and only 10 percent by the year 2028." Well, maybe that date is going to slip now by five years. Well, what about the waste that's leaked out of the tanks and is heading toward the groundwater and toward the river? The fact is that Hanford is — stores two thirds of the nation's high-level nuclear waste, and you all don't know what to do with — do about that, the fact that it's migrating into the environment. ... Focus on the cleanup.

2519-2 — And our environmental surveillance indicates that radiation levels are starting to increase along the shoreline of Hanford. Your own records indicate that there are spikes happening with tritium and strontium-90 and other levels continuing to escalate, which you would expect to see. This will start having probably more dramatic effects on Washington's crops and fish and people in the area as time goes on.

2519-3 — So this is the backdrop for reopening a reactor that will produce spent nuclear fuel. We don't have a disposal path for that fuel. So we're — it seems to me that you're committing a mistake all over again, which is making more stuff that you don't know what to do with, that's hazardous for a very, very long time. I hear talk of repository. Well, what repository? I mean, we've talked about repositories now in the United States for decades. They're fighting over Yucca Mountain, don't know if it will open or not. But it's certainly way too small to accommodate the volume of nuclear waste in the United States.

2519-4 — There's also talk of bringing in German fuel from a company called SBK. And I heard comments earlier that's not nuclear weapons- grade fuel, which I found a curious comment. It turns out that a whistle-blower, in fact, from a company called ANMS, leaked some documents out concerning this very fuel. And I've got here a letter from the lawyer for this German company to Secretary Hazel O'Leary dated June 13th, 1996, and he refers to the record of decision for the final environmental impact statement on a proposed nuclear weapons non-proliferation policy concerning foreign research reactors' spent nuclear fuel.

Response to Commentor No. 2519

2519-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2 OF Appendix N, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

2519-2: The commentor's concern for existing radiation levels at the Hanford shoreline are noted. The analysis presented in the PEIS addresses the potential for incremental impacts associated with facility operations associated with each of the alternatives proposed. Current levels of contamination and exposures to the workers and public are addressed in the assessment of cumulative impacts presented in Section 4.8. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2519: Tom Carpenter (Cont'd)
Government Accountability Project

That's the title — not my title, it's just the title; I just read it off, thank you. So this — he's saying, "Take back this German fuel, which is of U.S. origin, for non-proliferation reasons." This is nuclear weapons-grade material, according to the company that has this fuel right now. And it's not just offering to give it away, they're willing to pay somebody \$35 million to take it off their hands.

2519-5 — So don't restart the FFTF.

Response to Commentor No. 2519

Energy) This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

- 2519-3:** The NI PEIS assumes, for the purposes of analysis, that Yucca Mountain Nevada, would be the final disposal site for DOE's high-level radioactive waste and spent nuclear fuel. As directed by the U.S. Congress through the Nuclear Waste Policy Act, as amended, Yucca Mountain is the only candidate site currently being characterized as a potential geological repository for high-level radioactive waste and spent nuclear fuel. DOE has prepared a separate EIS, "Draft Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High Level Radioactive Waste at Yucca Mountain, Nye County, Nevada" DOE/EIS-0250D, July 1999), which analyzes the environmental impacts from construction, operation and monitoring, related transportation, and eventual closure of a potential geological repository.
- 2519-4:** The commentor is correct in stating that the German MOX fuel currently stored in Europe represents a nonproliferation concern because it contains plutonium oxide mixed with uranium oxide. Chemical separation of the plutonium from this fuel could result in the extraction of weapons grade plutonium as discussed in the separate DOE Nuclear Infrastructure Nonproliferation Impact Assessment which was published and released to the public in September, 2000. However, this nonproliferation report also states that, "If a decision is made to restart FFTF, the German MOX fuel could serve an immediate civil nuclear programmatic interest of the U.S. Government and at the same time dispose of a significant stockpile of highly attractive fresh plutonium fuel by conversion to spent fuel through irradiation in FFTF."
- 2519-5:** DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

*Commentor: Katy Carter
[for] Heidi Wills, Seattle City Council*

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 271.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2526: Larry Chambers

2526-1 — To leave the FFTF reactor on line, to me, is a symbol of our willingness to continue producing either a near-grade plutonium bomb material, or perhaps like other people have suggested, that they will sneak that in.

2526-2 — The last public hearing I was to at — for Hanford, the BNF, or British Nuclear Fuels, was supposed to resolve the waste dilemma by vitrification. That scenario seems to have fallen through. ... DOE has constantly missed its past cleanups deadlines on the Tri-Party Agreement.

2526-3 — What are we going to do with the new waste? The logic of creating more high-level waste without any concrete cleanup escapes me. We have no national depository, no vitrification plants, no comprehensive plan in action.

2526-4 — Shut down the FFTF reactor, and adopt Alternative 5.

Response to Commentor No. 2526

2526-1: DOE has no hidden agenda for weapons production or use of FFTF to support defense missions. The only missions being considered are those evaluated in the NI PEIS, which are the production of isotopes for medical, research, and industrial uses; plutonium-238 production for future NASA space exploration missions; and U.S. nuclear research and development needs for civilian application.

2526-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford and delays in vitrification of waste. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. DOE has expedited procurement of the vitrification plant design and build services in anticipation of maintaining the TPA goal for processing the most hazardous tank wastes. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.

2526-3: The DOE Manual 435.1. Radioactive Waste Management defines high level radioactive waste as "the highly radioactive waste material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid material derived from such liquid waste that contains fission products in sufficient concentrations; and other highly radioactive material that is determined, consistent with existing law, to require permanent isolation." DOE has prepared an implementation guide to DOE M 435.1 to assist in implementing the requirements contained in that manual. For this particular "requirement," the definition of high-level radioactive waste, the guide is intended to facilitate the classification of indefinite waste as to whether or not they are high-level radioactive waste. It is recognized that the definition of high-level radioactive waste is not precise and is essentially a source-based definition that also alludes to concentrations of a given waste stream. Page II-8 of this guide notes that "For the purpose of managing high-level waste under DOE M 435.1-1 [sic], spent nuclear fuel includes spent driver elements and/or irradiated target elements that contain transuranium elements." This statement was included in the guide because the concentrations of long-lived isotopes are likely to be somewhat high during reprocessing and it also meets the source-based definition. As a result of reviewing this guide and to address the comments raised, DOE is considering whether the waste from processing of irradiated neptunium-237 targets should be

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2526: Larry Chambers

Response to Commentor No. 2526

classified as high-level radioactive waste and not transuranic waste. As a result, the Waste Management sections (i.e., Sections 4.3.1.1.13; 4.3.2.1.13; 4.3.3.1.13; and 4.4.3.1.13) of this NI PEIS have been revised to reflect this different classification from what was assumed in the draft NI PEIS. As discussed in these revised sections, irrespective of how the waste is classified (i.e., transuranic or high-level radioactive waste), the composition and characteristics are the same and the waste management (i.e., treatment and on-site storage) for this NI PEIS would be the same. In addition, even if the waste is managed as high-level radioactive waste it would have no impact on the existing high-level radioactive waste management infrastructure (e.g., high-level waste storage tanks), since the high activity waste from processing of the targets would be initially stored and vitrified within the processing facility (i.e., FMEF, REDC, or FDPF).

2526-4: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2551: Donn Colby
Washington Physicians for Social Responsibility

2551-1 — There's no argument that they're necessary or that FFTF can produce them [medical isotopes]. The question is whether production at FFTF is affordable or economically feasible. The Department of Energy has looked for a private contractor for years to commit to medical isotope production at Hanford, and has been unable to find a single producer willing to commit to the project....

Nothing in the draft EIS indicates that isotopes produced by FFTF would be any more affordable than currently available isotopes. In fact, statement from DOE's own committees confirm that medical isotope production at FFTF is not commercially viable.

2551-2 — The fact is that there is no current shortage of medical isotopes. The National Institute of Medicine issued a report that stated that there is no current shortage of medical isotopes and that they could not foresee any shortage coming in the near future....

I'd like to remove the argument for medical isotope production from decision making process.

2551-3 — I'd like to ... ask that DOE permanently close the FFTF.

Response to Commentor No. 2551

2551-1: DOE notes the commentor's opinion. The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost-efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities.

2551-2: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1 2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

*Commentor No. 2551: Donn Colby (Cont'd)
Washington Physicians for Social Responsibility*

Response to Commentor No. 2551

2551-3: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FTFE.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2528: Mike Contini

- 2528-1** — I support Alternate 1, restart of FFTF for the production of medical isotopes and Pu-238.
- 2528-2** — I want a statement in the PEIS that provides a categorical exclusion of using FFTF at any time for production of weapons materials of any kind.
- 2528-3** — I want to now turn my attention to accountability. There is a sign here concerning two FFTF employees fired for falsifying work done. I am familiar with this; I work at FFTF. The event happened, and the employees paid the price: they were fired, as they should have been. Can we say this about Heart of America Northwest? The Government Accountability Project? Columbia River United, or whatever new name they have? Does accountability exist for them? They can distort, misquote, take out of context items of great concern — again, what accountability exists for the watchdogs of Hanford?
- 2528-4** —...want Hanford cleaned up as fast as — as fast and as safe as possible.

Response to Commentor No. 2528

- 2528-1:** DOE notes the commentor's support for Alternative 1, Restart FFTF.
- 2528-2:** The only missions being considered are those stated and evaluated in the NI PEIS, which are the production of isotopes for medical, research, and industrial uses; plutonium-238 production for future NASA space exploration missions; and U.S. nuclear research and development needs for civilian application. No component of the proposed action is for the purpose of supporting any defense or weapons-related mission. If, in the future, other missions are considered for FFTF, additional NEPA analysis would be conducted.
- 2528-3:** DOE notes the commentor's views and testimony.
- 2528-4:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2502: Megan Cornish Freedom Socialist Party and Radical Women

2502-1 — I'd like to support the other speakers who have exposed some of the facts for why the FFTF should not be restarted and should be permanently closed down.

2502-2 — I would like to just mention quickly, the bias of the draft is so blatantly obvious to me. And I'm not a person who's watched every tiny detail of this, the development of this process. But just listening to the proposal tonight, I've found the bias for restarting the reactor appalling.

2502-3 — Under capitalism, if you'll pardon the term, the science, the research, and the medicine that gets funded is only that which benefits corporations and the military. We do not trust or support medical or nuclear energy support that is in the hands solely of the profits system. ... Now civilian nuclear energy research — are you kidding? It's bad enough to have nukes and nuclear research under the control of the military, which at least reports to Congress and the executive branch, which are susceptible to public pressure. But why should we fund civilian profit-making nuclear energy research which will be accountable to no one? This is corporate welfare, and it's corporate welfare at the expense of public welfare. This is the use of a public facility for private business interests. I believe that this is not supposed to happen, and I believe that it's unethical as well as illegal.... This version of corporate welfare means ill-fare for thousands of people, hundreds of thousands of people. And I understand the concern of people, working people in the Tri-Cities area, but I believe that they're being held hostage. We should have money for safe jobs, not death traps and not nukes.

2502-4 — Furthermore, how ironic it is that this nuclear facility is being proposed as part of the war on cancer, given the numbers of people who are already sick and dying from Hanford's radiation.

2502-5 — For the victims of cancer, we demand: stop industrial pollution, stop toxic and nuclear waste, and provide free, nationalized health care. And you can solve the war on cancer.

2502-6 — And I don't think it's accidental that the Tri-Cities is an area with a high concentration of Chicano population and migrant farm workers who use the water in the area, work on it, and sleep on it.

2502-7 — Since the FFTF is not needed for medical research, and it's inappropriate to use it for commercial medical isotopes, and unneeded, and since it's not required by NASA for the space exploration missions that have also been raised as a reason for it, and since federal money should not be used for commercial nuclear energy research — and those were all the alternatives that were listed — and also, there are other alternatives for all of these missions that are far cheaper than the reactor, what is the real reason for the drive to restart the FFTF? Obviously, the reason is military. It is star-wars-type space missions from the U.S. space command, and the use of arms from space directed at earth. Come out and say what it's really all about, because that's the obvious underpinning of this.

Response to Commentor No. 2502

2502-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF.

2502-2: DOE has made every effort to make this NI PEIS objective. This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives. This was accomplished through review and evaluation of site-specific information on the environmental conditions prevailing at ORR, INEEL, and Hanford to include a comprehensive analysis of the associated environmental and health risks of each alternative.

2502-3: DOE notes the commentor's concerns.

2502-4: The commentor's concern about cancer rates in the Hanford area is noted. Chapter 4 of Volume 1 and Appendixes H through J discuss radiological exposures to the public that would be expected to result from implementation of the nuclear infrastructure alternatives. This PEIS has provided an estimate of the incremental potential human health impacts associated with a reasonable range of alternatives (including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small. Cancers are believed to be caused by a combination of hereditary and environmental factors, including radiological and chemical agents. Statistics from the National Cancer Institute indicate that the rate of cancer incidence and the rate of cancer mortality has dropped during the 1990's [NCI webpage (as of 10/19/2000) - <http://cancernet.nci.nih.gov/statistics.shtml> article entitled "Cancer Death Rate Declined in the 1990s for the First Time Ever"]. A survey sponsored by the National Cancer Institute and published in the Journal of the American Medical Association in 1991 (JAMA 1991:1403-1408) detected no general increase in the risk of cancer death for people living in 107 counties adjacent to or containing 62 nuclear facilities. The Hanford Site, Idaho National Engineering and

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2502: Megan Cornish (Cont'd)
Freedom Socialist Party and Radical Women

Response to Commentor No. 2502

Environmental Laboratory, and Oak Ridge Reservation were included in the survey. The study used cancer mortality data from Benton, Franklin, and Grant Counties in the survey for the Hanford Site (See Section 3.4.9.3 of Volume 1).

- 2502-5:** DOE notes the commentor's opposition to pollution and waste and support for national health care. As discussed in Chapter 4 of Volume 1 (e.g. sections 4.3.1.1.13, 4.3.2.1.13, 4.3.3.1.13), waste will be generated by all of the alternatives, including the No Action Alternative. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. DOE activities associated with this program would not impact the schedule or available funding for existing cleanup activities at candidate sites for implementation of the nuclear infrastructure alternatives. The purpose of this NI PEIS is to evaluate the environmental impacts of a range of reasonable alternatives to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238 for future NASA missions, and civilian nuclear energy research and development. The DOE mission requirements can currently only be met using nuclear reactor or accelerator technologies.
- 2502-6:** The commentor's position is noted. The racial and Hispanic composition of the potentially affected population surrounding the Hanford Site is discussed in Section K.5.3 of Appendix K (Environmental Justice Analysis). As discussed in Chapter 4 of Volume 1 and Appendix K, implementation of the nuclear infrastructure alternatives would pose no significant radiological or nonradiological risk to minority or low-income populations residing in the potentially affected area.
- 2502-7:** DOE has no hidden agenda for weapons production or use of FFTF for military missions. Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. The NI PEIS evaluates a range

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

*Commentor No. 2502: Megan Cornish (Cont'd)
Freedom Socialist Party and Radical Women*

Response to Commentor No. 2502

of reasonable alternatives for accomplishing the proposed action, one of which includes use of FFTF. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor: William A. Dautel

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 431.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2506: Tiffany Devoy
Heart of America Northwest

2506-1 — I am with Heart of America Northwest, which I know in the eyes of many of you means whatever I say will be a half-truth. But what I think is very interesting is that you who have come here [Seattle] from the Tri-Cities are right, but Congressman McDermott is wrong. You are right, but the entire Seattle City Council is wrong. You are right, but Brian Baird, Adam Smith, Ron Wyden — they're all wrong. And all the people who have come here tonight to tell you that they are afraid, that they don't want this to happen, that they are worried about what will happen if it is restarted — they're all wrong, and their concerns are nothing, they're based on lies. And I think that's really disgraceful that you come in here to our city and tell us that our concerns are invalid, and that our representatives are wrong. And I very much object to that kind of attitude and to your presence here tonight.

Response to Commentor No. 2506

2506-1: DOE notes the commentor's views and observations including views toward other speakers at the Seattle, Washington public hearing. It is DOE policy to encourage public input on matters of regional, national and international importance as part of its commitment to facilitate a public participation process that is open and unbiased.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

*Commentor: Tiffany Devoy
[for] Carole Woods, Sierra Club*

The oral comments were submitted in written form by the Sierra Club and are addressed in the responses to Commentor No. 262.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2527: Larry Ebersole

2527-1 — . . . everyone is concerned about cancer and preventing disease, and it sounds like tonight there is actually more support for publicly subsidized health care than I realized. And I would like, in sort of a tangent, to make sure that the Department of Nuclear Energy and the people here at this hearing convey to the people in Washington, D.C., at the appropriate level of government — I believe it would be what, Department of Health and Human Services? — that from what we hear tonight, there is really support for some sort of universal health care program that would address all of the relevant disease and their treatments such as cancer. And people haven't mentioned AIDS or major depression or post-trauma or anything like this. But I think, really, you know, definitely, public support for this is a very good idea. There is plenty of funding. Plenty of funding for it, when certain changes are made.

2527-2 — . . . why not find other ways to develop isotopes than restart a reactor? It seems like it's something out of a 1950s horror film, the idea of supporting public health by starting a nuclear reactor.

2527-3 — I wonder how this particular subject interacts with the rest of what the Department of Energy is doing, this stockpile steward program, which is basically modernizing the U.S. nuclear arsenal, preparing for what used to be called strategic defense initiative, the so-called missile defense system — which eventually would be nuclear most likely, because it wouldn't work. And it shouldn't work, because it doesn't have to be built, because there can be nuclear abolition every year. Congresswoman Pelosi, Sonoma, California, introduces an act called the Nuclear Disarmament and Economic Conversion Act. It would do exactly that, calling the president to initiate a treaty for nuclear abolition.

2527-4 — I'm in the "don't restart it" camp.

2527-5 — . . . in the table S-2, "Facilities lacking sufficient neutron production capacity to support the PEIS proposed action without impacting existing missions" — and there's a whole bunch of them listed. Well, one of them happens to be Los Alamos, and another one is Lawrence Livermore. I think the crux here is "Let's not challenge the existing missions"; well, that's the nuclear weapons part of it. So I think that is how these are related. So nuclear disarmament will be helpful.

Response to Commentor No. 2527

2527-1: DOE notes the commentor's interest in national health care, although this issue is beyond the scope of this Nuclear Infrastructure PEIS. The DOE missions addressed in this PEIS include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development.

2527-2: The commentor's opposition to the use of reactors for isotope production is noted. The PEIS addresses a range of reasonable alternatives for the production of isotopes. Among these are the use of existing DOE facilities including operating reactors at INEEL and Oak Ridge and the use of FFTF, currently in standby. Additionally, the PEIS considers two alternatives which would make use of new facilities. One would make use of a to-be-built reactor facility and another (Alternative 3) would make use of two to-be-built accelerators. The PEIS provides information that can be used to make the decision on which of these facilities, if any, are to be used for isotope production.

2527-3: DOE notes the commentor's opposition to nuclear weapons and strategic defense initiative, although these issues are beyond the scope of this Nuclear Infrastructure PEIS. The scope of this Nuclear Infrastructure PEIS is limited to analysis of alternatives to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development. The three missions are civilian nuclear energy missions and are not defense-related.

2527-4: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2527-5: DOE notes the commentor's views on nuclear disarmament. The evaluation of existing missions at facilities, whether they are nuclear weapons related or not, are not within the scope of this NI PEIS.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2539: Kirstin Ellstrom

2539-1 — I'm against the restart of this nuclear reactor.... My decision is that certainly further studies need to be made before we restart this reactor.

Response to Commentor No. 2539

2539-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF. DOE does not believe that further study is needed if Alternative 1 is selected in the Record of Decision. DOE has evaluated all appropriate information within the context of the NEPA process and believes that the decision-maker has sufficient information on which to base their final recommendation.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2550: Rachael Golden

2550-1 — The estimated cost of restarting the FFTF is roughly \$400 million dollars which could alternatively be spent on Hanford cleanup. Also, this is much, much more than it would cost to create an individual separate facility to create medical isotopes unto itself. And that's the cost.

2550-2 — I question whether there's any benefit to restarting FFTF, No. 1. The blue ribbon medical advisory committee stated FFTF is not a viable source of research isotopes and medical isotopes have been proven to be able to be made in the reactors in Tennessee, Idaho, and Canada.

2550-3 — Also, NASA released a statement on May 27th of this year that it no longer has a need for the quantity of plutonium-238 which would be produced by the FFTF, effectively eliminating them as a purchaser of this exceptionally toxic element.

2550-4 — On the other hand, at the DOE scoping hearing last October, Colette Brown stated that Pu-238 from FFTF would not be used for military purposes. However, it was brought to her attention at this hearing its production of FFTF would indeed free up the Pu-238 already stored around the country for military.

Therefore, if we're restarting the FFTF to produce Pu-238 would free up its use for military systems that are designed to destroy life, there is not only zero benefit to restarting FFTF but indeed it would be a detriment to the human race as nuclear war, even if fought from space, as well as increased nuclear waste and increased risk of nuclear accident ...

Response to Commentor No. 2550

2550-1: DOE prepared a separate Cost Report to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such an ancillary document need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed this document to about 730 interested parties on August 24, 2000. The report was made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided a summary of the Cost Report in Appendix P in the Final NI PEIS.

2550-2: DOE assumes that the commentor is referring to the conclusions presented in the "NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000" regarding the suitability of the Fast Flux Test Facility (FFTF) to produce research isotopes in a timely and cost-efficient manner. These conclusions were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of the FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates use of the FFTF when coupled with the other proposed missions. There currently is little room for growth of medical isotope production at either ATR, in Idaho, or HFIR, in Tennessee. At ATR the neptunium 237 targets for plutonium-238 production will compete for space in the reactor. There are potential negative impacts to the private company that leases reactor space for the production of radioisotopes due to being assigned less desirable irradiation space. At HFIR, the ability to expand medical isotope targets into additional reactor locations is limited by the potential impacts that the targets have on the primary experiments in the reactor. Medical isotope targets and neptunium-237 targets are not in competition for the same locations in at HFIR. Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability is dispersed throughout the DOE complex. This capability supports secondary missions, but cannot be effectively used due to the operating constraints

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2550: Rachael Golden (Cont'd)

Response to Commentor No. 2550

associated with the facilities' primary missions basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term. The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

- 2550-3:** A May 22, 2000, correspondence from NASA to DOE identified that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium 238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.
- 2550-4:** Small radioisotope thermoelectric generators (RTGs) using plutonium 238 are used to power electronic systems on some strategic weapons, some of which have become surplus due to strategic arms reductions. Although the exact configuration of these RTGs is classified, the amount of plutonium-238 in each unit is relatively small and the assay of the plutonium-238 is unacceptable (too low) for use in RTGs or radioisotope heater units for NASA spacecraft. Therefore, it is not a viable source for consideration in the NI PEIS.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2512: Roy D. Goodman

2512-1 — Let's do away with industrial, nuclear, chemical, and other man-made toxins which poison our environment and cause cancer, so we don't need medical isotopes.

2512-2 — Let's have speakers only speak once at any of these hearings. If you have people that come to these hearings and want to speak at a second hearing, let them go at the end of people who have waited to speak the first time. I don't know if that's happened tonight, but I know it does happen. In other words, if I spoke last night in Portland, I shouldn't get to speak tonight until everyone who hadn't spoken to you before got to speak. You know who those people are. I don't care which side they're speaking for. Your postcard I got in the mail had a toll-free number on it. I called two weeks ago with some questions about tonight; nobody called me back. A week ago I sent an e-mail; nobody e-mailed me back on my questions about tonight. You mailed out a packet of material, Volume 1, Volume 2, summary — it cost you \$10 in postage, plus I don't know what other costs were involved with that. Why don't you just send a postcard out to everybody first, ask them if they want these things. You'll save some money. You could apply it towards cleaning up Hanford, or pay somebody to respond to my toll-free call and my e-mail.

2512-3 — Hanford, it's in Washington State; I said Hanford, full of nuclear waste; I said Hanford suffers from your delay to honor your cleanup agreement.

2512-4 — It's time to shut down the FFTF.

The additional oral comments were submitted in written form and are addressed in the responses to Commentor No. 277.

Response to Commentor No. 2512

2512-1: DOE notes the commentor's concern regarding cancer causing material generation. As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. This PEIS has provided an estimate of the incremental potential human health impacts associated with a reasonable range of alternatives (including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

2512-2: DOE strives to ensure that the hearing format used serves to promote open and equal representation by all individuals and groups, regardless of the motivation for attending, at each and every public hearing. One means used by DOE in trying to ensure equal representation at public hearings is by selecting the order of speakers through a random number drawing. As suggested by the commentor, excluding speakers from speaking in the initial comment round at one hearing if they had already done so at a previous hearing would not be practical to enforce and would serve to undermine the representativeness of the body of concerned persons speaking at each hearing. The commentor's concerns for not receiving a response to questions on the Seattle, Washington public hearing are noted. Both the toll-free telephone line and e-mail were being answered during the course of the public comment period. DOE regrets that the commentor's request for information was not responded to and will take appropriate action to avoid such oversights in the future. DOE apologizes for sending a complete set of the Draft NI PEIS materials to the commentor that was not requested. DOE works

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2512: Roy D. Goodman (Cont'd)

Response to Commentor No. 2512

carefully to strike a balance between keeping the public informed about potential impacts from its proposed actions by making published materials available in a timely manner, as required by NEPA and CEQ regulations, and controlling the cost of the NEPA compliance process. Individuals and groups maintained in the NI PEIS mailing list received a postcard accompanied by either the NI PEIS Summary only or the complete document package (Summary and Draft NI PEIS in hardcopy or CD ROM) based on the preferences indicated in the mailing list. DOE will update the NI PEIS mailing list to ensure that the commentor does not automatically receive documents in the future. However, the commentor may of course request a copy of the Final NI PEIS and the Record of Decision, when published.

- 2512-3:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Public meetings were held on this formal milestone change. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities.
- 2512-4:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2547: Jack Griffith
Carpenters and Mill-Race Local 2403

2547-1 — I don't have any member of my family or immediate family who I can say who've have cancer, but I'm fully supportive of medical isotopes.

2547-2 — It's very unfortunate that we have some folks that do not see the value in what we [unions] do. The media's not our best friend. The media has the ability to send out information that isn't always true. The problem is they're not talking to the worker. Talk to me and I'll tell you what my belief is and what my fellow workers' belief is, and that is safety first. We're here to protect you, me, my family, your family and anybody else in need.

Response to Commentor No. 2547

2547-1: DOE notes the commentor's support of medical isotope production.

2547-2: DOE notes the commentor's view on the priority of safety and protection of the environment at Hanford.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2534: Norm Gundle

2534-1 — I want to state for the record that I am opposed to restarting the facility.

2534-2 — I think there's a myriad of reasons not to, including public safety,

2534-3 — I think there's a myriad of reasons not to, including ... the lack of disclosure by the DOE and many other numerous concerns that are not being addressed and weren't addressed during the EIS.

2534-4 — I don't think there's any reason to add to the nuclear waste we have stored at Hanford.

2534-5 — I think we should be focusing our efforts on doing something with that waste [at Hanford], disposing of it in an environmentally safe way and not contributing to that waste.

2534-6 — I really hope that the DOE can listen to our comments and I'm not swayed by the propaganda that I see at the public hearing. I find it kind of exasperating, they feel they need to sell it to us when it's really a comment period; we need to be giving our comments and not being tried to be swayed by glossy magazine-like ads on the walls.

Response to Commentor No. 2534

2534-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2534-2: The commentor's opposition to the restart of FFTF is noted. This PEIS has provided an estimate of the incremental potential human health impacts associated with a reasonable range of alternatives (including the restart of FFTF) for the proposed action. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

2534-3: This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS. Further, DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives. All references used in preparing the NI PEIS are cited in the reference section of each chapter and appendix. DOE has made these references and other material relevant to review of the NI PEIS and supporting the decisionmaking process available to the public in the designated public reading rooms. DOE made every effort to obtain, analyze, and disclose all required information to make a decision on expanding nuclear infrastructure.

2534-4: Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2534: Norm Gundle (Cont'd)

Response to Commentor No. 2534

addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

- 2534-5:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities. Waste generation and management under Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1. Waste that would be generated under implementation of Alternative 1 would not pose a significant burden to the waste management infrastructure at the Hanford Site.
- 2534-6:** Comment noted. It is DOE policy to encourage public input on matters of regional, national and international importance as part of its commitment to facilitate a public participation process that is open and unbiased. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS DOE carefully considered comments received from the public.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2497: Suzanne Heaston
[for] U.S. Senator Slade Gorton, WA

2497-1 — One in three Americans is touched by cancer. Every hour of every day, a child is diagnosed with cancer. Fortunately, every year our nation's scientists develop new technologies for treating cancer and other diseases. Medical isotopes are used in new leading-edge technologies without the usual debilitating side-effects and at lower cost than traditional treatments. Unfortunately, developments are thwarted and treatments are suppressed because our country lacks the production capability for the variety, quantity, and quality of life-saving isotopes that are necessary to conduct research and treat our patients. Restarting the FFTF is imperative in order to meet our nation's needs for life-saving isotopes.

Dr. Reiner Storr, a founding member of the Fred Hutchinson Cancer Research Center in Seattle, wrote to me about his exciting research. He explained that so-called alpha-emitters are likely to make bone marrow transplantation and other cancer therapy much less toxic, more safe, and effective. However, he lamented that the Department of Energy is unable to offer a constant and affordable supply of these unique isotopes. He reported that his research results are, quote, 'nothing short of spectacular,' unquote. But taking the next step into clinical trials is impossible without the availability of alpha-emitting isotopes. FFTF is uniquely capable of producing high-quality alpha-emitters, which are isotopes for treating disease. These treatments dangle by a thread, and could be cut off at any moment by supply lapses or the whims of a crowd of well-intentioned but misinformed protesters. Meanwhile, lives are being lost.

While accelerators primarily produce isotopes for diagnosing disease, they cannot produce many of the isotopes for treating disease. For example, the isotopes for alleviating excruciating bone pain as a result of cancer can only be produced in a reactor. The draft PEIS confirms the need for, the safety of, and the lack of environmental impacts of restarting the FFTF. The accompanying cost analysis confirms the cost-effectiveness of utilizing the FFTF for the entire suite of identified missions.

The FFTF is our nation's newest, most versatile reactor. It can effectively meet our nation's needs for plutonium-238 for the space program and twenty-first century research and development needs. But most importantly, through its isotope program, the Department of Energy has an opportunity to greatly improve the quality of life for millions of Americans who suffer from cancer, cardiovascular, and other diseases. DOE must recognize and embrace its responsibility to provide the quality and quantity of isotopes needed to diagnose and treat our patients. We must have an adequate domestic production facility.

Response to Commentor No. 2497

2497-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2497: Heaston, Suzanne (Cont'd)

Let's not be held hostage to foreign sources of life-saving isotopes, like we are to oil and gasoline. Each day 1500 people die of cancer. What are we waiting for? Restart FFTF.

2497-2 — However, there are those who are reporting half-truths and lies in an effort to sway public opinion. I will address some of those lies here.

One, restarting the reactor would put Hanford back into plutonium production, producing more liquid waste for high-level nuclear waste tanks. The truth: plutonium-238 is used for space missions, and is not the same as plutonium-239, which is used in nuclear weapons. Pu-238 cannot be used to make bombs.

Also, the proposed new missions will not add a single drop of high-level waste to the tanks at Hanford, nor will it impact the Columbia River. The FFTF waste minimization plan was developed in consultation with the Washington State Department of Ecology and the Oregon Office of Energy.

Another lie: restarting FFTF will delay and take money away from Hanford cleanup. The truth: restarting FFTF will have no impact whatsoever with Hanford cleanup funding. FFTF is funded through a completely different program from the cleanup budget. And as a member of the Appropriations Committee, I am committed to fight for funding in the environmental management program for Hanford cleanup. Make no mistake, however. If DOE decides to shut down the FFTF, decommissioning activity, which will become part of Hanford cleanup, will be prioritized along with all the other more pressing problems of Hanford cleanup. One last lie: restarting the FFTF will have enormous environmental consequences for the Pacific Northwest. The truth: FFTF will produce no high-level waste. In full operation, producing life-saving isotopes for the entire nation, FFTF will produce low-level waste comparable to about four medical and research institutions like the University of Washington. Currently, the State of Oregon sends its low-level waste to the commercial repository at Hanford. It annually sends twenty-two times the waste FFTF would produce. In thirty-five years of operation, FFTF would produce a small amount of spent nuclear fuel, equivalent to .015 percent of our nation's inventory. The benefits of operating the FFTF to produce desperately needed isotopes are obvious.

Response to Commentor No. 2497

2497-2: DOE notes the commentor's views and observations. DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and to providing ample opportunity for public comment on those actions.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2504: Judith Hine

2504-1 — I have discovered the suitable geological facility. It is the black hole into which the information required for this to be a programmatic environmental impact statement has fallen. This is not an environment impact statement.... We don't know to what extent comments here [at the hearing] modified this document.

I think I don't know what frightens me more: the possibility, the magnitude of the possibility of harm to the people of the Northwest should a highly unlikely accident occur — one chance in a large number, but look at the magnitude — or the magnitude of the discrepancy between what this document purports to be and what the Department and the public and the Secretary need to make a rational, honest, open decision about whether FFTF should be closed as planned, as scheduled, or reopened on the basis of — some people say half-truths; I say half-information. The PEIS, at best, from this, is preliminary environmental impact statement.

2504-2 — Possibly [this would be an EIS] with addenda that are not available, possibly with corrections that were made verbally on the fly about the research isotopes not being a factor, it's still in the report, about agricultural use of radioisotopes, the question about the irradiation of food, still in there.

Response to Commentor No. 2504

2504-1: The NI PEIS is adequate and provides sufficient scope and detail on which to make mission decisions relative to the environmental impacts of alternatives. This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS. Further, DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives. This was accomplished through review and evaluation of site-specific information on the environmental conditions prevailing at ORR, INEEL, and Hanford to include a comprehensive analysis of the associated environmental and health risks of each alternative. DOE made every effort to obtain, analyze, and disclose all required information to make a decision on expanding nuclear infrastructure. In preparing the Draft NI PEIS, DOE carefully considered all scoping comments received from the public (see Section 1.4 of Volume 1 and Appendix N). In preparing the Final PEIS, DOE has assessed and considered both oral and written comments received on the Draft PEIS during the public comment period and has responded to these comments in the Final PEIS. Volume 3 of the NI PEIS contains public comments received on the NI PEIS and DOE responses to those comments. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

2504-2: DOE assumes the commentor is referring to the cost and nonproliferation reports when she refers to "addenda." The cost and nonproliferation reports are separate, ancillary documents that were made available to the public since the issuance of the Draft NI PEIS. Although other manufacturers produce medical radioisotopes, DOE remains the key provider for a large number of radioisotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially experimental, these isotopes are not generally purchased in large-enough quantities to make their production financially attractive to private industry. However, supplies of many research isotopes are not readily available from existing domestic or foreign sources, causing a number of medical research programs to be terminated, deferred, or seriously delayed. Under the NI PEIS proposed action and consistent with its mandates under the Atomic Energy Act, DOE would enhance its existing nuclear facility infrastructure to, among other things, more effectively support production of radioisotopes for medical applications and research. DOE's intent is to complement commercial sector capabilities to ensure that a reliable supply of

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2504: Judith Hine (Cont'd)

Response to Commentor No. 2504

isotopes is available in the United States to meet future demand, and to encourage the commercial sector to privatize the production of isotopes that have established applications to a level that would support commercial ventures. The conclusions presented in the "NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000" regarding the suitability of the Fast Flux Test Facility (FFTF) to produce research isotopes in a timely and cost-efficient manner were made in the context of the facility producing research isotopes as its sole mission. DOE agrees that the FFTF's large size and configuration are not particularly well suited for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of the FFTF for the production of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. The availability of radioisotopes for the purposes of agricultural use or food irradiation is not the focus of DOE's proposed action. Although radiation sterilization of food is a possible application for certain industrial radioisotopes, including Cesium-137 and Cobalt-60, DOE does not anticipate a similar need for increased production of radioisotopes used for either of these purposes.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2496: Wenonah Hauter

2496-1 — I think you should have the — in keeping with the spirit of public, you should hold your presentation until the public speaks. Let the public speak first.

Response to Commentor No. 2496

2496-1: The purpose of DOE's presentation at the Portland Oregon, public hearing and at all of the NI PEIS public hearings was to provide an overview of the Draft NI PEIS as a basis for facilitating relevant discussion and public input. Therefore, it is customary to present this background information before the start of the formal comment process.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

*Commentor: Russ Hulvey
Association of Washington Businesses*

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 19.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor: Chris Jackins

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 275.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

*Commentor: Dave Johnson
Heart of America Northwest*

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 273.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2498: Ken Kadlec

Representative for U.S. Representatives Jim McDermott, Brian Baird, Earl Blumenauer, Peter A. DeFazio, Darlene Hooley, Adam Smith, David Wu; and for U.S. Senator Ron Wyden

2498-1 — The letter focuses primarily on what is left out of the draft EIS — namely, what we do with the waste ...

2498-2 — . . .the actual true cost of restarting the FFTF, the impact on our nation's nonproliferation policies, and most basically, an assessment of the need and suitability of FFTF for its purported missions. To leave the discussion of these areas to separate reports, delivered after the hearings, makes a sham of the NEPA process. You owe the citizens of this state and our nation greater accountability.

2498-3 — I would like to point out the purpose of the draft EIS is to define the role of the FFTF in research, not commercial production, and sets forth four — originally, instead of three — possible research missions for the start of the FFTF. Your own research advisory committee and NASA have stated that FFTF was not suited to three of these missions. The only remaining is for the “unspecified” missions. This leaves us commenting on a draft EIS for an unspecified mission with an unspecified need, with an unspecified cost, with unspecified environmental impacts. It sounds like a project in search of a mission.

2498-4 — If I heard you correctly tonight, the decision has been made, and that you can make the decision independent of the decision of Secretary Richardson.

2498-5 — Let me leave you with the suggestion that you do have a mission at Hanford: it's called cleanup. That's a specified mission. That's a specified mission, and you've had it for twelve years now. Let's get on with it

2498-6 — ... let's put FFTF to bed.

Response to Commentor No. 2498

2498-1: DOE notes the commentor's concern regarding waste management. Management of wastes that would be generated under implementation of Alternative 1, Restart FFTF, is discussed in Section 4.3 of Volume 1 (e.g., see Section 4.3.1.1.13). Section 4.3.1.1.13 was revised to clarify that, the Hanford waste management infrastructure is analyzed in this PEIS for the management of waste resulting from FFTF restart and operation. This analysis is consistent with policy and DOE Order 435.1, that DOE radioactive waste shall be treated, stored, and in the case of low-level waste, disposed of at the site where the waste is generated, if practical; or at another DOE facility. However, if DOE determines that use of the Hanford waste management infrastructure or other DOE sites is not practical or cost effective, DOE may issue an exemption under DOE Order 435.1 for the use of non-DOE facilities (i.e., commercial facilities) to store, treat, and dispose of such waste generated from the restart and operation of FFTF. In addition, Section 4.3.3.1.13 and 4.4.3.1.13 also address the potential impacts associated with the waste generated from the target fabrication and processing in FMEF and how this waste would be managed at the site.

2498-2: The costs and nuclear nonproliferation impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such ancillary documents need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed these documents to more than 730 interested parties on August 24 and September 8, 2000, respectively. Both reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided summaries of the Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment in Appendixes P and Q, respectively in the Final NI PEIS. Consistent with its mandates under the Atomic Energy Act, DOE is proposing this enhancement of its nuclear facility infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2498: Ken Kadlec (Cont'd)

Response to Commentor No. 2498

Purpose and need are discussed in Chapter 1 of Volume 1. The NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 and that of the Expert Panel are discussed in Chapter 1 relative to medical and industrial isotope production mission. DOE has taken the Expert Panel and NERAC report recommendations under consideration in developing the range of alternatives, including Alternative 1, Restart FFTF, evaluated in the NI PEIS. These reports were made available to the public at the NI PEIS public information centers and on the Internet at www.nuclear.gov.

2498-3: The only missions being considered by DOE are the three that are analyzed in the NI PEIS, which are the production of isotopes for medical research, and industrial uses; plutonium production for future NASA space exploration missions; and U.S. nuclear research and development needs for civilian application. No "unspecified" missions are being considered. DOE's production and sale of radioisotopes fall into two categories—"commercial" and "research" and both types of isotope production are considered under the proposed actions. Commercial radioisotopes are those that are produced in large, bulk quantities and sold to pharmaceutical companies or distributors, or to equipment or sealed source manufacturers. Examples of commercial radioisotopes produced by DOE include strontium-82 and germanium-68 for medical applications, and iridium-192 and californium-252 for industrial applications. DOE only produces commercial isotopes when there is no U.S. private sector capability or when foreign sources do not have the capacity to meet U.S. needs reliably. In contrast, research radioisotopes are typically produced and sold in small quantities in response to specialty orders from researchers preparing experiments in the field of medicine, with small quantities of these radioisotopes also purchased by industrial researchers. Because small-quantity production of research isotopes is not financially attractive to private-sector producers and is generally not undertaken, DOE attempts to provide all research radioisotopes that are requested, subject to production capability, inventory, and financial constraints. As successful application of a specific research isotope is established, the production and sales of that radioisotope may shift from research to commercial status. In recent years, over 95 percent of DOE's sales of radioisotopes by dollar volume were commercial and 5 percent have been for research. Additional discussion of how DOE's isotope program fits into the overall U.S. and foreign isotope production capabilities was incorporated into Section 1.2.1 of Volume 1. The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2498: Ken Kadlec (Cont'd)

Response to Commentor No. 2498

effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. The May 22, 2000, correspondence from NASA to DOE identifies that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, SRTG development efforts were stopped in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large a RTG be maintained as a backup. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

2498-4: No final decisions have been made with regard to the alternatives or to the facilities and locations evaluated to fulfill the requirements of the proposed actions. However, in accordance with Council on Environmental Quality regulations (40 CFR 1502.14(e)), DOE has identified its preferred alternative in Volume 1, Section 2.8 of the Final NI PEIS and includes a discussion of DOE's justifications for selecting it. It is the Secretary of Energy who will make the programmatic decisions with respect to the alternatives presented in this NI PEIS to accomplish the DOE missions. Decisions made will be published in the Record of Decision no sooner than 30 days after publication of this NI PEIS. All pertinent information and public input will be provided to the Secretary so that he may make an informed and unbiased decision with respect to the alternatives presented in this NI PEIS.

2498-5: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the progress of the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2498: Ken Kadlec (Cont'd)

Response to Commentor No. 2498

conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy) This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Prior public meetings were held on this formal milestone change.

2498-6: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor: Bruce Klos

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 406.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor: Sally Lamson

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 280.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2521: Hyun Lee

2521-1 — I oppose FFTF restart.

2521-2 — Restart of FFTF will lead to generation of what this draft EIS has referred to as aqueous high-activity waste, which sounds an awful lot like liquid high-level nuclear waste, to me, that will be sent to what's referred to as the evaporator tank feed while awaiting treatment and vitrification for disposal, which looks like a tank in the FMEF, in that schematic on page S-17. So that sounds like this waste is going to be stored in Hanford FMEF until about 2007, when the vit-plants will ostensibly be operable and a new contractor will have been, hopefully, found, I guess. Until then, which would be — this stuff would sit around for, maybe, like close to seven years. This would violate state and federal laws on hazardous waste disposal, which only allows a few months for the stuff to be stored before it has to be disposed of in some permanent way. Again, this is illegal, violating Washington State and federal law.

2521-3 — Just the possibility of FFTF restart has significantly delayed Hanford cleanup. I mention this in the context of the 325 and the 306-E buildings in the 300 Area, which are being kept erect until — for FFTF support. These are two highly contaminated buildings, with a long history of mishaps and radiation releases that date back to the '60s, and possibly the '50s.

2521-4 — Shipping FFTF waste to commercial disposal facilities, which was something that was mentioned at the last two hearings, violates existing U.S. DOE policy, that requires waste to be sent only to NRC-licensed facilities. You can see this in 64 Federal Register 1216. Thus far, only U.S. Ecology has been licensed in that capacity. And disposal of FFTF low-level and mixed waste at U.S. Ecology would violate the compact between the states, which Oregon has a veto in. Furthermore, disposing of FFTF at these type of facilities would just open the door to U.S. DOE becoming one of the biggest PRPs in Superfund history, which would probably ramp up FFTF operation costs quite a bit.

2521-5 — Having spoken to a number of people who have been here [at the hearings], who were planning to come here, they've just voiced a lot of frustration that — not being heard, that their message hasn't been heard by policy-makers.

Response to Commentor No. 2521

2521-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2521-2: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. High-level radioactive waste would not be generated from merely operating FFTF. The use of proposed alternative facilities associated with reprocessing of neptunium-237 targets would have no impact on schedules or available funding for high-level radioactive waste programs at either Hanford or the INEEL sites. The higher activity waste would be treated as a solid form via a stand-alone vitrification system, separate from any tank waste treatment system. The existing Hanford high-level radioactive waste facilities would also not be used, and as analyzed in the PEIS, no existing or planned high-level radioactive waste facilities would be used to treat the wastes resulting from processing the irradiated targets. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

2521-3: The commentor's concerns about delays in Hanford cleanup are noted. The 306-E facility is not contaminated and is being proposed as a location to conduct activities that do not involve radioactive materials. While the 325 Building has a large inventory of radionuclides associated with ongoing activities at the facility, the building is not contaminated in worker accessible areas. Operations at the 325 Building are conducted in accordance with applicable federal and state regulations and appropriate DOE Orders. The 300 Area Revitalization Plan (DOE 1999) provides for continued multi-program R&D operations in the 300 Area, including operation of various laboratories, office facilities, and services. It also provides for consolidation (but not complete elimination) of radiological operations, with support for Hanford Site facility transition and environmental restoration efforts. The plan does not require closure of the 325 and 306 E buildings as long as they

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2521: Hyun Lee (Cont'd)

Response to Commentor No. 2521

are needed for active research projects. Operation of these facilities would not violate any existing agreements between DOE and stakeholders or other legal obligations, nor would it affect ongoing or planned environmental restoration and facility transition activities. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e. Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement.

2521-4: DOE Order 435.1 "Waste Management" gives responsibility to the DOE Field Element Managers to approve exemptions for use of non-DOE facilities for storage, treatment or disposal of DOE radioactive waste based on certain requirements. One of these requirements is that the facility must have the necessary permits, licenses, and approvals for the specific waste. As discussed in DOE's "Commercial Disposal Policy Analysis for Low Level and Mixed Low-Level Wastes" dated March 9, 1999, there are three commercial low-level radioactive waste disposal facilities (i.e., Envirocare of Utah; Barnwell, South Carolina; and US Ecology, Richland, Washington) which are currently operating and licensed to receive low level radioactive waste. Envirocare of Utah also has a permit to receive RCRA hazardous wastes. DOE has and is currently disposing of low level radioactive waste and mixed low-level radioactive waste at Enirocare of Utah and has sent low-level radioactive waste to Barnwell, South Carolina. In June 1995, US Ecology submitted an unsolicited proposal to DOE for the disposal of DOE waste at the US Ecology facility. In November 1995, the State of Washington informed US Ecology and DOE that the State would allow the disposal of DOE waste at the facility subject to certain conditions.

2521-5: DOE is committed to providing the public with comprehensive environmental reviews of its proposed actions in accordance with NEPA, and to providing ample opportunity for public comment on those actions. In addition to the hearings, DOE provided opportunity to the public to comment on the Draft NI PEIS through the U.S. mail, e-mail, a toll-free fax number, and a toll-free phone number. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

***Commentor: Nick Licata
Seattle City Council***

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 2061.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2535: Richard Locke

2535-1 — I have a particular interest in the FFTF in as much as it's an asset in our battle, I believe, to fight cancer in this country.

Response to Commentor No. 2535

2535-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

**Commentor No. 2508: Fred Miller
Peace Action**

2508-1 — ... they [owner of the fuel] quoted from the [FRR] final environmental impact statement in that matter: "In countries where material control and accounting or physical accounting systems are not sufficiently rigorous, there is a risk of diversion or threat of theft of such materials. In addition, even in countries with effective nuclear test weapons nonproliferation commitments, the presence of unneeded stocks of plutonium could raise security concerns on the part of neighboring countries." I would submit that the United States is in the former category, not the latter, given the huge volume of plutonium that the DOE cannot account for. And I would say that the draft PEIS is incomplete until it does address very definitively the proliferation concerns that we're raising.

2508-2 — The Department of Energy has — and Hanford in particular has a long history of dishonesty, carelessness, neglect. And when you're saying definitively that there is, at most, this or that safety hazard, you are relying upon the estimates from an organization that in the past has lied in their estimates of similar hazards. We have to assume that they are not more honest than they were in the past. We have to assume that they are not more careful than they were in the past. Otherwise, we're going to come up with extravagant claims. And the extravagant claims that they've made in the past have not been fulfilled.

2508-3 — I oppose restart of the Fast Flux Test Facility for production of plutonium-238.

2508-4 — When I gave comments in the scoping process, I suggested that perhaps the biggest inventory of plutonium-238 in the United States is in the nuclear weapons arsenal. A warhead on any of our SLBMs or ICBMs has an RTG, and we have many of those surplus. You have not analyzed what happened to those and to that net stockpile of plutonium, which could possibly meet any NASA needs, no matter whose numbers you choose for many, many years.

Response to Commentor No. 2508

2508-1: The plutonium being considered for production in this NI PEIS is plutonium-238 which is not an isotope of plutonium that is used in nuclear weapons. The production of plutonium-238 does not present a nonproliferation concern. DOE developed a separate Nuclear Infrastructure Nonproliferation Impact Assessment, published in September, 2000, that analyzed the nonproliferation impacts of the actions considered in this PEIS and found that, there are currently no U.S. nonproliferation policies, laws, regulations or international agreements that preclude the use of any of the facilities in the manner described in the Draft NI PEIS. Although this policy analysis is not required under NEPA, DOE believes it to be an essential element in the decision making process for the DOE nuclear infrastructure, and has included a summary of the Nuclear Infrastructure Nonproliferation Impact Assessment in Appendix Q in the Final NI PEIS. It is also available on the DOE NE web site (<http://www.nuclear.gov>).

2508-2: Comment noted.

2508-3: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2508-4: Small radioisotope thermoelectric generators (RTGs) using plutonium-238 are used to power electronic systems on some strategic weapons, some of which have become surplus due to strategic arms reductions. Although the exact configuration of these RTGs is classified, the amount of plutonium-238 in each unit is relatively small and the assay of the plutonium-238 is unacceptable (too low) for use in RTGs or radioisotope heater units for NASA spacecraft. Therefore, it is not a viable source for consideration in the NI PEIS.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor: Jim Montano

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 261.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor: Rick Mounce

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 278.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2541: Paul Myer

2541-1 — I want to question the DOE's assertion that there is a near term and urgent need by NASA for Pu-238....

NASA is planning two Rovers in 2003, but they are solar powered and battery powered and not 238 powered. They don't use RTGs....

Part of the reason they're probably not talking about these things [NASA missions] is that the power systems that they would need have not yet been developed, and if you're talking about missions out there around 2010 or so, there will be advancements, the need for 238 may be very small, if at all. And to start up this reactor now on that kind of a flimsy thing appears to me to be a, as it's been said before, a process in search of a mission.

2541-2 — NASA is very concerned about putting such contaminants on the surface of any planet other than Earth. We seem to be willing to live with it here.

Response to Commentor No. 2541

2541-1: The commentor should note that DOE is providing NASA, plutonium-238 fueled heater units for the rover missions. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions. A May 22, 2000, correspondence from NASA to DOE identified that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

2541-2: DOE notes the commentor's view on the effect of NASA's space missions on other planets. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. These radioisotope power systems have been used for almost 40 years, and have repeatedly demonstrated their performance, safety, and reliability in various

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2541: Paul Myer (Cont'd)

Response to Commentor No. 2541

NASA space missions. NASA establishes the need and requirements for space missions and undergoes a thorough NEPA evaluation for each launch.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2546: Charles Nelson

2546-1 — I'm a firm believer that FFTF can save lives and could possibly save my life some day, if I'm unfortunate enough to come down with cancer, and my son's life which is more important than anything in the world.

And I would hope that the Department of Energy would see that and would restart the FFTF reactor. Of, if not FFTF reactor, whatever is necessary to produce these isotopes that makes it one minute closer to saving my son's life.

Response to Commentor No. 2546

2546-1: DOE notes the commentor's support for Alternative 1, Restart FFTF, or whatever is necessary to produce medical isotopes.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor: Hans Nesse

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 272.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2548: Pennie S. O'Grady

2548-1 — I'm very concerned that the hearings are not being done in a way that is truly no preference. Not knowing a lot of details, I walked in cold, and I saw a preference [for FFTF].

2548-2 — ... the perspective I do come from is an alternative five and I would really like to feel that truly the truth and that, you know, my concerns are going to be equally important.

2548-3 — I have great concern that there's a lot of corporate use of plutonium-238 and that use is for profits for large corporations and big industry in the medical industry and NASA and space technology and Boeing and all of that.

And I would like to have a government of, by and for the people so that the Department of Energy is truly responsive to all of the people and does not weigh the concerns of industry over the concerns of the many citizens, because I live in what is supposed to be a democracy and I'd like to uphold the principles of our democracy.

2548-4 — I am not for anything which risks the ultimate health and well being of our citizens, my children, their children.

I want to ask what's causing the level of cancer and ill health in our population in the first place.... We need to look at solutions to the underlying problems that are presumably addressed by the FFTF and its products, and not use a supposedly low risk technology that has devastating potential consequences should our human infallibility kick in.

Response to Commentor No. 2548

2548-1: DOE has made every effort to make this NI PEIS objective. This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives. This was accomplished through review and evaluation of site-specific information on the environmental conditions prevailing at ORR, INEEL, and Hanford to include a comprehensive analysis of the associated environmental and health risks of each alternative.

2548-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF. DOE appreciates all comments it receives on the NI PEIS and all are given equal consideration.

2548-3: DOE notes commentor's view. DOE policy encourages effective public participation in its decisionmaking process. In compliance with NEPA and CEQ regulations, DOE provided opportunity to the public to comment on the scope of the NI PEIS and the environmental impact analysis of DOE's proposed alternatives. DOE gave equal consideration to all comments. In preparing the Final NI PEIS, DOE carefully considered comments received from the public.

2548-4: The commentor's concerns about finding the causes of and addressing the underlying problems associated with cancer are noted. Chapter 4 of Volume 1 and Appendixes H through J discuss radiological exposures to the public that would be expected to result from implementation of the nuclear infrastructure alternatives. While radiation is a known cause of cancer, the analysis in Chapter 4 provides the results of the evaluation of potential health impacts that would be expected to result from a range of reasonable alternatives (Alternative 1 includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The evaluation of both normal operations and accidents took into consideration the potential for human error in determining the risks associated with each of the alternatives. The environmental analysis showed that radiological and nonradiological risks associated with each of these alternatives and with restarting FFTF would be small.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

***Commentor: Marlene Oliver
National Association of Cancer Patients***

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 1700.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2507: Henry Perry
Plymouth Church Peace Action Group

2507-1 — I am against the further use of nuclear weapons or nuclear energy for any reason whatsoever, other than — if we could be convinced that the national security required this, I might change my mind. But I don't see that's the case. I think that, although the statements have been made here [Seattle] that this [FFTF] — the risks are very slight, I think when we're dealing with nuclear weapons, we're playing with fire, and should move away from that process as rapidly as process.

2507-2 — I think we should shut down the Fast Flux Test Facility now.

2507-3 — If we do restart it [FFTF], among other things, we're violating agreements that we've entered into before: the Tri-Party Agreement of 1995, which the state and the environmental agency and the Hanford all signed and agreed to ...

2507-4 — furthermore . . .the nonproliferation treaty. In this, we have said that we will be moving away from the development of nuclear weapons, rather than continuing with this process.

2507-5 — So I strongly oppose any plan to restart the nuclear facility [FFTF] with the cost ... that's involved.

2507-6 — So I strongly oppose any plan to restart the nuclear facility [FFTF] with the ... risk that's involved.

Response to Commentor No. 2507

2507-1: The commentor's positions on nuclear weapons, nuclear energy, and national security are noted. The scope of this Nuclear Infrastructure PEIS is limited to analysis of alternatives to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development. The three missions, described in Section 1.2 of Volume 1, are civilian missions and are unrelated to the national defense. Neither nuclear weapons nor components for nuclear weapons would be produced under the nuclear infrastructure alternatives described in Section 2.5.

2507-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2507-3: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Public meetings were held on this formal milestone change.

2507-4: The actions proposed in the PEIS neither support nor involve weapons material development. The alternatives evaluated in the PEIS support U.S. nonproliferation policy, as confirmed in the Nuclear Infrastructure Nonproliferation Impact Assessment, published in September 2000. Although this policy analysis is not required under NEPA, it is an essential element in the decisionmaking process for the DOE nuclear infrastructure. A summary of the Nuclear Infrastructure Nonproliferation Impact Assessment is included in Appendix Q in the Final NI PEIS. It is also available on the DOE NE website (<http://www.nuclear.gov>).

2507-5: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, on the basis of cost.

2507-6: The commentor's opposition to the restart of FFTF is noted. This PEIS has provided an estimate of the incremental potential human health impacts associated with a reasonable range of alternatives (including the restart of FFTF)

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

*Commentor No. 2507: Henry Perry (Cont'd)
Plymouth Church Peace Action Group*

Response to Commentor No. 2507

for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2520: Sheila Pfeiffer

2520-1 — I just want you to know that it doesn't make any sense for us to say we do not know where cancer comes from. We know where it comes from. It comes from the environment, it comes from places like this, it comes from the crummy air that we breathe, the horrible water that we drink, and the groundwater that we're ruining right now. ... But we have to recognize that people are dying every day from a cancer that we created. And we can't sit here and act like we don't know where it comes from.

2520-2 — And yet here we go again, and say that we're going to start this thing [FFTF]; it's got these great isotopes and it's going to save lives. Well, it's just not true.

2520-3 — We have to start focusing on our environment. And we have to start finding alternatives to different ways of dealing with energy. We can get energy from the sun, we can get energy from the wind. We can find other ways to do it.

Response to Commentor No. 2520

2520-1: Environmental factors are a contributing factor to the incidence of cancer. Chapter 4 of Volume 1 and Appendixes H through J discuss radiological exposures to the public that would be expected to result from implementation of any of the range of reasonable alternatives analyzed in the NI PEIS. While radiation is a known cause of cancer, Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 which includes restart of FFTF, including normal operations and a spectrum of accidents that included severe accidents. The methodology used to produce these results is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

2520-2: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2520-3: DOE notes the commentor's interest in alternative energy sources, although issues of research and development of alternative energy sources are beyond the scope of this Nuclear Infrastructure PEIS. The DOE missions to be addressed in this EIS, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development, can currently only be met using nuclear reactor or accelerator technologies.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

**Commentor No. 2501: Gerald Pollet
Heart of America Northwest**

2501-1 — Twice in the last three years the Department of Energy had plutonium releases at Hanford. Twice in the last three years the people who will be responsible for resuming plutonium processing operations at Hanford lied to emergency responders, public officials, and the public about whether or not there were plutonium releases.

The first incident, in May of 1997, the Department of Energy officials claimed that they took nasal smears from workers exposed to the plume from the explosion at the plutonium finishing plant. And they told the public that there was no plutonium found from the workers, and no plutonium found outside the plant, and that there was no plutonium release whatsoever. Can we trust these people? What happened to their nasal smears? They were never taken, they were lost. What happened to the plutonium? It did leave the plant.

What happened in the wildfire in June of this year? Plutonium released. But you all heard on the radio and TV and read in the paper that the Department of Energy Hanford management repeatedly said no area of contamination burned — they said for days. Then they got it — had to admit that was a lie. They said, "Yes, but there was no radiation released." No radiation released? Bill Richardson was lied to, and he relied on them. "How many times must the plutonium fly before Hanford officials are permanently replaced?" That's what the song's next verse should be. And the answer, my friends, is, Hanford's plutonium is blowing in the wind. Hanford's cancer is blowing in the wind. Now we're talking about resuming plutonium processing, and all its attendant dangers. I don't know who fed Senator Gorton lies and half-truths; it wasn't our side.

2501-2 — The EIS clearly says plutonium-238 targets, quote, would be "cut up into small pieces and leached with nitric acid. Undissolved cladding would be discarded as waste." And it continues, after treatment with tributylphosphate, quote, "the high activity" — "the high activity aqueous waste phase would then be sent to tanks awaiting treatment and vitrification for disposal." What we are talking about — and we have the schematics from DOE's own waste-management documents blown up at the back of the room. What we are talking about is high-level nuclear waste. You can call it something else, but it's the same exact chemical process that was used for processing plutonium-239. What are we going to do with liquid high-activity waste awaiting vitrification? That means that some other wastes in the leaking high-level nuclear waste tanks will not get vitrified. DOE's plan for this vitrification plant, until recently, was 10 percent of the wastes would get turned into glass by the year 2018. We'll all be dead by the time they get around to the most dangerous tanks being vitrified. And they want to add more waste, and they want to tell you that it's not the same. But it's going to await vitrification for disposal, and it's going to this place, wastes that are currently in tanks that will be leaking.

Response to Commentor No. 2501

2501-1: Previous events at other facilities (other than FFTF) are outside the scope of the NI PEIS. The emergency management and response federal laws, regulations, and executive orders that relate to the NI PEIS alternatives are provided in section 5.3 of the NI PEIS. In regards to the Hanford wildfire of 2000, the DOE Richland Operations Office, the State of Washington Department of Health, and U.S. Environmental Protection Agency performed environmental monitoring on and around the Site to assess potential radiological impacts. The wildfire did not cause a release of radioactive materials from any Hanford facilities but did result in resuspension of radioactive materials which were already in the environment. The very low levels of radioactive materials that were resuspended were slightly above natural background levels and required several days of analysis to quantify. Information on this event has been made available to the public and can be accessed at <http://www.Hanford.gov/envmon/indes.html>. This site also provides a link to information on the independent offsite air monitoring that was conducted by the U.S. Environmental Protection Agency. With respect to plutonium processing, no defense-mission processing or weapons material production is being proposed by this NI PEIS. All proposed activities are for civilian purposes.

2501-2: The DOE Manual 435.1. Radioactive Waste Management defines high level radioactive waste as "the highly radioactive waste material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid material derived from such liquid waste that contains fission products in sufficient concentrations; and other highly radioactive material that is determined, consistent with existing law, to require permanent isolation." DOE has prepared an implementation guide to DOE M 435.1 to assist in implementing the requirements contained in that manual. For this particular "requirement," the definition of high-level radioactive waste, the guide is intended to facilitate the classification of indefinite waste as to whether or not they are high-level radioactive waste. It is recognized that the definition of high-level radioactive waste is not precise and is essentially a source-based definition that also alludes to concentrations of a given waste stream. Page II-8 of this guide notes that "For the purpose of managing high-level waste under DOE M 435.1-1 [sic], spent nuclear fuel includes spent driver elements and/or irradiated target elements that contain transuranium elements." This statement was included in the guide because the concentrations of long-lived isotopes are likely to be somewhat high during reprocessing and it also meets the source-based definition. As a result of reviewing this guide and to address the comments raised, DOE is considering whether the waste from processing of irradiated neptunium-237 targets should be classified as high-level radioactive waste and not transuranic waste. As a result,

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2501: Gerald Pollet (Cont'd)
Heart of America Northwest

2501-3 — And you use the calciners and you add the tributylphosphate, and you have an organic phase, and you have the same risk of an explosion that the Department of Energy admitted in the early 1990s for use of the same process in the plutonium finishing plant. And the same chemicals will be involved. And you also have hydroxylamine nitrate which will be involved in the processes, which is the chemical that blew up at the plutonium finishing plant. But you don't have any mention in the environmental impact statement of events that, because they happened, by DOE's own planning guidelines, must be deemed to fall into the "likely to occur" category. But they're never mentioned.

2501-4 — Let me just close, then, by saying the other thing that is shocking is not in this EIS, is the risk of a port fire. What led the City of Seattle to pass its resolution, and the City of Tacoma, what led our brothers and sisters in the ILWU to refuse to offload these casks when it was proposed in the past, was this: shipboard fires burn for up to twenty-four hours at 2,000 degrees Fahrenheit. And that is not analyzed in this EIS.

Response to Commentor No. 2501

the Waste Management sections (i.e., Sections 4.3.1.1.13; 4.3.2.1.13; 4.3.3.1.13; and 4.4.3.1.13) of this NI PEIS have been revised to reflect this different classification from what was assumed in the draft NI PEIS. As discussed in these revised sections, irrespective of how the waste is classified (i.e., transuranic or high-level radioactive waste), the composition and characteristics are the same and the waste management (i.e., treatment and on-site storage) for this NI PEIS would be the same. In addition, even if the waste is managed as high-level radioactive waste it would have no impact on the existing high-level radioactive waste management infrastructure (e.g., high-level waste storage tanks), since the high activity waste from processing of the targets would be initially stored and vitrified within the processing facility (i.e., FMEF, REDC, or FDPF).

2501-3: The plutonium-238 fabrication/processing facilities evaluated in the NI PEIS can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. The accident evaluation specifically accounted for the chemical processes likely to be used and considered a spectrum of accidents including internal events, external events, natural phenomena, and sabotage and terrorist activities. Sections 4.2-4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from implementation of the alternatives, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that the radiological and nonradiological risks associated with each of the alternatives would be small. The solvent extraction process involving the use of tributyl phosphate in hydrocarbon to separate and produce plutonium nitrate solution has been used extensively for years in the United States as well as in Japan, England, and Germany. Under a combination of off-normal conditions, there can be a reaction between nitric acid or nitrates and tributyl phosphate degradation products at higher than normal operating temperatures. Such a reaction could only occur in a heated evaporator or concentrator if there is excess tributyl phosphate impurity or residual in the plutonium nitrate liquid. This scenario will be analyzed as a potential design basis accident in developing the safety authorization basis and associated technical safety requirements for the chemical processing option chosen by DOE.

2501-4: Alternative 1 does postulate that DOE might decide at some point to import mixed oxide fuel from Europe to fuel FFTF. At this time, however DOE has not proposed to import this fuel through any specific port. If DOE ultimately decides to import fuel from Europe, it would perform a separate NEPA analysis to select a port. This review would address all relevant potential impacts of

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2501: Gerald Pollet (Cont'd)
Heart of America Northwest

Response to Commentor No. 2501

overseas and inland water transportation, shipboard fires, package handling, land transportation, as well as safeguards and security associated with the import of SNR-300 mixed oxide fuel through a variety of specific candidate ports on the east and west coasts. It would consider all public comments, including local resolutions, concerning the desirability of bringing mixed oxide fuel into the proposed alternative ports. In the event that DOE decides to enhance its nuclear infrastructure, it would not expose any population to high, unacceptable risks under any alternative. Any transportation activities that would be conducted by DOE would comply with U.S. Nuclear Regulatory Commission and U.S. Department of Transportation regulations. Associated transatlantic shipment would comply with International Atomic Energy Agency requirements. In Section J.6.2, DOE reviewed the potential maximum impacts from the marine transportation of mixed oxide fuel from Europe to a representative military port, Charleston, South Carolina, and overland transportation to Hanford. Also in that section, a bounding analysis demonstrates that the maximum potential radiological risks to the surrounding public from mixed oxide fuel shipments would be extremely small (e.g., less than 1 chance in a trillion for a latent cancer fatality per shipment from severe accidents at docks and in channels and less than 1 chance in 50 billion for a latent cancer fatality per shipment from overland highway accidents).

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

*Commentor: Gerald Pollet
[for] U.S. Representatives Adam Smith and Brian Baird*

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 158.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2533: Dorli Rainey

2533-1 — I understand that the Department of Energy has updated plans to restart the Fast Flux test facility reactor. This facility is already leaking towards the Columbia River and has not only not been cleaned up, but it had to take a back seat to funding of the restart studies and maintaining the restart capabilities.

It is time that citizens start to question the administration's commitment to cleanup of the high level nuclear waste. The new plan would only add to the nuclear waste stream at the most contaminated nuclear site in the Western world. Already, the FFTF has diverted much needed cleanup funds to keep the reactor on the standby mode pending an approved mission.

The time has come to ... seriously begin the cleanup of the existing nuclear waste now present at Hanford.

2533-2 — The time has come to permanently shut down the FFTF reactor.

Response to Commentor No. 2533

2533-1: Restarting FFTF is one of the six alternatives described in Section 2.5 of Volume 1. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2 of Appendix N, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected. As identified in Section 4.3.1.1.13 of Volume 1, restarting FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations. High-level radioactive waste would not be generated from merely operating FFTF. It is DOE's policy that all wastes be managed (i.e., treatment, storage and disposal) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e. Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement.

2533-2: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2530: Eliza Reed

2530-1 — Hanford — I recall the director of waste disposal, who quit Hanford, said, "I will refuse to work for an organization that is this unsafe." And in the newspaper — what, three months ago? One of the people who was the head of — a high official; I can't remember his name. He said that there was so much danger in some of the nuclear waste, that he was — a quote in the newspaper — he was amazed people weren't freaking out, that everybody wasn't freaking out. The Columbia River happens to be one of the most radioactive rivers on the planet. Salmon are getting three eyes. It's very dangerous.

2530-2 — I just want to implore the people that are the elite, the power elite that have the money, that think that they're thinking in this linear, scientific method, the progress way, to really be honest with yourself. Look in your heart. Really study the fallibility, and look at what the — how you might be rationalizing to yourself your financial gains.

2530-3 — I have complete compassion for anybody who has cancer, and I want them to have whatever means it takes for them to cure their cancer. But I do not want that means to be a cause of trillions of other people getting cancer — of many people getting cancer.

2530-4 — Stop this Fast Flux.

Response to Commentor No. 2530

2530-1: The Hanford Officials referenced above were quoted in a local (Tri Cities, Washington) newspaper as departing because of organizational and project management reasons. Workers at the Hanford Site are free to, and in fact encouraged to, disclose safety hazards associated with DOE activities. Workers are protected against reprisals by legislation applicable to the U.S. Departments of Energy and Labor. No food or water restrictions are in place outside the Hanford Reservation as a result of Hanford activities. Environmental parameters e.g. air, soil, surface water, groundwater, vegetation, animals, fish, etc.) in and around the Hanford Site are monitored on a periodic basis. Results of the measurements are available to the public in annual environmental monitoring reports.

2530-2: DOE notes the commentor's views and remarks.

2530-3: This PEIS has provided an estimate of the incremental potential human health impacts associated with a reasonable range of alternatives including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

2530-4: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

**Commentor No. 2529: Nancy Rising
Peace Action of Washington**

2529-1 — I'm the Chairperson of Peace Action of Washington, representing almost 18,000 households in Western and Eastern Washington. Peace Action's members have been concerned about Hanford for many years. We want the DOE to stick to first things first. We want the clean up of Hanford to become the primary objective of the DOE, without distractions such as a return to production of nuclear waste for whatever purpose. Until you have shown that you can clean out all leaking or "watch list" tanks, and stabilize all high-level waste in a timely and cost-effective fashion, that is your job. Until you have identified all significant bodies of pollution on the site and downstream, and taken appropriate measures to keep them out of the Columbia and out of our environment, that is your job. Until you've thoroughly decontaminated usable land and facilities, so that they can again make positive contributions to the region and the nation, that is your job. Until Hanford workers are free to speak out when they see safety hazards, incompetence or corruption, without fear of reprisal, that is your job. Other priorities can wait.

2529-2 — The Department of Energy's draft NI PEIS is neither complete nor objective. Whether deliberate or inadvertent, the cumulative effect of numerous omissions to the PEIS are unprofessional and bias the PEIS in favor of a de-facto "preferred alternative," the restart of the Fast Flux Reactor. Many have already been brought to your attention, especially the NASA letter should have been included in the discussion of the need for Pu-238. An omission that hasn't been mentioned since it was pointed out by Peace Action members during the scoping process is the military Pu-238 stockpile. Since the START treaty, the number of deployed nuclear warheads has been drastically reduced. Further reductions are expected. The Pu-238 used to power the electronics on these warheads can now be used to power spacecraft, if necessary. The omission of any discussion of this resource tends to bias the PEIS further in favor of restarting FFTF.

2529-3 — Although we talk a lot about science here, what really comes out is emotions and people's concerns. And I would like us to think a little about that, because I have been to a lot of these hearings, as have many of these other people. I am very, very willing to grant sincerity of belief to the people that think differently than I. But I would certainly hope that sincerity of belief could be granted to me without having people say, "You people over here want us to have cancer and don't want radioactive isotopes to be available to treat cancer." Now, I don't know where they got that idea, but if that seed is being planted over east of the mountains, I think that's a travesty and a tragedy. Because it certainly is totally untrue. We all care about each other.

2529-4 — I just want to say we hear, mostly east of the mountains, about how we don't care about jobs, and this is about jobs. I would like to point out that in the draft, in the EIS on page 4-39, and then in another place, we have the possibility of increasing, with this restart of the fast flux reactor, from 56 to a hundred jobs, total.

Response to Commentor No. 2529

2529-1: DOE notes the commentor's concerns regarding priority of the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e. Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF at the Hanford Site was one of several existing DOE resources that was assessed for this mission. Workers at the Hanford Site are free to, and in fact encouraged to, disclose safety hazards associated with DOE activities. Workers are protected against reprisals by legislation applicable to the U.S. Departments of Energy and Labor.

2529-2: This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. The environmental impacts of reasonable alternatives to fulfill the requirements of the missions were disclosed and evaluated in the NI PEIS. Further, DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives. This was accomplished through review and evaluation of site-specific information on the environmental conditions prevailing at ORR, INEEL, and Hanford to include a comprehensive analysis of the associated environmental and health risks of each alternative. DOE made every effort to obtain, analyze, and disclose all required information to make a decision on expanding nuclear infrastructure. DOE assumes that the commentor's reference to the "NASA letter" refers to the May 22, 2000 correspondence from NASA Headquarters to the DOE Office of Space and Defense Power Systems. This letter is in fact cited in Volume 1, Section 1.2.2 of the Draft and Final NI PEIS (Volume 1) with regard to the discussion of plutonium-238 needs for future space missions. This letter identifies that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2529: Nancy Rising (Cont'd)
Peace Action of Washington

Response to Commentor No. 2529

missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires one-third less plutonium-238 as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000, letter to DOE that large RTGs be maintained as backup. Section 1.2.2 was revised to clarify plutonium-238 mission needs. Both NASA letters have been included in Appendix R of this Final NI PEIS. As further suggested by the commentor, the acquisition and use of surplus defense-related plutonium-238 was not considered and is outside the scope of the non-defense missions considered in this NI PEIS. Specifically, the commentor is correct that small RTGs using plutonium-238 are used to power electronic systems on some strategic weapons, some of which have become surplus due to strategic arms reductions. Although the exact configuration of these RTGs is classified, the amount of plutonium-238 in each unit is relatively small and the assay of the plutonium-238 is much lower than that needed for use in NASA spacecraft.

2529-3: DOE notes the commentor's views and remarks.

2529-4: DOE is not considering restarting FFTF for the purpose of creating jobs, although socioeconomic impacts (e.g., number of new jobs created) are addressed in Sections 4.3.1.1.8, 4.3.2.1.8, and 4.3.3.1.8 for Alternative 1, Restart FFTF, Options 1 and 4, 2 and 5, and 3 and 6, respectively. The Record of Decision for the PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2536: Jennifer Rubinstein

2536-1 — I oppose restarting the FFTF reactor.

2536-2 — I believe that adding more waste to the Hanford waste tanks is dangerous and it cannot be justified by the development of isotopes for civilian purposes.

2536-3 — So far as the PEIS is concerned, I regret the omission of crucial facts and data. For example, the Washington State Medical Association says there is no need for the FFTF reactor for medical isotopes. A similar finding emerged from the DOE's own subcommittee.

2536-4 — NASA is on record as saying they do not need plutonium-238 for a space mission and yet this purported need has been used by DOE to justify restarting the FFTF.

2536-5 — I also find unconvincing DOE's assertions that money will not be diverted from the Hanford clean-up.

2536-6 — . . .my husband worked for ten years at Hanford and died of cancer in 1993 at age 57. And while I don't know for a fact that the situation at Hanford caused his death, it certainly is a possibility that it led to his cancer and so I do find somewhat upsetting the linkage of the FFTF startup with the war on cancer without considering how these nuclear products contribute to the etiology of cancer itself.

Response to Commentor No. 2536

2536-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2536-2: DOE notes the commentor's concern regarding waste generation. High level radioactive waste would not be generated from the processing of targets for medical isotope production. Section 4.3.1.1.13 of the NI PEIS provides information on the waste generated from medical isotope production at RPL/306-E.

2536-3: DOE assumes that the commentor is referring to the conclusions presented in the "NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000" regarding the suitability of the Fast Flux Test Facility (FFTF) to produce research isotopes in a timely and cost-efficient manner. These conclusions were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of the FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates use of the FFTF when coupled with the other proposed missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without disturbing the existing missions of these facilities.

2536-4: DOE assumes that the commentor is referring to the May 22, 2000, letter from NASA Headquarters to the DOE Office of Space and Defense Power Systems. This correspondence identifies that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2536: Jennifer Rubinstein (Cont'd)

Response to Commentor No. 2536

22, 2000 letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

2536-5: The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2 of Appendix N, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

2536-6: This PEIS has provided an estimate of the incremental potential human health impacts associated with a reasonable range of alternatives (including the restart of FFTF) for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 (which includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small. Worker safety (radiological protection) is a key element of DOE's Radiological Health and Safety Policy (DOE P 441.1, April 26 1996). This policy states in part that Department of Energy facilities must "conduct radiological operations in a manner that controls the spread of radioactive materials and reduces exposure to the workforce and the general public and that utilizes a process that seeks exposure levels as low as reasonably achievable." Each Department of Energy site, including Hanford, is required to implement a radiological control program with the intent to meet this policy goal. Based on the assessment of worker health impacts for the range of reasonable alternatives and options that make use of Hanford facilities, the most likely impact of the use of these facilities is no increase in cancer fatalities among the facility workers. For example in Alternative 1 option 1, all of the activities (target irradiation and processing) occur at Hanford facilities. As shown in Sections 4.3.1.1.9 and 4.3.2.1.9, the expected consequences are less than one additional fatal cancer among the workforce; that is, no additional fatal cancers are expected.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2505: George Ruge

2505-1 — I strongly urge the Department of Energy to restart the FFTF, to support the three missions described in the nuclear infrastructure PEIS, because it is the best technical and the lowest-cost option for meeting the identified important needs.

2505-2 — In fact, contrary to the statements made by Senator Wyden and others in a letter from NASA to DOE dated May 22nd, 2000, it was affirmed that the NASA deep-space systems programs would transition from small isotope, radioisotope thermoelectric generators, to the more efficient Sterling radioisotope power systems. This system also uses plutonium-238 as its power source, a fact which Senator Wyden neglected to mention in his letter either due to being misinformed, ignorance on his part and/or his staff, or outright deception. In any event, this letter, which contains numerous misstatements, is a disservice to the citizens of the Pacific Northwest. I urge DOE to consider all the available information related to the nuclear infrastructure PEIS, without political bias or undue consideration of anti-nuclear rhetoric.

2505-3 — There are significant technical issues and uncertainties associated with plutonium-238 production using either the new accelerator or the new reactor alternatives, as described in the nuclear infrastructure PEIS.

For example, it is unlikely that they will have — it is likely that they will have difficulty producing material at the purity level required by NASA. While these issues might eventually be resolved, their solution is likely to require significant time and funding.

2505-4 — There is a comment that I would like to make specific to the PEIS: the document needs to be updated to reflect NASA's recent change to the Sterling generator, which still requires plutonium-238.

Response to Commentor No. 2505

2505-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

2505-2: DOE notes the commentor's remarks regarding the May 22, 2000 correspondence from NASA Headquarters to the DOE Office of Space and Defense Power Systems. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000, letter to DOE that large RTGs (which require relatively larger quantities of plutonium-238) be maintained as backup. Section 1.2.2 of Volume 1 was revised to clarify plutonium-238 mission needs. Also, as referenced by the commentor, the consideration and selection of facilities and site locations for accomplishing expanded civilian nuclear energy research and development and isotope production missions is not a political decision and will not be biased. DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives. DOE made every effort to obtain, analyze, and disclose all required information to make a decision on expanding nuclear infrastructure. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

2505-3: Because of the unique attributes associated with each of the irradiation facility alternatives, the purity of the plutonium-238 produced will differ. In irradiating neptunium-237 target material to produce plutonium-238, other plutonium isotopes are also produced as impurities within the target material. These include plutonium-236 and plutonium-239. Of these impurities, plutonium-236 is important because daughter products resulting from radioactive decay of the plutonium-236 give off high-energy gamma rays which are difficult to shield. The plutonium-236 level present at the end of irradiation can be reduced by allowing it to decay over a period of time prior to processing or prior to use in fabricating heat sources. Plutonium-238 can also be blended with existing plutonium-238 stock that has less than 1 part per million plutonium-236 to lower the plutonium-236 concentration. The combination of plutonium-236 decay with blending as necessary would result in a plutonium-238 product that would meet NASA's needs, provided the plutonium-236 level is relatively low at the end of irradiation. The alternative selected to produce plutonium-238 will be required to ensure this impurity requirement is met. As detailed planning for a selected alternative progresses, this could result in the need for target design or facility modifications. The Record of Decision will be based on a number of factors including environmental impacts, costs, nonproliferation issues, schedules, technical assurance, public input, policy, and program objectives.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2505: George Ruge (Cont'd)

Response to Commentor No. 2505

2505-4: A May 22, 2000, correspondence from NASA to DOE identified that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

*Commentor: Marilyn Savage
United Staff Nurses Union*

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 335.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

*Commentor: Sarah Schmidt
Heart of America Northwest*

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 279.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2540: Agnes Schmoe

2540-1 — We've not yet cleaned up the mess that we've created over the last 55 or more years replacing the Columbia River. If the highest priority of the U.S. Department of Energy was cleanup, I believe it would have already been done.

2540-2 — There are other ways to fight cancer that doesn't create a lot more cancer-causing materials.

2540-3 — We, the USA, said we would destroy our huge stock of nuclear weapons. So far this has not been happening. The Trident subs, for example, have bombs equaling eight Hiroshima bombs. Some are to be mothballed but others upgraded four times. These are not weapons. They are destructive to ourselves as to any other person in the world as well as animals and everything else on the planet. If we had only two it would be too many. I don't know how many we have but it's a huge number.

2540-4 — I do not believe the FFTF should be restarted.

2540-5 — Until we have something that will be "nuke off" and destroy the nuclear waste, I believe we have absolutely no business in creating any more.

Response to Commentor No. 2540

2540-1: Restoration of the Hanford Site and waste management activities are the primary missions at Hanford. Although beyond the scope of this NI PEIS ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e. Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

2540-2: DOE notes the commentor's concern regarding cancer-causing materials generation. As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. This PEIS has provided an estimate of the incremental potential human health impacts associated with a reasonable range of alternatives for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems. The methodology used is intended to provide realistic results based upon our current knowledge of the health impact of low doses of radiation. Sections 4.3 through 4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from implementation of any of the analyzed alternatives (Alternative 1 includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2540: Agnes Schmoe (Cont'd)

Response to Commentor No. 2540

nonradiological risks associated with each of the alternatives and with restarting FFTF would be small.

2540-3: DOE notes the commentor's interest in reducing the arsenal of nuclear weapons, although issues of nuclear weapons production, dismantlement of weapons, and elimination of weapons systems are beyond the scope of this Nuclear Infrastructure PEIS. The DOE missions addressed in this EIS are civilian nuclear energy missions and are not defense-related.

2540-4: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

2540-5: DOE notes the commentor's concern regarding waste generation and treatment. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2510: Peggy Scott

2510-1 — I feel the area [Hanford] should be cleaned up.

2510-2 — I also feel that medical isotopes is important....

I only needed to look at one cancer education source to come to grips with how staggering the health impacts will be to our future and our children's future. Each and every one of us has a one in three chance of being diagnosed with cancer during our lifetime. In the year 2000 alone, over one million people in the U.S. will be diagnosed with cancer. With the treatments we have today, their overall chance of survival is only a little more than fifty-fifty. Every person in this room will be heartbreakingly aware of the painful truth of these statistics at some time.

But FFTF can change this story for many....this story will be a tragedy for many if FFTF does not produce these isotopes.

Response to Commentor No. 2510

2510-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement.

2510-2: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2503: Stan Scott

2503-1 — I would like to rebut some of the inflammatory rhetoric offered by anti-nuclear organizations such as Heart of America Northwest, Columbia River-Keeper, and Physicians for Social Responsibility.... The anti-nuclear groups love this report [NERAC] because they can pull little sound bites out of it and have you believe that the whole report backs the fact that the FFTF isn't a viable source. Well, the report says that the FFTF is not a viable source of research radioisotopes. Now, of course, this is taken out of context.... In reality, if the FFTF and associated PNNL facilities are operated to produce large quantities of isotopes, the production of research quantities of isotopes will be done at almost no cost, and essentially have a free ride with the other missions performed at the FFTF....

A couple of other comments I've read in some of the propaganda I've seen: "Supplies of medical isotopes are readily available from Canada and non-DOE sources in the U.S." Yes, it is true that certain isotopes are readily available, but most are not.... When talking about the large-scale production of isotopes, Heart of America Northwest says, "Commercial suppliers and hospitals with cyclotrons can produce these and meet the projected need." This might make you think that the commercial or private sector is producing lots of isotopes. This statement is another half-truth. The fact is that the only non-DOE reactor in the U.S. that is currently producing medical isotopes is a small 10-megawatt reactor at the University of Missouri. The rest of the commercial isotope production actually occurs at DOE reactors. The FFTF operated, it would be the key source for these commercial suppliers.

Response to Commentor No. 2503

2503-1: DOE notes the commentor's views and observations regarding the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 and on the production and availability of research and medical isotopes.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

**Commentor No. 2532: Don Segna
Nuclear Medicine Research Council**

2532-1 — Also, I've heard that — several times, that we got to buy the Pu-238 from the Russians. Now, to me, that's us taxpayers paying for nuclear technology in foreign countries. And also we ought to buy from the Canadians. And there was one case where Dr. Darrell Fisher couldn't get his iso- — he had to go to Peru. They've got reactors in Peru. We then paid for a little bit of nuclear technology in a foreign country. And we need the people like the watchdogs that we have here — we need them in the foreign countries, and they ain't there yet. When you do get them there, then we ought to be buying from the Russians and, you know, wherever the cheapest is. But right now, that is not the case. And I think you really need to take this back to your people to understand that we should not buy nuclear technology and keep their infrastructure going and let ours completely die, and then they can go off and do what they want with bombs.

2532-2 — What are we telling the rest of the world? We're producing weapons-grade — excuse me; by definition, it's not weapons-grade material. But every watchdog group, when they looked at FFTF producing it, said it was weapons-grade. We are now telling the rest of the world "You can produce tritium in your civilian reactors." And I think the watchdog groups have let this country down because of things like that.

Response to Commentor No. 2532

2532-1: DOE notes the commentor's opposition to buying foreign nuclear materials that are produced under conditions different than in the U.S., although the issue of foreign nuclear program safety is beyond the scope of this Nuclear Infrastructure PEIS. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted within the next several years. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost. DOE could purchase plutonium-238 from Russia; however, information is limited concerning nuclear safety and domestic safeguards of foreign plutonium-238 production facilities. Therefore, for supply reliability reasons and concern of nuclear nonproliferation, DOE's preference is to establish a domestic plutonium-238 production capability. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

2532-2: DOE notes the commentor's opposition to producing tritium in a civilian reactor, although this issue is beyond the scope of this Nuclear Infrastructure PEIS. The scope of this Nuclear Infrastructure PEIS is limited to analysis of alternatives to fulfill the requirements of the DOE missions, which include the production of medical and industrial isotopes, the production of plutonium-238, and civilian nuclear energy research and development. The three missions are civilian nuclear energy missions and are not defense-related.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2515: Valerie Shubert

2515-1 — I've heard people talking about isotopes all night long, and I have hardly heard any isotopes actually mentioned. And I just — I wish I'd brought my periodic table, because there actually is a table of them in here, in the — in the NERAC report. And I would like to know more about what specific isotopes are being needed, and how much of them are needed, and whether they can or can't be provided by other sources. And I just don't feel that's been adequately addressed.

Response to Commentor No. 2515

2515-1: For the purposes of analyses in the NI PEIS, a representative set of isotopes was selected on the basis of the recommendations of the Expert Panel, medical market forecasts, reviews of medical literature, and more than 100 types of ongoing clinical trials that use radioisotopes for the treatment of cancer and other diseases. These isotopes are listed in Table 1-1 of Volume 1, along with a brief description of their medical and or industrial applications. Unlike Table C-1 of Volume 2, which lists representative isotopes that could be produced using FFTF, the isotopes listed in Table 1-1 include both reactor- and accelerator- produced isotopes. The absence of any specific isotope from the Table 1-1 should not be interpreted to mean that it would not be considered for production under the proposed action. Rather, these isotopes are a representative sample of possible isotopes which could be produced, and DOE expects that the actual isotopes and specific amounts produced as a result of the proposed action would vary from year to year in response to the focus of clinical research and the specific market needs occurring at that time. The United States currently purchases approximately 90 percent of its medical radioisotopes from foreign producers, most notably Canada. However, Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2524: Dane Spencer

2524-1 — I do not advocate the restart of the flux reactor.

2524-2 — I think personally I might be more open to having you restart the reactor, if first you did what you said you were going to do in the first place, which was to cleanup the Hanford Nuclear Reservation. Now, you can't — you can't do both at the same time. It directs time, energy, and money away from the priority, which is to cleanup the nuclear reservation.... I had the harebrained idea of stopping in at the Hanford Reservation, because I'd never been there....And that happened to be the week when the wildfires had gone over Area 300, which is right where we were. And then the next day I read in the paper how the plutonium had been released into the air. So me and my wife had been exposed to your plutonium. And so I'm wondering if you will treat me and my wife when you use these isotopes, when you start this new reactor.... We want to know the truth. We've been lied to in the past. We don't believe you.

2524-3 — About 1993 we were talking about starting the flux reactor to produce tritium. No, we're not talking about that now, but I'm not sure why. Why has that all of a sudden gone away as an issue? Has it just kind of gone under the rug, and we're not going to talk about that? Is this an issue that's been classified, and we're not going to know for sure? We'll find out.

2524-4 — Shut down the FFTF.

Response to Commentor No. 2524

2524-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and support for Alternative 5, Permanently Deactivate FFTF.

2524-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. No radioactive materials were "released" in the Hanford Wildfires of 2000. The DOE Richland Operations Office, the State of Washington Department of Health, and U.S. Environmental Protection Agency performed environmental monitoring on and around the Site to assess potential radiological impacts. The wildfire did not cause a release of radioactive materials from any Hanford facilities but did result in resuspension of radioactive materials which were already in the environment. The very low levels of radioactive materials that were resuspended were slightly above natural background levels and required several days of analysis to quantify. Information on this event has been made available to the public and can be accessed at <http://www.Hanford.gov/envmon/indes.html>. This site also provides a link to information on the independent offsite air monitoring that was conducted by the U.S. Environmental Protection Agency.

2524-3: DOE has no hidden agenda for weapons production or use of FFTF for classified missions. The only missions being considered are those analyzed in the NI PEIS, which are the production of isotopes for medical research, and industrial uses; plutonium production for future NASA space exploration missions; and U.S. nuclear research and development needs for civilian application. DOE addressed tritium production in the "Final Programmatic Environmental Impact Statement for Tritium Supply and Recycling" (DOE/EIS-0161) and subsequent Record of Decision (60 FR 63878). On December 22, 1998, the Secretary of Energy announced his selection of the commercial light water reactor as the primary tritium supply and that an accelerator would be developed but not constructed. In addition, DOE decided that FFTF would have no role in tritium supply plans.

2524-4: See response to comment 2524-1.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2509: Margaret T. Swartzman

2509-1 — ... we have an existing problem at Hanford that the public has high priority, first priority to have addressed. That is the existing nuclear material that we know is leaking and is a problem. We want to address that. And there, connected with that, is the concern of the public that monies that have been associated with the FFTF have drained from that fund of cleanup. Now, I don't know whether that is accurate or not. But my concern and my voice is to make sure that you make sure. You are our protector. And I want to make sure that you are examining that. If you're — if you're holding FFTF on line and that money is taken from cleanup, then I think you're doing the citizens of the state a disservice, because that's the purpose that we voted for that money. You know, we designated that money for cleanup. And that is why organizations like Heart of America appeal to us, because they — whether they have information that is correct or not, we feel at least they are examining what is going on and creating the opportunity for these dialogues.

Response to Commentor No. 2509

2509-1: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2517: Tim Takaro
Washington Physicians for Social Responsibility

2517-1 — Tragically, about 1500 people in the United States will die of cancer today and tomorrow and for the foreseeable future. Unfortunately, FFTF cannot save them. To suggest such is manipulative, and it plays to the fears that we all have of cancer, since each of us has likely been affected by cancer, either in ourselves or in our loved ones.

2517-2 — The National Academy of Science Institute of Medicine report on the nation's isotope needs in 1995 specifically recommended against using existing reactors because they were not designed for this use.

2517-3 — The PEIS we are discussing tonight has an Alternative 4, a so-called new reactor, which is also a straw man. It doesn't take a nuclear physicist to know that a reactor designed forty years after the FFTF, specifically for the production of medical isotopes, would perform better than the FFTF for that mission. The National Academy of Sciences settled that question five years ago.

Response to Commentor No. 2517

2517-1: DOE notes the commentor's view.

2517-2: The FFTF started operation in 1982. Although it was originally designed and operated as a science test bed for U.S. liquid metal fast reactor programs, it also produced a wide variety of medical isotopes. In addition HFIR, ATR, and other foreign and domestic reactors, not designed for medical isotope production, also produce a very wide variety of medical isotopes.

2517-3: The commentor's preference for Alternative 4, Construct New Reactor, over Alternative 1, Restart FFTF, is noted. FFTF and a new research reactor are two of the six alternatives, including no action, that were analyzed in detail in this PEIS. Each alternative offers specific technical, environmental, economic, and nonproliferation advantages and disadvantages, which will be considered by DOE in its decisionmaking process. The National Academy of Sciences has not determined that a new research reactor would perform better than FFTF for the missions described in this PEIS.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2538: Tom Tucker

2538-1 — I'm here to speak in favor of restarting the Hanford Fast Flux Test Facility.

2538-2 — I fear that opponents have an unscientific and emotional fear of waste that is left over from World War II and bomb production during the '50s and '60s, that this is contaminating their view of what we should be doing today.

2538-3 — Too often, unscientific people are victimized by propaganda into believing that a fuel rod is nothing but waste and toxic and cannot be got rid of, when in fact it can in fact — and should be — reprocessed. Irradiated fuel rods contain waste products and useful products, meaning isotopes, and an abundance of fuel that could be turned into new reactor fuel.... I will say, however, that having people closely involved with the reprocessing of fuel rods is probably unnecessary. That is 1970's technology again. I see no reason that small fully automated, hermetically sealed modules can and should be used to reprocess radioactive fuels. These would be sealed, negative pressure, humans should be kept at a great distance using virtual reality, etc. to process the waste. This is can and should be done and I don't see the DOE doing this and I think this is my only criticism.

2538-4 — Regarding tank leaks. Who is really to blame? I worked for a company back in the 70s that asked Congress, our congressional representative, please let us build double walled tanks to stop the leaking, to replace those old single walled iron tanks. And you know what Congress said? We can't afford it. ... We should make the right decision now, put in the double walled tanks, reprocessed fuel, etc.

Response to Commentor No. 2538

2538-1: DOE notes the commentor's support of Alternative 1, Restart FFTF.

2538-2: DOE notes the commentor's views concerning the perception of waste from weapons production. The generation of wastes from the proposed action, which are small in comparison to the candidate sites' current generation rates, are discussed for each alternative in Chapter 4 of Volume 1. The additional waste generated would only have a small impact on the management of wastes at the candidate sites.

2538-3: The commentor's support of reprocessing spent nuclear fuel rods and automated technology for this reprocessing is noted. Reprocessing of spent nuclear fuel is not considered nor is it part of any actions or missions considered in this EIS.

2538-4: Hanford tank waste issues are not within the scope of this PEIS, as none of the alternatives considered would add to these waste volumes. However, underground waste tanks at Hanford built from the 1970s on are double-contained with leak detection and pumping capability. No double shell tank at Hanford has leaked. Hanford is in the last stages of transferring the pumpable portion of liquids from single shell tanks to double shell tanks.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

**Commentor No. 2525: Amber Waldref
Heart of America Northwest**

2525-1 — And the first one [issues not addressed in PEIS] is the non-proliferation issues, and it [the Summary] says that a separate nuclear infrastructure non-proliferation impacts assessment report will be completed in the summer of 2000, to also address non-proliferation issues. Well, unfortunately, this is not available to me yet. And I'm very curious about this document and what it will say, because according to U.S. non-proliferation policy, the U.S. strongly discourages the use of highly enriched uranium fuel in civilian, research, and test reactors. And in the event that a decision is made to restart FFTF, the Office of Non-Proliferation and National Security would undertake a study to consider the technical feasibility of low-enriched uranium fuel, but if that doesn't work, DOE would procure highly enriched uranium fuel. And I can't imagine how we could restart FFTF with this fuel, using this fuel, if it's strongly discouraged under U.S. non-proliferation policy.

2525-2 — The PEIS was to look at the transition of FFTF stewardship after it is deactivated, and the appropriate transition information was to be included. And a comment on this: in the cost report which was released Friday, DOE added the cost of deactivation of FFTF to each alternative, you know, of the five alternatives, except the restart of FFTF. So it's — to me, it's kind of skewed, because it makes it look like FFTF is the most economically feasible option. But yet, the additional cost of shutting it down is not included in that total cost. So it's unclear to me how this could be left out if we do intend someday to deactivate FFTF.

2525-3 — . . . restarting of FFTF and budget constraints were to be included [in the PEIS]. DOE made a commitment that implementation of the record of decision will not divert budgeted funds designated for Hanford cleanup, and that they're also supposed to include information on the Tri-Party Agreement. And I just wanted to make a comment on — some people were speaking about the Tri-Party Agreement earlier. And shutdown of FFTF was included after the initial Tri-Party Agreement. It's part of the Tri-Party Agreement. And in 1995, cleanup milestones were added, that if FFTF was to be deactivated and decommissioned — and the U.S. Department of Energy promised to shut down FFTF then, basically, and use the money saved every year on cleanup. And that just seems like good fiscal policy, to me.

Now the U.S. Department of Energy admits that its current budget for the next six years is too low to meet cleanup deadlines and commitments. So you know, I would advocate that we should use the money that we were going to use, that we're using right now for keeping FFTF on hot standby or for restarting it, for — instead, for cleanup.

2525-4 — I'm not convinced that this PEIS adequately ... demonstrates the need to restart FFTF for the proposed plutonium-238 or medical isotope production missions.

2525-5 — Shut it [FFTF] down.

Response to Commentor No. 2525

2525-1: DOE notes the nonproliferation concern expressed in the comment, and can assure that its proposed action in the PEIS supports U.S. nonproliferation goals. The alternatives evaluated in the PEIS support U.S. nonproliferation policy, as confirmed in the Nuclear Infrastructure Nonproliferation Impact Assessment, published in September 2000. Although this policy analysis is not required under NEPA, it is an essential element in the decisionmaking process. A summary of the Nuclear Infrastructure Nonproliferation Impact Assessment is included in Appendix Q in the Final NI PEIS. It is also available on the DOE NE website (<http://www.nuclear.gov>). In the event that a decision is made to restart FFTF, the first six years of operation would use existing onsite mixed oxide fuel. DOE expects that an additional 15-year supply of mixed oxide fuel in Europe, owned by Germany, would be available for FFTF. The Nuclear Infrastructure Nonproliferation Impact Assessment for the NI PEIS alternatives stated that using the two different sources of existing mixed oxide (MOX) fuel for FFTF (existing FFTF fuel and German MOX fuel) is consistent with U.S. nonproliferation policy, and, additionally, represents a safe, low-cost opportunity to reduce civilian plutonium without chemical or bulk processing, which would afford substantial nonproliferation benefits. DOE's approach to potential use of HEU in the FFTF is also consistent with U.S. nonproliferation policy. The FFTF is an existing research reactor capable of performing its research missions using HEU fuel, if MOX fuel is not available. U.S. nonproliferation policy provides for such a circumstance as part of the effort to reduce and discourage HEU use. During the period of MOX fuel use, in compliance with U.S. nonproliferation policy directives, DOE's Office of Nonproliferation and National Security would undertake a study under the Reduced Enrichment Research and Test Reactor (RERTR) program to consider the technical feasibility of using low enriched uranium to fuel the FFTF. Under this nonproliferation protocol, if use of low enriched uranium fuel is found feasible, it will be used; if found infeasible for meeting assigned missions in the FFTF, an already existing research reactor, policy would allow DOE to subsequently procure highly enriched uranium fuel for use in that facility. This approach is consistent with U.S. nonproliferation policy.

2525-2: Deactivation of FFTF is not part of implementing Alternative 1, Restart FFTF. Deactivation of FFTF is part of implementing Alternatives 2, 3, 4, and 5 and including the cost of FFTF deactivation in the implementation costs for these alternatives is appropriate. The Cost Report was structured to identify the implementation costs of the various alternatives so the Secretary of Energy would have this information along with other data for consideration.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2525: Amber Waldref (Cont'd)

Response to Commentor No. 2525

- 2525-3:** DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. A Tri-Party Agreement change was made to place the milestones for FFTF's permanent deactivation in abeyance until the DOE reaches a decision on whether the facility will be used to meet mission needs. Public meetings were held on this formal milestone change. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2 of Appendix N, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.
- 2525-4:** Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. The NI PEIS evaluates a range of reasonable alternatives for accomplishing the proposed action, one of which includes use of FFTF. Section 1.2 of Volume 1 was revised to clarify the purpose and need of the proposed action.
- 2525-5:** DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor: Marjorie Worthington

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 636.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2531: Barbara Zepeda

2531-1 — We are playing a game here, like, you know, it's us against you. We are not after the truth. And until we're after the truth, we cannot solve the problem. When you start using objective data that is produced by people who don't have an interest in the outcome, a personal interest, a monetary interest, then you'll begin to get accurate information. And until we do that, we're playing a game that none of us can win.... Objective agencies, such as the International Atomic Energy Agency, that have not been contractors or officials, could be used to approach the truth. The truth is necessary to solve these problems.

2531-2 — FFTF is said, by similar corporate interests, to be able to introduce cheap isotopes for whatever government agencies want. And a footnote to that is that the industrial isotopes are probably a cover for military production.

Response to Commentor No. 2531

2531-1: DOE notes the commentor's views on the necessity for reliance on objective, scientific data as the basis for sound decisionmaking. DOE has made every effort to make this NI PEIS objective. This NI PEIS has been prepared in accordance with the provisions of NEPA (42 U.S.C. 4321 et seq.) and the related CEQ and DOE implementation regulations (40 CFR Parts 1500 through 1508 and 10 CFR Part 1021), respectively. DOE evaluated each environmental resource area in a consistent, unbiased manner across all the alternatives to allow a fair comparison among the various alternatives. This was accomplished through review and evaluation of site-specific information on the environmental conditions prevailing at ORR, INEEL, and Hanford to include a comprehensive analysis of the associated environmental and health risks of each alternative. NEPA compliance is DOE's responsibility. IAEA has no role in NEPA compliance and DOE decisionmaking.

2531-2: DOE has no hidden agenda for weapons production or use of FFTF for classified missions. The only missions being considered are those stated and evaluated in the NI PEIS, which are the production of isotopes for medical, research, and industrial uses; plutonium production for future NASA space exploration missions; and U.S. nuclear research and development needs for civilian application.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor: Richard O. Zimmerman

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 323.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2542: Mike Zotter

2542-1 — ... It makes no sense to me to restart this reactor [FFTF] when public safety can be definitely affected. People have died from plutonium, that's pretty much a fact....

... I think anyone will tell you, any science teacher will tell you, the best way not to get cancer is to prevent it. The best way to prevent it is not to have plutonium....

2542-2 — I think most people would feel that cleanup would be a priority versus making money off of restarting this reactor.

... we already know that there is a lot of radioactive material up there and that it is leaking toward the Columbia River from 69 leaking tanks. I know this and there's no way I'd trust the Department of Energy to say that there won't be anything leaked. I mean it might not even necessarily be their fault but that's just what's going to happen and there should not be any more plutonium made at Hanford.

2542-3 — I know that if this reactor is restarted it will produce waste. That's pretty clear. Where will this waste be stored? I don't think that it will be stored completely safely and quickly because the waste that's already there has not been stored. That's pretty much known, etc. And what we need to do is make sure the waste does not hit the Columbia River until they ruin that. That is what irrigates our crops, that's where our fish come from.

2542-4 — I don't think that my kids deserve to have to make a choice to live anywhere around the Northwest if there's a spill. That's always a chance when you move this plutonium or when you produce it, there's always a chance this will happen and it's not necessary.

Response to Commentor No. 2542

2542-1: The commentor's position concerning exposure to plutonium and the restart of FFTF is noted. Chapter 4 of Volume 1 and Appendixes H through J discuss the radiological risks that would result from operation of reactors and fabrication/processing facilities, target storage, transportation activities, waste generation, and waste management. The methodology used provides realistic results based upon our current knowledge of the health impact of low doses of radiation. Both radiological and chemical impacts, including impacts from exposure to plutonium, were addressed in the analysis (See Appendix H). Sections 4.3 through 4.6 of Volume 1 provide the results of the evaluation of potential health impacts that would be expected to result from a range of reasonable alternatives (Alternative 1 includes restart of FFTF), including normal operations and a spectrum of accidents that included severe accidents. Plutonium is the primary contributor to the health impacts from normal operations associated with the processing of irradiated neptunium targets at any of the proposed processing facilities. The environmental analysis showed that radiological and nonradiological risks associated with each of these alternatives and with restarting FFTF would be small.

2542-2: DOE notes the commentor's positions regarding the existing cleanup mission at Hanford, the risk of contamination to the Columbia River, and production of plutonium-238 at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities. Missions delineated in the Section 1.2 of Volume 1 would not have an impact on the Columbia River. FFTF is located approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to the groundwater. Analyses presented in Chapter 4 of the NI PEIS (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4) indicate that there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of the existing Hanford facilities in support of the stated missions. Also, no water quality impacts would be expected as a result of permanent deactivation of FFTF (Section 4.4.1.2.4). As discussed in Section 1.2.2 of Volume 1, plutonium-238 would be produced to support NASA's Deep space missions. Plutonium-238 is not used to make nuclear weapons. Hanford tank waste issues are not within

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2542: Mike Zotter (Cont'd)

Response to Commentor No. 2542

the scope of this PEIS. None of the alternatives described in Section 2.5 of Volume 1 would add to these waste volumes.

- 2542-3:** As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. The proposed activities delineated in the NI PEIS would not have an impact on the Columbia River. FFTF is located approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to the ground water. Analyses presented in Chapter 4 of the NI PEIS (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4) indicate that there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of the existing Hanford facilities in support of the alternatives. Also, no water quality impacts would be expected as a result of permanent deactivation of FFTF (Section 4.4.1.2.4).
- 2542-4:** The FFTF and fabrication/processing facilities at the Hanford Site can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with Alternative 1 would be small. DOE notes the commentor's concern regarding the safety of nuclear materials transportation. DOE is committed to safety and safeguards for its facilities and the transport of materials. As discussed in Appendix J of the NI PEIS, all transportation activities conducted by DOE (including SST/SGT operations discussed in Section J.3.4) would take place in accordance with U.S. Nuclear Regulatory Commission (NRC) and U.S. Department of Transportation (DOT) regulations. Transatlantic shipments would also be in accordance with the International Atomic Energy Agency (IAEA) regulations which are consistent with DOT and NRC regulations (see Section J.3.1). Type B shipping casks, which are designed to protect and retain their contents under transport accident conditions, and purpose-built ships, which are specifically designed to safely

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor No. 2542: Mike Zotter (Cont'd)

Response to Commentor No. 2542

transport casks containing radioactive materials, would be used to transport most nuclear materials covered in the NI PEIS.. Type B shipping casks have been used for thousands of shipments by road, rail, and water and there have been no cases of a major release of radioactive materials (see Section J.3.2.1). As shown in Volume 1, Section 2.7 , the transportation impacts would be small for any of the NI PEIS alternatives. Transportation risks are summarized in Section 2.7.1.6 of Volume 1 and are discussed in more detail throughout Chapter 4 and Appendix J.

Comments from the Seattle, Washington, Public Hearing (August 30, 2000)

Commentor: Frank Zucker

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 302.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2565: Anonymous

2565-1 — Coming back from Portland, we drove up to Crown Point Observation, and I saw the Columbia River spread before me and I clutched my heart. You better clean up that garbage dump out there. I don't want that waste seeping into my river. It is my river too.

2565-2 — But anyway, the cancer did come back on the scar tissue of the right breast. So I had 35 radiation treatments, where you are radiated until you are red, burned, bloody and blistered, and those people in Portland and Hood River had the gall and the arrogance to tell me that we should clean up Hanford — I agree 100 percent — and don't do anything about cancer until Hanford is cleaned up. So that is the suffer and die cult that wants to make this decision. They don't give a rats #*\$! if you all suffer and die from cancer.

Response to Commentor No. 2565

2565-1: DOE notes the commentor's concern regarding the existing cleanup mission at Hanford and the risk of contamination to the Columbia River. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities. The stated missions delineated in the NI PEIS would not have an impact on the Columbia River. FFTF is located approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to the groundwater. Analyses presented in Chapter 4 of the NI PEIS (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4) indicate that there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of the existing Hanford facilities in support of the stated missions. Also, no water quality impacts would be expected as a result of permanent deactivation of FFTF (Section 4.4.1.2.4).

2565-2: DOE notes the commentor's views and testimony.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2569: Anonymous

2569-1—This is a letter to Colette Brown, DOE. “Dear Ms. Brown, as Washington’s oldest and largest statewide business organization, whose 3,700 members employ more than 600,000 people, we are writing this letter to express our continued support for the ongoing environmental review process initiated by the Department of Energy for the Fast Flux Test Facility on the Hanford Nuclear Reservation. We believe that the Department must continue the process leading to the bringing on-line of the FFTF for medical isotope research and treatment. It is obvious that there is a need for additional sources of medical isotopes for research and treatment. The benefits of these isotopes to the patients are numerous.

Clearly the Fast Flux Test Facility represents the lowest risk since it is an existing facility where the medical isotope activities have already been performed. It also appears that FFTF provides greater flexibility to meet the multiple missions identified in the EIS, whereas the other alternatives appear to be dedicated to a single purpose with limited growth potential.” It concludes with, “We hope the Department will proceed expeditiously with the environment review and we surely hope it will lead to the safe and efficient restart of the operation of the FFTF.”

2569-2—We have additional concerns which we believe should be surfaced in the ongoing environmental review process. With the very recent national energy electric shortages coupled with concerns about global warming, there is a need for additional nuclear energy-based research. Given the concerns about carbon monoxide emissions from fossil fuel generating facilities and the fact that existing non-fossil fuel, non-nuclear technologies and conservations are not able to fill the gap, research to find acceptable solutions to the issues facing nuclear power production is necessary. If we are to have sufficient electricity to power our computers, heat and cool our homes and operate our facilities, nuclear power must be explored as an option for the future. At the very least, this proven source of energy production should be reexamined.

Response to Commentor No. 2569

2569-1: DOE notes the commentor’s support for Alternative 1, Restart FFTF.

2569-2: DOE notes the commentor’s support for civilian nuclear energy research.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2571: Anonymous

2571-1—And just yesterday during a CBS 11:00 p.m. local news broadcast, a commentator stated no harm has been done by the fallout since the National Monument wildfire. Inhaling plutonium particles in Hanford dust is not harmless. At the same time an ABC commentator announced high levels of radiation equal to Hanford was detected at Sunnyside. Which one of them was telling the truth or where did they get their information? That is a problem for people like me. Hanford officials reported two employees who falsified FFTF records and were fired, which the officials insist is an isolated incident. Which US DOE official can successfully convince anyone that no other records are falsified. FFTF is old and deteriorated like a lot of facilities at Hanford. They just won't hold up. That is the fact of it. You can talk to any nuclear operator that has left Hanford, and they will tell you the same thing. Disease is sometimes a sophisticated substitute for force used by people intending to prevail. If anyone believes the US can't delegate some of the US DOE delegates accountability, then please allow me to put you in touch with many witnesses who can enlighten you and provide you with other falsified record. Certain populations as well as children are suffering with various respiratory and other medical problems since the Hanford wildfire destroyed over 191,000 acres of national monument. Beginning back to when the wind blows, I have to stay inside and wear a mask. I have an exhibit attached here. The fire turned just six minutes either way from my north Richland home.

Response to Commentor No. 2571

2571-1: No radioactive materials were “released” in the Hanford wildfires of 2000. The DOE Richland Operations Office, the State of Washington Department of Health, and U.S. Environmental Protection Agency performed environmental monitoring on and around the Site to assess potential radiological impacts. The wildfire did not cause a release of radioactive materials from any Hanford facilities but did result in resuspension of radioactive materials which were already in the environment. The very low levels of radioactive materials that were resuspended were slightly above natural background levels and required several days of analysis to quantify. Information on this event has been made available to the public and can be accessed at <http://www.Hanford.gov/envmon/index.html>. This site also provides a link to information on the independent offsite air monitoring that was conducted by the U.S. Environmental Protection Agency. The FFTF reactor at Hanford was constructed and initiated operations in the mid- 1980s making it the DOE's newest reactor. It has no structural flaws that would prevent safe operations. The FFTF facility has a quality assurance program and a number of other management systems in place to identify deficiencies with safety-related work. These systems worked as discussed in the referenced case.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2591: Anonymous

2591-1—You guys have heard a lot from me. I am not sure I have said a lot in the past meetings, but I do think there is a concern relative to the NERAC Committee and the Frost and Sullivan report for the demand, and I think that the Committee was accelerator biased. So somebody is quoting NERAC as the actual fact. I think there should be some other details looked at. And the rationale I came up with is that the demand — a demand that is left out of there is this is life threatening. And I think you have heard it a lot, Owen, that once it gets FDA approved, you go from maybe treating the rate of 100 per year in phase III and now all of a sudden, you may have 10,000 to 20,000 patients who want that particular treatment. And you look at areas like thermogenic. They took a little while to get going and once they said, well, this looks like a pretty good isotope, they went for four years in a row at 70 percent a year. Now the system needs to accommodate looking at a single isotope that may be required at a demand rate that goes sky high. And that infrastructure needs to look at how that can be done. Now Frost and Sullivan did include — I think it was the year 2005, they expected five FDA approvals on nuclear medicine isotopes, and they went — I think I got it right — 700 percent in one year. And they came back and I said, where did you get that? And he said, well, there is going to be five different isotopes being approved by FDA. That was his estimate. But I think the point is that needs to be looked at very closely. Plus, when you look at the demand, you've got to account for prevalent patients. There are patients out there that have been treated and a lot of these demand schedules are not included in there. If they would be included, what you would see is a high ramp up, a large peak while the prevalent patients are being treated along with the new patients that are added to the list every year, and then it comes down as you have treated the patients and they are better or they die of other causes. Then it will actually come down. So those types of peaks need to be included in the demand curve. It needs to be looked at. Maybe I was wrong when I did it. But when I did the curves for FFFF to just try to get some feel for when is it going to be economical, you had to include the prevalent patients to treat. Because if a guy is on the third treatment, as you see those are the only ones they get to treat in clinical trials anyway. So they need to be included in that demand rate. And the infrastructure out there needs to look at that.

Response to Commentor No. 2591

2591-1: DOE notes the commentor's views concerning the Frost and Sullivan report. DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs. Currently, approximately 50 percent of DOE's isotope production capability is being used. Much of the remaining isotope production capability supports secondary missions, but cannot be effectively used due to the operating constraints associated with the facilities' primary missions (basic energy sciences or defense). DOE is currently meeting most of its short-term requirements. However, in the long-term (next 5 to 10 years) there will be a shortfall in available DOE capacity to meet demand. Should the isotope demand grow consistent with the Expert Panel Report, as it has recently, or if DOE's market share increases, there will be a need for expanded isotope production capacity in the short-term (less than 5 years).

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

*Commentor No. 2560: Nancy Aldrich,
Mayor Pro-Temp, City of West Richland*

2560-1—There is no doubt that West Richland would experience an economic boom if FFTF is restarted. But as a cancer survivor and a sufferer of rheumatoid arthritis, I want those medical isotopes available to not just me, but to the citizens of West Richland if we should need them at any point in our lives. On a lighter note, I have a 10-year-old son whose goal is to be an astronaut and to be part of a NASA mission to Mars. I would hate to have him be disappointed in those goals because the reason not to produce those isotopes were based on fear and not sound science. So, therefore, I and my community support the restart of FFTF.

Response to Commentor No. 2560

2560-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2612: Linda Alexander

2612-1—I'm not a scientist, but I worked with the scientists, and I do recall, just after FFTF radioisotopes were discontinued, there was a young intern that came over from Fred Hutchinson. He was going to personally escort a sample that he had been guaranteed was just as good as FFTF's. I watched this young scientist get really discouraged because we brought that in and we opened up the package. He had to run some tests, and he said oh, you know.

He said that the chemical toxicity was so high that the radionuclide would help the patient, but the chemicals would harm him. This is a scientist that said well, the chemical could be used on a lab rat, but not on a human. He was pretty discouraged.

It really had a big impact on me because I could tell that these people weren't doing this scientific. They really cared about how the radioisotopes made it easier for people to recover, and if they didn't receive them, that their chances were next to none.

Response to Commentor No. 2612

2612-1: DOE notes the commentor's views and testimony.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor: Sid Altschuler

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 1476.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2590: Bob Anderson
Benton County Democratic Central Committee

2590-1—What I am here tonight is to represent Democrats in Benton County. That was another one of the assertions that I had a problem with Mr. Pollet that he spoke for or that he made the statement that most Democrats oppose restart of FFTF. I know that is not the case in Benton County and Franklin County. I don't know how he is a spokesperson for the Democratic Party, but part of our burden is to basically put the facts out. And the facts in Benton County are that back in October of 1999, we passed a resolution in support of restarting the Fast Flux Test Facility. At the last public hearing, I submitted a copy of that. So I am not going to read that resolution again, but I have attached a copy to the written comment. And in April of this year, our Benton County Democratic Party also adopted a platform which states in part, "Cancer is the second leading cause of death in this country with 600,000 cancer victims dying annually. The American public cannot accept current, expensive and agonizing traditional treatments with their devastating side effects. Chemotherapy and radiation use a buckshot approach which frequently causes nausea, hair loss, bone weakness, lymphedema, burned and blistering skin, chronic coughing and increased susceptibility to shingles. These old-fashioned treatments are effective for 40 percent of the patients and cost \$105 billion annually. It is unconscionable not to devote all efforts to starting production of medical isotopes at the FFTF.

In summary, the Nuclear Infrastructure Draft Programmatic Environmental Impact Statement released on July 21 of this year has reinforced our belief for the need to restart FFTF.

Response to Commentor No. 2590

2590-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor: Walt Apley

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 405.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor: Dale Bartholomew

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 412.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor: Robert Beach

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 268.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

**Commentor No. 2563: Leo Bowman,
Benton County Commissioner**

2563-1—As Chairman Pro-temp of the Board of Benton County Commissioners, I want to restate the County's longstanding and unwavering support for the restart and continued operation of the FFTF. The County has passed several resolutions in recent years supporting the study, the operations and the restart of the Fast Flux Test Facility.

I would like to emphasize four points in your draft EIS. One of them is when you consider what it costs to build the FFTF, when you consider what it would cost to build a similar facility today, what it would cost to decommission the FFTF, and what it would cost to leave the facility in limbo, we believe that anything other than the restart and operation of the FFTF for the long term would be an abuse of taxpayer dollars.

Two, as in your EIS, it explains no other Department of Energy facility, existing or proposed, have the capabilities of producing all three missions for the Department of Energy — the production of plutonium-238, the research and development of nuclear fields, and the production of nuclear and industrial isotopes.

Three, currently the United States imports over 90 percent of all the medical isotopes used to save the lives of citizens in Benton County and the United States, and ironically we purchase all of our plutonium-238 supplies from Russia.

And four, contrary to the fears of under-informed detractors, renewed operation of the FFTF would not generate any new high level waste, would not support any military missions or weapons programs, and would not take any money from clean-up. Those budgets are separate. We believe that when the Department of Energy carefully and sensibly weighs its alternatives, the restart of the FFTF would be the obvious choice in meeting the nation's isotope research, development and production objectives for the next century.

Response to Commentor No. 2563

2563-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2568: Mark Beck Citizens for a Clean Eastern Washington

2568-1—What I would like to see included in the PEIS is more explicit statement of the environmental impacts associated with restarting the FFTF.

Furthermore, there are no statements about the environmental impacts of new accelerators or a new reactor. That is completely ignored in the environmental impact statement. If this is an environmental impact statement, those impacts have to be included in it.

2568-2—I have looked at the cost statement that was made available on Friday, specifically the cost of the waste streams. The storage treatment of waste are not included anywhere in that cost statement. Those have to be included in the PEIS. And those costs should be calculated for — not just for the 35 years of the mission, but have to be calculated for the entire time over which these wastes are threatening to the human life.

Let me just point out some of the costs. Some people have mentioned here that it must be cheaper to run the FFTF since it is already built. Well, I ran some of the numbers here. Considering \$314 million to start the thing up, at \$60 million a year for 35 years, that is \$2.4 billion over the course of 35 years. Let's consider what I call alternative 6, which would consider buying the plutonium-238 from Russia. That costs \$10 million a year. Do that for 35 years. Build a low energy accelerator which will produce the medical isotopes and the research isotopes. It costs \$35 million to build this accelerator. That is in the cost statement that was posted on the Web. \$35 million for a low energy accelerator. Not the billion dollars for the large accelerator to build a Pu-238. This accelerator won't make Pu-238. But if you buy that from Russia, you don't need to build a billion dollar accelerator. You can build a \$35 million accelerator. Okay? It costs \$4.5 million a year to operate that thing. Total that all up, accelerator and buying Pu-238 from Russia, that is \$500 million over 35 years. That is one-fifth the cost of operating the FFTF.

2568-3—You must include the findings of your blue ribbon task force here, the Nuclear Energy Research Advisory Committee. It has been mentioned a few times here. I won't read the quotes. They have already been stated several times. I realize that this specific document refers to research documents and what you have said here now is that the FFTF is actually being considered more for therapeutic and diagnostic treatments. That sounds like commercialization. But the EIS does not include anything about commercialization. If commercialization of the FFTF is what you intend, that has to be considered in the EIS.

2568-4—Further, you must include recent developments with NASA with regards to the Sterling engine. The PEIS assumes 5 kilograms of Pu-238 a year. While that may be true in the near future, in the long term, especially over a 35-year mission, that number is going to go down. That means all of the alternatives have to be reconsidered with consideration of lower amounts of Pu-238. That means for

Response to Commentor No. 2568

2568-1: The environmental impacts associated with operation of the FFTF during normal operations and from postulated accidents are explicitly presented and discussed in Section 4.3 of the draft NI PEIS. All impacts to human health and insults to environmental media including air, water, and land are shown to be small. No fatalities would be expected from the 35-year operating period of the FFTF. Any discharges would be in accordance with applicable permit and regulatory requirements and the impacts on air and water quality would be small. The potential impacts to the Hanford area and transportation corridors to and from Hanford associated with FFTF operations are also shown to be small. The environmental impacts associated with the construction and operation of new accelerators and of a new reactor are presented and discussed in Sections 4.5 and 4.6, respectively, of the NI PEIS. As indicated in Sections 2.5.4 and 2.5.5, site selection for Alternatives 3 and 4 is not evaluated as part of this NI PEIS. In the event one of these alternatives were selected for subsequent consideration, follow-on NEPA assessments would evaluate potential locations for these new facilities.

2568-2: As noted by the commentor, waste management costs were not presented in the Cost Report. Again, Neither NEPA nor the CEQ regulations for implementing NEPA require the inclusion of a cost analysis, including for waste generation. Wastes would be generated by all alternatives and all sites including for the implementation of Alternative 1, Restart FFTF, at Hanford, which makes these costs not a particularly useful discriminator among the alternatives considered. Also, the ultimate disposition of some of these wastes in terms of acceptable waste form and disposal site (onsite or off-site commercial) have yet to be determined. This adds an additional uncertainty to any attempt to quantify waste costs, thus, making any estimates highly presumptive and speculative at best. The commentor's proposed alternative consists of elements from the No Action Alternative and Alternative 3, Construct New Accelerator(s). Other combinations of alternative elements could also be selected to meet the DOE mission requirements to some level. As indicated in the NI PEIS, the Record of Decision can select elements from one or more alternatives evaluated in the NI PEIS. The proposed low-energy accelerator, an element of Alternative 3, can produce a select set of medical isotopes. The FFTF can produce a diverse set of medical and industrial isotopes plus meet the requirements of the civilian nuclear energy research and development mission. The commentor's proposed alternative does not meet any of the civilian nuclear energy research and development missions requirements. DOE considers all three missions of equal importance.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2568: Mark Beck (Cont'd)
Citizens for a Clean Eastern Washington

smaller — for new reactor design, that would mean a smaller new reactor. For accelerator designs, that would mean smaller accelerators. That would mean for cheaper alternatives for numbers of the others.

2568-5—In my testimony at the scoping hearing, I stated that all possible waste streams must be considered, including target fabrication and transportation, field fabrication and transportation, spent fuel from the reactor, unused isotopes themselves, and all solid and liquid wastes in processing targets and extracting isotopes. There are no detailed statements in the environmental impact statement of exactly where these wastes are going to be disposed of, and that has to be included in the statement.

2568-6—If you must decide that you have a reactor, although my organization does not explicitly support the use of a reactor, we would state that you should consider alternative three a much more attractive alternative to alternative one.

2568-7—Building a new reactor costs the same amount to build as it would to restart the FFTF, [and] would have far lower operating costs...

2568-8—[New reactor] would have a far smaller amount of waste production [than FFTF].

Response to Commentor No. 2568

2568-3: The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities. DOE's production and sale of radioisotopes fall into two categories "commercial" and "research" and both types of isotope production are considered under the proposed actions. Commercial radioisotopes are those that are produced in large, bulk quantities and sold to pharmaceutical companies or distributors, or to equipment or sealed source manufacturers. Examples of commercial radioisotopes produced by DOE include strontium-82 and germanium-68 for medical applications, and iridium-192 and californium-252 for industrial applications. DOE only produces commercial isotopes when there is no U.S. private sector capability or when foreign sources do not have the capacity to meet U.S. needs reliably. In contrast, research radioisotopes are typically produced and sold in small quantities in response to specialty orders from researchers preparing experiments in the field of medicine, with small quantities of these radioisotopes also purchased by industrial researchers. Because small-quantity production of research isotopes is not financially attractive to private-sector producers and is generally not undertaken, DOE attempts to provide all research radioisotopes that are requested, subject to production capability, inventory, and financial constraints. As successful application of a specific research isotope is established, the production and sales of that radioisotope may shift from research to commercial status. In recent years, over 95 percent of DOE's sales of radioisotopes by dollar volume were commercial and 5 percent have been for research. Additional discussion of how DOE's isotope

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2568: Mark Beck (Cont'd)
Citizens for a Clean Eastern Washington

Response to Commentor No. 2568

program fits into the overall U.S. and foreign isotope production capabilities was incorporated into Section 1.2.1 of Volume 1.

- 2568-4:** DOE notes the commentor's concern about NASA's need for plutonium-238 for space missions. A May 22, 2000, correspondence from NASA to DOE identified that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions. DOE chose a 5-kilogram per year production rate as an upper bound due to uncertainties in the SRPS technology development requirements for backup units and variability.
- 2568-5:** The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste treatment, storage, and disposal facilities for the wastes expected to be generated are identified in Chapter 4 of Volume 1 under the Waste Management sections of the NI PEIS. Spent nuclear fuel generation and management are discussed in the Spent Nuclear Fuel sections of Volume 1 of the NI PEIS. The cumulative impact tables for waste management in Section 4.8 of Volume 1 have been revised to include the individual site's storage, treatment and disposal capacities for comparison. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.
- 2568-6:** DOE notes the commentor's support for Alternative 3, Construct New Accelerator(s), over Alternative 1, Restart FFTF.
- 2568-7:** DOE notes the commentor's views and observations. A separate Cost Report was prepared to provide additional pertinent information to the Secretary of

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

*Commentor No. 2568: Mark Beck (Cont'd)
Citizens for a Clean Eastern Washington*

Response to Commentor No. 2568

Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. The information provided in the report is not required by NEPA and CEQ regulations to be included in the NI PEIS. The Cost Report was mailed to interested parties on August 24, 2000 and made available on the NE website (<http://www.nuclear.gov>) and in the public reading rooms. For information purposes, about 730 people were mailed the Cost Report. DOE has provided a summary of the Cost Report in this Final NI PEIS.

2568-8: The operational wastes generated by a new research reactor may be somewhat less than that of operating FFTF. However, the wastes that would be generated by the construction of a new research reactor must also be considered.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2609: Martin Benske

2609-1—There are several possibilities relative to the assertion that FFTF start-up and operation will detract from funds that would otherwise be dedicated to Hanford clean-up. One possibility is that Congress has publicly stated that the Hanford clean-up budget will be the source of FFTF funding, and I am simply unaware of those public statements. Doc Hastings actually put that one to bed.

A second possibility is that Congress has made secret agreements to fund FFTF with funds that would otherwise be allocated to Hanford clean-up, and while we ordinary folks have not been privy to these secret agreements, they have been leaked to environmental activists in Seattle, Portland, and Hood River.

A third, and in my opinion most likely possibility is that the spokesmen for Heart of America Northwest and Columbia River United are liars. Liars is, of course, a strong word, but it is hurled at the Department of Energy so casually and irresponsibly and so often by these same activist groups that I see no reason to gloss over a reasonably obvious truth.

My purpose in appearing before you is first to ask you to focus on what you expect to derive from these meetings and to recognize that testimony from people right on the scene is more important than testimony from distant, anti-nuclear activists whose agendas go far beyond FFTF and Hanford clean-up. Their purposes are obstruction and sabotage of any nuclear activities. FFTF and Hanford clean-up are just the activities of the moment that need to be discredited.

2609-2—More important, I want to express my belief and the belief of most people in this community that we would welcome the opportunity to operate FFTF in any way that will serve this nation.

Response to Commentor No. 2609

2609-1: DOE notes the commentor's views and remarks. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

2609-2: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor: Brian Berglin

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 281.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2582: Bill Brem

2582-1—What I am concerned about is the one-sided stories that appear in some of the newspapers and the bad press that Hanford generally gets all the time about all the problems, bad work. It says very little about the people really trying to clean the place up and working hard. Some of it seems to have carried over into the newspapers' discussion of the hearings and the restart of FFTF. So it is especially enlightening to see the article in "The Oregonian" two days ago.

I would like to encourage the Energy Department to follow Oregon's lead and objectively consider the benefits of restarting FFTF for treating cancer. The cancer patients deserve it.

Response to Commentor No. 2582

2582-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor: Tom Burke

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 286.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2606: Beth Call

2606-1—I should state at the beginning that I support alternative five, deactivation of the Fast Flux Testing Facility.

2606-2—The DOE's programmatic environmental impact statement suggests the possibility of shipping weapons plutonium through Puget Sound to fuel FFTF, despite recent vehement protests of nearby residents and the Seattle and Tacoma city councils against receiving even spent nuclear fuels. I just heard a speaker say that probably wouldn't be done. It would probably be brought through the east coast because that would be less expensive, which leaves one wondering how on earth they would get it safely across the continent. How often do we hear of train wrecks and truck wrecks? I can't think of a safe way of transporting it across the continent either.

Response to Commentor No. 2606

2606-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2606-2: The commentor appears to express the concern that DOE would expose people in the Puget Sound area to risks associated with the transport of weapons-grade plutonium. None of the proposed alternatives involved the shipment of any weapons-grade plutonium to any port in the United States. Alternative 1 does postulate that DOE might decide at some point to import mixed oxide fuel from Europe to fuel FFTF. At this time, however, DOE has not proposed to import this fuel through any specific port. If DOE ultimately decides to import fuel from Europe, it would perform a separate NEPA analysis to select a port. This review would address all relevant potential impacts of overseas and inland water transportation, shipboard fires, package handling, land transportation, as well as safeguards and security associated with the import of SNR-300 mixed oxide fuel through a variety of specific candidate ports on the east and west coasts. It would consider all public comments, including local resolutions, concerning the desirability of bringing mixed oxide fuel into the proposed alternative ports. In the event that DOE decides to enhance its nuclear infrastructure, it would not expose any population to high, unacceptable risks under any alternative. Any transportation activities that would be conducted by DOE would comply with U.S. Nuclear Regulatory Commission and U.S. Department of Transportation regulations. Associated transatlantic shipment would comply with International Atomic Energy Agency requirements. In Section J.6.2, DOE reviewed the potential maximum impacts from the marine transportation of mixed oxide fuel from Europe to a representative military port, Charleston, South Carolina, and overland transportation to Hanford. Also in that section, a bounding analysis demonstrates that the maximum potential radiological risks to the surrounding public from mixed oxide fuel shipments would be extremely small (e.g., less than 1 chance in a trillion for a latent cancer fatality per shipment from severe accidents at docks and in channels and less than 1 chance in 50 billion for a latent cancer fatality per shipment from overland highway accidents).

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor: Susan Carlstrom

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 427.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

*Commentor No. 2596: Mel Chapman
International Brotherhood of Electrical Workers, Local 112*

2596-1—I think it's time for Department of Energy to move off of dead center, make a positive step, restart this plant, stop the procrastination, and let's move forward. The life that they save might be their own.

Response to Commentor No. 2596

2596-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2598: James Chung

2598-1—In summary, I think the most important point that I'm trying to make is that the FFTF should not only be restarted for the missions that have been outlined more eloquently than I can, but also for the future of our country's nuclear power program.

Response to Commentor No. 2598

2598-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor: Frank E. Cole

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 389.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2584: Michael Contini

2584-1—I support alternative 1, restart of the FFTF for the production of medical and commercial isotopes, Pu-238 and research. However, I want a statement in the PEIS that provides a categorical exclusion of using FFTF at any time for the production of nuclear weapons materials at any kind.

2584-2—I now want to turn my attention to accountability. There is or was a sign here concerning two FFTF employees fired for falsifying work done. I am familiar with this event since I work at FFTF. This event happened and the employees paid the price. They were fired. In one of the other meetings, there was mention of the event where an in-vessel handling machine was damaged by bypassing interlocks. Again, the individuals responsible, predominantly the operations engineer after an investigation was fired.

Can we say this about Heart of America Northwest, the Government Accountability Project and Columbia River United? What accountability exists for them? They can distort, misquote, take out of context items of great concern. They giggle at hearings. Again, what accountability exists for Watchdogs of Hanford? "Who will watch the Watchman" is a quote I have often heard. I think Julius Caesar said this. The above methods used by these organizations to foster public support, both verbal and financial, are radical and extreme.

2584-3—I am concerned with the environment. I want Hanford cleaned up as safe as possible. A small quantity of waste in comparison to the huge quantities already there that FFTF will produce for the missions of the PEIS is a small price to pay for the benefits gained. I want the Willamette River cleaned up, thus helping to keep the Columbia River clean.

Response to Commentor No. 2584

2584-1: DOE notes the commentor's support for Alternative 1, Restart FFTF. The production of nuclear weapons materials is not one of the missions for which FFTF would be restarted, if Alternative 1 were selected in the Record of Decision.

2584-2: DOE notes the commentor's views and observations.

2584-3: The commentor's positions on the Hanford cleanup and waste generation benefits under Alternative 1, Restart FFTF, are noted. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. Cleanup of the Willamette River is outside of the scope of this PEIS.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor: William A. Dautel

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 431.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor: Jim Davis

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 401.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

*Commentor No. 2554: Jerome Delvin
Washington State Representative*

2554-1—I strongly urge the Department of Energy to adopt alternative 1 of the Draft Environmental Impact Statement, which would reactivate the FFTF and use it to produce medical and industrial isotopes and assist with nuclear research. The draft EIS prepared by DOE has identified a clear need for additional reactor capacity, capacity that can be readily provided by FFTF. Use of the FFTF will create the greatest and most efficient use of current resources of our national research and medical isotope needs. The taxpayers would be best served by putting this facility to work for both the Federal Government and for the economy of central Washington. With the need for medical isotopes projected to increase dramatically, America finds it is increasingly dependent on overseas facilities to meet its needs. Radioactive isotopes are frequently used to treat cancer and it is important that we develop a domestic facility for production of these isotopes.

Response to Commentor No. 2554

2554-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

**Commentor: Ken Dobbin, Councilman,
City of West Richland, WA**

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 400.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

*Commentor No. 2577: Amy Evans
Citizens for Medical Isotopes*

2577-1—So what I have to say is we have already waited too long. We are not about to grab an opportunity that lies ahead of us. We have already waited far too long to provide the reliable and affordable supply of medical isotopes that are needed to move new cancer treatments forward. And I think my comment about the PEIS would be choose the option that is going to provide the best reliable supply of quality and quantity isotopes that we are going to need for research and treatment in the shortest amount of time. And that answer is restart the FFTF.

Response to Commentor No. 2577

2577-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2601: Martin Evans

2601-1—I recommend alternative number five, the shutdown and permanent closure of all activities of the Fast Flux Test Facility reactor.

2601-2—It is my belief that the medical benefits of nuclear isotopes, while large, are outweighed by the risks to public health that come with any increase in the amount of nuclear waste in our region of the type generated by FFTF.

Response to Commentor No. 2601

2601-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2601-2: DOE notes the commentor's concern regarding waste generation. As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. This NI PEIS has provided estimates of human health impacts associated with a range of reasonable alternatives for the production of isotopes for medical uses, research and development, and as heat sources for radioisotope power systems, including the restart of FFTF. The methodology used provides realistic results based upon our current knowledge of the health impact of low doses of radiation. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1 which includes restart of FFTF, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2574: Darrel Fisher
Nuclear Medicine Research Council

2574-1—I would like to compliment the Department of Energy on the work that it has been doing in this area, and I support alternative #1, restart of the Fast Flux Test Facility.

2574-2—My statements tonight address the need for medical isotopes. There was a quotation in the Seattle Post Intelligence this morning quoting Dr. Harry Kramer that we have all the isotopes that we need and that there is not a need for any more production. That is blatantly false and irresponsible. I worked today with Dr. Julie Park and Dr. Dana Matthews at the Fred Hutchinson Cancer Research Center putting together a protocol for FDA approval of a new treatment of neuroblastoma in children. Dr. Park is at Children's Hospital and Dr. Matthews at Fred Hutchinson Cancer Research Center. These physicians recognize that the only effective treatment of this disease is a combination of surgery and radiolabeled antibodies, in particular to treat the micrometastatic disease, combined with chemotherapy, additional radiation therapy, and in some places a marrow transplantation. This is a very aggressive therapy for an otherwise incurable disease.

If we are able to produce these isotopes in the reactor in Richland, the physicians in Seattle will be first in line to use them, each and every one. The physicians that I have talked to, they cannot depend on the FFTF if it is closed or if it is in standby. That is why the statements that you see, we cannot depend on FFTF for our isotopes because it is not operating. Each one that I have talked to, including physicians at the University of Washington in the Nuclear Medicine Division, has said you make the isotopes, we will use them.

Response to Commentor No. 2574

2574-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

2574-2: DOE notes the commentor's support for the use of FFTF to produce medical isotopes.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor: Dennis A. Fitzgerald

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 426.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2605: Mike Fox

2605-1—I'm a supporter of the restart of FFTF.

2605-2—I was in a meeting with the Society of Nuclear Medicine in 1994 where Hazel O'Leary spoke to the national meeting. I took notes from her meeting that I have here that she presented to the Society of Nuclear Medicine. Among her points, she say one, I am proposing a vision, a world class nuclear medicine program for the 21-st century.

Two, we should eliminate the full cost recovery. I don't know why in the world we're demanding economic viability when the government throws \$6 billion contracts as basic physics and NASA and so forth and don't ask for an economic recovery. She was very explicit in saying we should eliminate the full cost recovery.

We must advance the frontiers of nuclear medicine and radiopharmacy and biotechnology and instrumentation and so forth. Something near and dear to me, the DOE. She obligated the DOE to work together in demystifying all things nuclear, reducing fear, healing mistrust.

Now, that was the Department of Energy making those commitments, and yet I would describe them, as I have here, as broken promises. I think that the Department of Energy has led to this public fear, because I have been involved at times when the Department of Energy would call me up in my career and ask if I had certain pamphlets and booklets that had been produced in the early 70's.

This was by Tina Hobson, who was in the Carter Administration, head of the Office of Communications. She was a Naderite that got appointed in the Carter Administration. She confiscated those documents, and I later learned that they were destroyed. There isn't a whole lot of difference here from the burning of the books in 1930 Germany.

So, I think that if there's someone, if there's a will within DOE headquarters to re-examine what DOE has done and what they have promised and established a scientifically defensible approach to these things, an approach such as beneficial, I think the DOE could enhance its own public trust.

Response to Commentor No. 2605

2605-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

2605-2: DOE notes the commentor's viewpoint.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2581: Gary Greene

2581-1—One doesn't have to look too far to see what the quality of the infrastructure in Russia is right now. I can't expect the EIS to capture what the environmental impact might be to the world in general and other nations and other populations in the PEIS, but I think that it should be noted that we would be putting a great number of people at risk by obtaining those isotopes from other sources.

2581-2—The comment about keeping eastern Washington clean rankles me because that is the height of not in my backyard. What I think is that, yes, in my backyard because we have the regulatory infrastructure. We have the oversight and safety. We have, I know, the skill of our work force, and we have the tools necessary to carry out these important missions at FFTF and in a safe environmental free manner.

2581-3—Also, that we will — and this is a probabilistic kind of thing. We stand a better chance of accomplishing those missions than the other options that are listed in the PEIS.

Response to Commentor No. 2581

2581-1: The commentor's interest in the safety of isotope production and distribution capabilities in Russia is noted. Under the No Action Alternative, plutonium-238 would be purchased from Russia to support NASA's deep space missions. However, evaluation of potential health impacts in Russia is outside the scope of this NI PEIS.

2581-2: The commentor's support for Alternative 1, Restart FFTF, is noted. The commentor's position on safety and skills of the Hanford Site workforce is noted.

2581-3: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor: R. K. Greenwell

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 411.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

***Commentor No. 2552: Patricia Hale, Washington State Senator,
8th Legislative District***

2552-1—The Fast Flux Test Facility has long been the crown jewel of the nuclear industry and that has been borne out by ten years of operating excellence. But the Government has never tapped into the enormous potential of this remarkable facility and the time has come for us to do so.

With the FFTF, as Congressman Hastings said, we have a unique facility that can produce the variety, the quality of isotopes that will be needed in the decades ahead. Why then is our nation supporting 100 reactors in more than 40 foreign countries? It is incomprehensible to me that we would do that, invest in foreign facilities, when we have by far the most superb facility right here at home.

Obviously there is a clear and compelling need for medical isotopes. This year in the United States alone, half a million people will die from cancer and more than twice that from heart disease. Our country can no longer afford to turn its back on an existing state-of-the-art facility, already paid for by taxpayer dollars that could and should lead the world in medical isotope production and research. Nor should we risk heavy reliance on foreign sources, no matter how friendly, for our isotope supply. Without the FFTF, we will continue to be reliant for 90 percent of our isotope needs on foreign sources. And history is filled with grim reminders of the consequences that happen when political winds change, and they do.

And finally, at this time when the world is struggling with scientific challenges in medicine and energy production and waste management and space exploration, it would be both wasteful and foolhardy for the Government to dismantle this versatile facility that could boost our national capabilities and lead the way to important new discoveries.

Response to Commentor No. 2552

2552-1: DOE notes the commentor's support for Alternative 1, Restart FFTF. DOE also notes the commentor's statement about the Foreign Research Reactor Program; however, this program managed by the DOE Office of Environmental Management, is separate from the proposed action in this PEIS.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

*Commentor No. 2557: Larry Haler
Richland City Council and Chairman, Hanford Communities*

2557-1—I had the opportunity a year ago to testify before the NERAC Committee which made the decision to do this PEIS for the FFTF. I flew back to Washington, D.C. and listened to some very learned people make that decision, some very impressive minds that the Energy Secretary had gathered from industry as well as science and as well as from the universities who made this decision. But one thing that was brought out during that one day of testimony and presentations that were given was that we do not have enough reactor volume in this country to generate the kind of isotopes that are needed to save lives. And if we were to use the existing DOE reactor facilities, we would be pushing some of the programs out — and I believe you mentioned this earlier, Colette. Some of those programs would be the critical defense programs that we have.

The only reactor in the United States that could generate — or I should say the only facility that can generate the type of quality isotopes that we need for cancer patients to effectively cure cancer in those patients that the isotopes would be applied to is the FFTF. Let's not kid ourselves. An accelerator does not, and that was brought out in the NERAC committee meeting. Accelerators do not generate the quality of neutrons and the quality of proton isotopes that are needed and only the FFTF can do that.

Response to Commentor No. 2557

2557-1: DOE notes the commentor's support for Alternative 1, Restart FFTF. The commentor should note the DOE reactors and accelerators are currently producing medical isotopes for research and clinical use.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor: Susan Hamilton

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 2139.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

*Commentor No. 2553: Shirley Hankins, Washington State
Representative, 8th Legislative District*

2553-1—The United States Government has a great opportunity to save lives with continued research at FFTF. If continued hearing or studies are needed, my attitude is you should get on with it.

Our community has developed ways to take care of waste. We have the research personnel to treat cancer patients. Please let us go forward. This will be good for your family, for members of my family, and the members of every family in the United States.

Response to Commentor No. 2553

2553-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

***Commentor: Doc Hastings,
U.S. House of Representatives, WA***

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 387.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2579: Harold Heacock

2579-1—What I would like to do tonight is simply touch on a few of the claims that have been made in the testimony this week. First is FFTF is an inherently safe reactor designed and built to the highest standards available in the country and is the safest of all of the available DOE facilities. It will operate at a lower power level than was designed for adding to the margins of safety. There are no significant environmental releases from that reactor.

The fuel — there is a fuel supply available which can be utilized for the first 15 years of operation and there are alternatives available for use beyond that point which are nonproliferation.

2579-2—There are no significant waste streams from it. And there is no high level waste generated by the FFTF because there is no fuel reprocessing planned. Rather the spent fuel will be stored in dry casts and disposed of. So the words we have heard about adding high level waste to already leaking tanks is not relevant. It is insupportable.

2579-3—The FFTF was not designed or ever operated for military programs and there are none proposed in the current EIS.

2579-4—The possibility of accelerators? Yes, accelerators can produce a lot of materials. But an accelerator the size and power that would be required to equal the capacity of the FFTF does not exist even on paper and is extremely doubtful to be built in the near future.

2579-5—The idea of bringing plutonium in through Puget Sound is simply unrealistic. The national port for shipping spent fuel materials, not fresh fuel, into this country is the Navy port of Charleston, South Carolina, which routinely handles those shipments.

2579-6—In terms of impact to clean-up, the FFTF is currently funded from separate funds from the Environmental Management budget and if it were to be started up and operated, it would be funded out of entirely separate funding. It would not take funding from the clean-up program.

2579-7—On the other hand, if the decision were made to shut down and decommission the reactor, then it would be transferred to the Environmental Management Program at an estimated cost of some \$200 million for decommissioning, and that would have to come out of an already inadequate EM budget here at Hanford.

2579-8—Look at all the facts and all the issues. You can only come to one conclusion and that is that FFTF is the best solution to meet the programmatic needs.

Response to Commentor No. 2579

2579-1: DOE notes the commentor's support for Alternative 1, Restart FFTF. FFTF can be operated safely to accomplish the stated missions. The analyses presented in this NI PEIS reflect the proposed changes to the reactor core (including fuel and irradiation targets) to perform the stated missions. The Record of Decision for the PEIS will be based on a number of factors including environmental impacts, costs, public input, nonproliferation issues, schedules, technical assurance, policy, and program objectives. In the event that FFTF restart is selected in the Record of Decision, a new Safety Analysis Report, including a Probabilistic Risk Assessment (PRA), will be prepared and it will address any changes in plant configuration, operating conditions and procedures. The revised safety analyses will be subjected to a thorough independent review process.

2579-2: DOE notes the commentor's observations regarding waste generation. As identified in Section 4.3.1.1 13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. High-level radioactive waste would not be generated from merely operating FFTF. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision.

2579-3: DOE notes the commentors statement concerning the actions proposed for FFTF and evaluated in the NI PEIS. The only proposed actions being considered are those analyzed in the NI PEIS, which are the production of isotopes for medical, research, and industrial uses; plutonium production for future NASA space exploration missions; and U.S. nuclear research and development needs for civilian application. None of the alternatives in the NI PEIS include defense missions, nor would they contribute to future weapons production.

2579-4: While DOE has the final design for accelerator with an energy level and size larger than the high-energy accelerator proposed in the NI PEIS, DOE has no conceptual, preliminary, or final design for an accelerator that has the energy level and size

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2579: Harold Heacock (Cont'd)

Response to Commentor No. 2579

required to support the plutonium-238 production mission at the maximum production rate of 5 kilograms per year. The accelerator designs for Alternative 3 were developed to a level of detail that was adequate to assess the environmental impacts associated with the construction and operation of the proposed facilities and the technical feasibility of meeting the mission objectives. Figure 2.33 indicates that design and construction of the high-energy accelerator would be completed in 5 years plus an additional 2 years would be required for startup and testing of the facility. DOE operates two accelerators that are being utilized for the production of medical isotopes, the Brookhaven Linac Isotope Producer (BLIP) located at the Brookhaven National Laboratory and the Los Alamos Neutron Science Center (LANSCE) located at the Los Alamos National Laboratory. DOE is currently in the process of upgrading the LANSCE facility with the 100 MeV isotope production facility. The upgrade is scheduled for completion in 2001.

2579-5: Alternative 1 does postulate that DOE might decide at some point to import mixed oxide fuel from Europe to fuel FFTF. At this time, however DOE has not proposed to import this fuel through any specific port. If DOE ultimately decides to import fuel from Europe, it would perform a separate NEPA analysis to select a port. This review would address all relevant potential impacts of overseas and inland water transportation, shipboard fires, package handling, land transportation, as well as safeguards and security associated with the import of SNR-300 mixed oxide fuel through a variety of specific candidate ports on the east and west coasts. It would consider all public comments, including local resolutions, concerning the desirability of bringing mixed oxide fuel into the proposed alternative ports. In the event that DOE decides to enhance its nuclear infrastructure, it would not expose any population to high, unacceptable risks under any alternative. Any transportation activities that would be conducted by DOE would comply with U.S. Nuclear Regulatory Commission and U.S. Department of Transportation regulations. Associated transatlantic shipment would comply with International Atomic Energy Agency requirements. In Section J.6.2, DOE reviewed the potential maximum impacts from the marine transportation of mixed oxide fuel from Europe to a representative military port, Charleston, South Carolina, and overland transportation to Hanford. Also in that section, a bounding analysis demonstrates that the maximum potential radiological risks to the surrounding public from mixed oxide fuel shipments would be extremely small (e.g., less than 1 chance in a trillion for a latent cancer fatality per shipment from severe accidents at docks and in channels and less than 1 chance in 50 billion for a latent cancer fatality per shipment from overland highway accidents).

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2579: Harold Heacock (Cont'd)

Response to Commentor No. 2579

- 2579-6:** The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities.
- 2579-7:** The commentor should note, that the NI PEIS addresses deactivation of FFTF, not decommission of FFTF. Deactivation of FFTF is a Hanford cleanup cost.
- 2579-8:** DOE notes the commentor's support for Alternative 1, Restart FFTF.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor: Patricia Heasler

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 392.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

*Commentor: Suzanne Heaston
[for] U.S. Senator Slade Gorton, WA*

The oral comments were submitted in greater detail at the Seattle, Washington, hearing. For responses, see Commentor No. 2497 (Suzanne Heaston).

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2589: Raymond Issacson

2589-1—I look at FFTF as our prize jewel. And as has been said by many, including some pretty high level members of the Department of Energy, that is exactly what it is. It operated, as you have heard tonight, for a long time without fault. It was idle for some time. Many missions have been looked at. But I think this is the first one that really is the most humanitarian mission of all that this community was willing to support.

But nonetheless, FFTF is there. It is there for us to again utilize in the defense of people of the United States and other places against diseases. Not just cancer but heart diseases, osteoporosis as was mentioned earlier and a few other things of that nature.

2589-2—I got a chance to handle tons of plutonium during the inspection process as we shipped that stuff out. The fear of plutonium I think is over exaggerated. It is dangerous and you've got to handle it carefully. There is no question about that, both from a critical mass standpoint and from the safety standpoint. We did have accidents, yes. But darn few with respect to what happened out there

2589-3—Some of the people spoke to the issue of how much power it takes to run these accelerators. And was that factored into the overall cost analysis, including the infrastructure required to produce the power? Because in some cases, you know, we talk about the size of a reactor, and you can't build a reactor today for less than about a billion dollars.

Response to Commentor No. 2589

2589-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

2589-2: Procedures and controls will be in place to protect personnel and facilities from contamination. Both neptunium-237 and plutonium-238 would be stored in shielded containers in quantities and configurations that preclude criticality. Target preparation and postirradiation processing would be carried out in batches involving quantities well below those at which criticality could occur.

2589-3: The cost of the electric power required to the support accelerator operation was included in the annual operating cost estimate for Alternative 3. The infrastructure associated with generating that power was not considered.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2558: *Charles Kilbury, Councilman,
City of Pasco, WA*

2558-1—I am a Councilman and former Mayor of the City of Pasco. In addition, I am also chairman of the Franklin County Democratic Central Committee, a trustee of the Southeastern Washington Central Labor Council and an officer of the United Transportation Union Local 977, and I am speaking in behalf of all four bodies. These four bodies are quite familiar with the abilities of the Fast Flux Test Facility, having followed its beginning to completion and its operation for the Department of Energy. And each body has passed numerous resolutions supporting the resumption of operations for the FFTF, assured this facility is properly the most capable and the most financially reasonable method of accomplishing the proposed functions desired by the Department of Energy.

The FFTF can probably produce the greatest profusion of new isotopes for use as required for medical treatment of disease, including that their sale will go a long ways toward paying for the operation of the FFTF, and will certainly eliminate the importation of particles from the CANDU reactors in Canada. In addition, the production of plutonium-238 to provide power for the operation of our instruments traveling through space is a use which can be provided for a reasonable cost and with more production than in any other avenue.

Finally, the FFTF already has demonstrated its capability to function as a nuclear science and radiation services users facility. That function has already taken place during ten years of operation and it worked quite well. Therefore, these four projects are well adapted to the FFTF and the entities desire to see that they are carried out.

2558-2—...we expect to see them carried out without use of any clean-up money.

Response to Commentor No. 2558

2558-1: DOE notes the commentor's support for Alternative 1, Restart FFTF. FFTF operation would not eliminate the need to acquire isotopes from foreign sources, including Canada. DOE has revised Section 1.2 of Volume 1 of the PEIS to clarify the availability of isotopes from other producers.

2558-2: The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2 of Appendix N, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor: *Bruce Klos*

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 406.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2564: Jim Knight

2564-1—Now we are looking at something else that would help people. A way to reduce cancer, to kill cancer cells and give people an extension of their lives. This is something we can do with the FFTF. Now as with food irradiation, it is like if we had a house on fire there and our neighbors, which had the radioisotopes that prevent the contamination, wouldn't turn on their fire hose. We are looking at the same thing here. The fire hose being the radioisotopes from the FFTF and the fire being these people whose lives are flaming out early, prematurely, because of not having the radioisotopes. Right now we are in a position — Colette and DOE and, you, the bureaucracy, are in the position of playing God. You can make a decision. You can start the FFTF and reduce the death and pain of these cancer patients, or you can sit by and spend days, months and years doing these studies and at the rate of, what is it, 1,000 or 1,500 people dying each day.

2564-2—How many days are we going to look at these many people dying because the DOE and bureaucracy are sitting on all these studies in Washington and using these smoke screens that are set up by Heart of America and by these other anti-nuclear who do not have to bear any responsibility of any of these people dying, but they can certainly help you keep your hand on the faucet and not turn the water on to help save these people.

Response to Commentor No. 2564

2564-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

2564-2: DOE notes the commentor's views and concerns particular with regard to delays in the medical isotope production mission. DOE is committed to discharging its responsibilities in an open and unbiased manner and providing the public with comprehensive environmental reviews of its proposed actions. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives. Decisions made will be published in the Record of Decision no sooner than 30 days after publication of this NI PEIS.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2607: Ava Kruse-Chung

2607-1—As a health care professional, it's my recommendation for the start-up of FFTF.

Response to Commentor No. 2607

2607-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2600: Molly Lewis

2600-1—I would be a great proponent of alternative five, which would be no start-up for the FFTF.

2600-2—I'm really concerned about the waste. The contamination is already going into the Columbia without any method of stopping or controlling the waste.

I'm also extremely concerned that the EIS has no proposed clean-up plan in their statement. I'm very concerned that it would just contribute to the waste that is already going into the Columbia, which is becoming more and more polluted. I'm very worried about that because I see the Columbia becoming a more and more polluted river, and I don't think that we need to do anything to endanger its health any further.

2600-3—Also, as far as cancer research goes, none of these isotopes have been FDA approved for the cancer patients, and I think that needs to be taken into account, that these isotopes might not even be approved by the FDA and therefore not used for cancer. Therefore, the FFTF would already have been started up without any benefit to anyone, really.

Also, the medical team that the Department of Energy sent out to look at the possible options for the FFTF said that the FFTF was not well suited for the production of medical isotopes. It seems very ludicrous to me that the FFTF would be restarted for these medical isotopes if it's not well suited to it, where other facilities are much more well suited for this project.

Response to Commentor No. 2600

2600-1: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

2600-2: DOE notes the commentor's concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE is fully committed to honoring this agreement. FFTF is approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to groundwater. As indicated in analyses presented in Chapter 4 of Volume 1 (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4), there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of Hanford facilities that would support the nuclear infrastructure missions described in Section 1.2 of Volume 1.

2600-3: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1.2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs. The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However,

*Comments from the Richland, Washington, Public Hearing (August 31, 2000)**Commentor No. 2600: Molly Lewis (Cont'd)**Response to Commentor No. 2600*

sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities. DOE has taken the Expert Panel and NERAC report recommendations under consideration in developing the range of alternatives evaluated in the NI PEIS. These reports were made available to the public at the NI PEIS public information centers and on the Internet at www.nuclear.gov. The list of isotopes shown in Table 1-1, Volume 1 of the Draft NI PEIS are a representative set of isotopes selected on the basis of the recommendations of the Expert Panel, medical market forecasts, reviews of medical literature, and more than 100 types of ongoing clinical trials that use radioisotopes for the treatment of cancer and other diseases. Although these isotopes are a representative sample of possible isotopes that could be produced, DOE expects that the actual isotopes produced as a result of the proposed action would vary from year to year in response to the focus of clinical research and the specific market needs occurring at that time. Therefore, unless used for research and development or clinical trials, medical isotopes that have not been approved for use by the Food and Drug Administration would not be produced.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2566: Ellen Magan

2566-1—I am here on behalf of my son who a year and a half ago got hit in the eye with a golf ball and lost his eye. He had three surgeries in two weeks. Sometime after that, we had to go to the hospital to see what the swelling was doing in the implant in his eye. They didn't have to give him IV's. They didn't have to put him to sleep. He didn't have to go in for surgery. He simply got a shot of an isotope. They did a scan and they were able to tell the condition of his eye without going in there and invading it at all. And I would just ask you to keep the isotopes coming for people like him.

Response to Commentor No. 2566

2566-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2588: Bill Martin
Tri-City Industrial Development Council

2588-1—TRIDEC strongly supports the objectives of DOE's nuclear energy program and specifically endorses the implementation of the missions identified in the draft EIS. We also strongly support the identification of the FFTF as the preferred option for accomplishing these missions. The draft EIS clearly shows the capability and superiority of the FFTF over the other alternatives considered. FFTF is the most modern reactor available. It was designed and constructed to meet DOE and NRC standards and operated flawlessly over a 10-year period with no significant safety incidents or issues.

In fact, the operation of FFTF will provide very positive economic and social impacts, not only in the Pacific Northwest but also the nation. Local business, labor and government organizations strongly support the restart of FFTF.

2588-2—FFTF has been clearly identified in the EIS to be the preferred option for meeting the identified program missions without negative social, environmental or economic impacts.

We request that the assets of FFTF receive an objective, balanced and realistic evaluation during the preparation of the record of decision.

Response to Commentor No. 2588

2588-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

2588-2: DOE notes the commentor's views. In accordance with Council on Environmental Quality regulations (40 CFR 1502.14(e)), DOE has identified its preferred alternative in Volume 1, Section 2.8 of the Final NI PEIS and included a discussion of DOE's reasons for selecting it. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

*Commentor No. 2595: Pat McDaniel
Mid-Columbia Engineering*

2595-1—We have a facility out here that is just essentially rotting away that the American taxpayer has paid literally billions of dollars for, and it does have a lot of use for the production of plutonium for the use for health purposes. As our aging community gets older and older, there is continued use in new developments for these types of isotopes, and that's why I think it's very important that we keep the FFTF alive and put it back into production.

Response to Commentor No. 2595

2595-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2578: Debbie Mensinger

2578-1—I want to see medical isotopes produced here at FFTF so that we have an adequate local source of supply and are not forced to go to a foreign country.

FFTF is the only reactor in the Western Hemisphere capable of producing large quantities of several high specific activity isotopes like iodine-131. The FFTF reactor could produce enough copper-67 and alpha-emitting isotopes for cancer treatment options.

My message is simple. Restart FFTF immediately. Include in its mission the production of medical isotopes.

2578-2—As a taxpayer, I am hopeful that the Department of Energy will look at the facts behind each alternative and not be swayed by political pressure or anti-nuclear groups spreading misinformation while using scare tactics.

Response to Commentor No. 2578

2578-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

2578-2: DOE notes the commentor's views including the need for reliance on factual information as the basis for sound decisionmaking. The selection of facilities and site locations for accomplishing expanded civilian nuclear energy research and development and isotope production missions is not a political decision. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

*Commentor No. 2561: Armand Minthorn
Confederated Tribes of Umatilla*

2561-1—This evening, I come here to cite our concerns with the consideration that is being deliberated about the Fast Flux Test Facility. I come here not only to listen, but to learn and to not make any hasty judgments. A lot of the people in this room my tribe have to work with and I have to work with. And by no means do I want to interfere with those working relations. But there comes a time when we have to make a choice and we have to make a decision. I would hope that any decisions that are made here wouldn't be criticized. I am not here to criticize anyone for the decision that they are going to make.

This evening, I come here and I join Governor Kitzhaber, the State of Oregon, in opposing the restart of Fast Flux Test Facility.

Response to Commentor No. 2561

2561-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor: Victor Moore

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 408.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2599: Derek Mosely

2599-1—I'm testifying for my best friend, Andrew Sniden. I'm 15 years old. I'm a sophomore at Richland High School. Andrew and I, we were born on the same day, October 25, 1984, in Northwest Hospital in Seattle, Washington.

We were really close friends because we were born, you know, the same day, friends at birth, soul mates, like brothers. No matter where we lived, whenever we got together, we just clicked.

Well, Andrew got real sick in February of 1997 when he was 12, and they diagnosed him with AML, which stands for acute myelogenous leukemia.... Nuclear medicine, or radioisotopes, could have been able to save my best friend, Andrew.

Don't let someone die just because you don't understand the possibilities that FFTF means to others with cancer, especially if they're only 14.

Response to Commentor No. 2599

2599-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

**Commentor No. 2556: Carol Moser, Mayor Pro-Temp,
City of Richland, WA**

2556-1—The FFTF holds the possibility to cure some cancers in our lifetime. Already radioisotope therapy has been used successfully in treating many types of human diseases including rheumatoid arthritis and some forms of leukemia.

The draft PEIS shows that the FFTF could be used for many other missions as well, and you will hear lots of expert testimony testifying to the technology and its possibilities. I am here because it is time to make a positive decision to restart the FFTF. For this community, it is a mission that we deserve. A possibility to overcome the stigma that our nuclear legacy has left us with and to put the U.S. citizens past investments to good use, especially in the efficient production of isotopes for commercial demand. Let's not hold future generations hostage because we are afraid to take the steps of progress. I strongly urge the adoption of alternative 1 of the draft PEIS.

Response to Commentor No. 2556

2556-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2567: Rick Mouts

2567-1—I was not surprised that the PEIS confirmed that there was essentially no public risk associated with operation of the FFTF to support an expanded isotope mission. Since I have been associated with operation of the FFTF for many years, I can personally attest to its high standards of safety.

2567-2—One brochure I have read from front to back is entitled “Hanford in the River”, by Columbia River United. This brochure identifies the major areas in past operations at Hanford that have impacted the Columbia River. I would like to point out that the FFTF operated for nearly 10 years. FFTF is not mentioned one single time in this activist publication for impacting the Columbia River. Why? Because the operation of FFTF has absolutely no impact on the River.

I honestly do not understand the basis for many of Heart of America Northwest claims that restarting FFTF will have enormous environmental consequences for the Pacific Northwest for generations to come. Or their claim that the public must demand that DOE shut down FFTF to prevent more disasters at Hanford and save the future of Hanford clean-up.

2567-3—Another handout I read was from Columbia Riverkeeper. In it they demand that the following statement be removed from the PEIS summary on spent fuel management. “The environmental impacts associated with the existing inventory of spent fuel at the Hanford site are minimal.” I agree that this statement should be removed. Instead, the PEIS summary should reflect DOE’s well publicized and appropriate commitment to remove the 2,100 metric tons of corroded defense mission spent fuel from Hanford’s 100 area water basins. This defense mission’s spent fuel does not include the 16 metric tons of non-defense spent FFTF fuel. The PEIS summary should also discuss the minimal environmental impacts associated with the spent FFTF fuel on its own merits. Namely, that it is not corroded and is stored in dry storage casts, not aging defense mission water basins. This section should also be consistent with Chapter 4 of the PEIS which correctly states that the FFTF spent fuel will be shipped to the repository for disposal.

Another activist statement made by Seattle-based Heart of America Northwest contends, “Restart of the FFTF nuclear reactor will have enormous environmental consequences for the Pacific Northwest for generations to come. Restart of the FFTF nuclear reactor will mean importations of weapons grade plutonium and mixed oxide fuel to Hanford from Germany and production of 35,000 pounds of high level nuclear waste.” Here they mean the 16 metric tons of spent FFTF fuel, “Waste which US DOE has no idea where or how to dispose of. But the report,” — and here they mean the PEIS — “just concludes that the waste can be stored indefinitely in Hanford.”

Response to Commentor No. 2567

2567-1: FFTF can be safely operated to support the nuclear infrastructure missions described in Section 1.2 of Volume 1. Section 4.3 of Volume 1 provides the results of the evaluation of potential health impacts that would be expected to result from implementation of Alternative 1, including normal operations and a spectrum of accidents that included severe accidents. The environmental analysis showed that radiological and nonradiological risks associated with restarting FFTF would be small.

2567-2: The stated mission delineated in the NI PEIS would not impact the Columbia River. FFTF is located approximately 4.5 miles from the Columbia River. There are no discharges to the river from FFTF and no radioactive or hazardous discharges to the groundwater. Analyses presented in Chapter 4 of the NI PEIS (e.g., Sections 4.3.1.1.4, 4.3.3.1.4, 4.4.3.1.4, 4.5.3.2.4, and 4.6.3.2.4) indicate that there would be no discernible impacts to groundwater or surface water quality at Hanford from operation of the existing Hanford facilities in support of the stated missions. Also, no water quality impacts would be expected as a result of permanent deactivation of FFTF (Section 4.4.1.2.4).

2567-3: The discussion in the Summary and Section 4.8.3.5 of Volume 1 on the cumulative impacts for spent nuclear fuel management at Hanford was revised to clarify that the management of the existing spent nuclear fuel at Hanford results in a dose of less than 0.1 millirem per year of the maximally exposed member of the public. This dose is well within the DOE limits given in DOE Order 5400.5. As discussed in that Order, the dose limit from airborne emissions is 10 millirem per year, as required by the Clean Air Act; drinking water is 4 millirem per year, as required by the Safe Drinking Water Act; and the dose limit from all pathways combined is 100 millirem per year. DOE has committed to remove the spent nuclear fuel at Hanford for ultimate disposition in a geologic repository. In full recognition of DOE’s position to take expeditious action in regards to Hanford cleanup, the NI PEIS evaluated the maximum cumulative radiation exposure to the public from all reasonably foreseeable Hanford Site activities over the 35 year time-frame. These activities include future waste management (as estimated in the Hanford Comprehensive Land Use Plan), tank waste remediation, K Basin spent nuclear fuel management, decommissioned naval reactor plant disposal, and Plutonium Finishing Plant Stabilization (see section 4.8.3.3). As shown in Table 4-173, the dose to the maximally exposed individual would be expected to remain well within regulatory limits. Based on an exposure period of 35 years, 0.21 (<1) latent cancer fatalities would be expected to occur among the local population over the 35-year period as a result of Hanford related radiation exposure. The cumulative impact assessment also determined that the

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2567: Rick Mouts (Cont'd)

First, the FFTF fuel is not nor could it ever been classified as weapons grade plutonium. Also, had Heart of America Northwest read Chapter 4 of the PEIS, they would know that DOE did not in any way conclude that the spent fuel would be stored indefinitely at Hanford. Instead they would know that the disposition path for the 16 metric tons of spent FFTF fuel is to ship it to the repository for disposal. The same process as for the nation's 105,000 metric tons of commercial reactor fuel. They would also know that the timeline for doing this is either during operation or at cessation of reactor operation. Furthermore, if Heart of America Northwest really had public education in mind, they would be knowledgeable about the status of the repository at Yucca Mountain. They would then know that the FFTF fuel is suitable for repository disposal in its current form and that its contribution to the overall projected repository inventory is only 0.015 percent.

2567-4—Heart of America Northwest must provide accurate, credible analysis to substantiate their claims. They must also be willing to come to the table with their concerns so that they can be resolved. Operation of FFTF to produce isotopes for this nation is too important to throw out based on the hearsay of a few activist groups. By using unsubstantiated claims in an attempt to manipulate the public into forcing DOE to shut down FFTF, it is my opinion that Heart of America Northwest has seriously undermined the NEPA process and their own credibility as a stakeholder.

2567-5—I fully support the restart of FFTF to produce medical isotopes.

Response to Commentor No. 2567

incremental annual radiation dose to the maximum exposed public individual from the NI-PEIS proposed operations at FFTF and FMEF or RPL, including the impact of storing the 16 metric tons of heavy metal of spent FFTF nuclear fuel (see section 4.3.1.1.14) that would be generated in the 35 year nuclear infrastructure operation period, would be 0.0054 mrem. This assessment also determined that 0.0045 latent cancer fatalities would be expected to occur among the local population as a result of the NI PEIS related radiation exposure over the 35 year period. Also note that in section 4.3.1.1.14, it is stated that upon cessation of reactor operation, or earlier, this spent fuel inventory would be shipped off-site to a geological repository for disposal. The annual doses to the public from the Hanford site and proposed NI PEIS activities above are insignificant. For perspective, the radiation dose the average American receives from natural sources is about 300 mrem each year. Based on the same 35 year time period used above, approximately 2,000 latent cancer fatalities would be expected among the same population as a result of this natural (non-Hanford related) radiation exposure. In that same 35 years, about 19,000 cancer fatalities from all causes would be expected in the same population.

2567-4: DOE notes the commentor's views on the need for accurate, credible analysis to substantiate claims and concerns that unsubstantiated claims undermine the NEPA process.

2567-5: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2597: Mark Naulty

2597-1—I support the restart of the Fast Flux Test Facility outside of Richland. I think it will be a huge benefit to our community and nation with its research and its development of isotopes.

2597-2—I also believe that some things are not being looked at, such as the cost of power. The cost of power in the last year has quadrupled to enormous rates, and that the addition of a generator on the Fast Flux Test Facility would also help pay for its cost.

Response to Commentor No. 2597

2597-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

2597-2: DOE notes the commentor's view that FFTF could generate power to help pay for its cost. However, the purpose of the NI PEIS is to evaluate the environmental impacts of reasonable alternatives to expanding DOE's existing nuclear facility infrastructure. FFTF was not designed for the production of electric power. For example, it has no turbine generators and actually requires some electric power for operations (see description of FFTF in Volume 1, section 2.3.1.1). Consistent with its mandates under the Atomic Energy Act, DOE seeks to maintain and enhance its infrastructure for the purposes of addressing three primary needs: 1) to support the need for increased domestic production of isotopes for medical, research, and industrial uses, as initially identified by a panel of experts in the medical field and reaffirmed by the Nuclear Energy Research Advisory Committee; 2) to support future NASA space exploration missions by re-establishing a domestic capability to produce plutonium-238, a fuel source that is required for deep space missions and which the U.S. has no long-term, assured supply; and 3) to support civilian nuclear research and development needs in order to maintain the clean, safe, and reliable use of nuclear power as a viable component of the United States' energy portfolio. These missions do not include the generation of power. A separate "Cost Report for the Alternatives Presented in the Draft NI PEIS" was issued by DOE in August 2000, which is available at the NI PEIS public information centers and on the Internet at www.nuclear.gov.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2613: Jack Nelson

2613-1—Restart and operation of the Fast Flux Test Facility is a pro-active step in meeting our nation's medical, industrial, and space exploration isotopes needs, a progressive approach to nuclear power research, and a wise use of public dollars.

2613-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor: Debbie Nielsen

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 425.

Response to Commentor No. 2613

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

***Commentor: Donna Noski, Council Member,
City of West Richland, WA***

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 399.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

*Commentor: Marlene Oliver
National Association of Cancer Patients*

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 1700.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor: *Bernie Patterson*

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 264.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

**Commentor No. 2559: Jerome Peltier, Mayor,
City of West Richland**

2559-1—The restart of FFTF means giving cancer patients a choice, that choice medical isotopes. Yes, the choice can be as simple as life or death. Ask yourself what is a life worth. It is my position that if the restart of FFTF could save just one life, then it is worth it.

My comments this evening at this hearing are directed to the Department of Energy Fast Flux Test Facility Draft Programmatic Environmental Impact Statement release in July. It is essential that the final PEIS contain all of the facts as they relate to the capability of FFTF, which has the greatest capability of producing the quantity, the variety and the quality of medical isotopes required by the medical industry. In addition, FFTF has the capability of producing industrial isotopes, space batteries and can be a world leader in nuclear research.

The final PEIS should designate FFTF as the preferred alternative for the production of medical isotopes because it is the only facility that can accommodate all the demands of the medical isotope program as well as industry, space and research.

2559-2—These capabilities are far too important to get lost in the extreme tactics of the anti-nuclear movement as demonstrated in the previous hearings on FFTF. These groups lie, misrepresent facts and present alternatives that are far more expensive and technically inadequate.

Finally, let me say that the capabilities, flexibility, technology, cost benefits and the saving of lives must be the drivers behind the decision to restart FFTF. Politics should not drive or prevent the restart, which in the past has had a tendency to overshadow the merits of the technology. The FFTF is a safe reactor and can produce medical isotopes that can save

thousands of lives. Do not listen to comments of an anti-nuclear faction whose only goal is to stop a lifesaving medical isotope mission in Hanford, create fear, raise money for their cause and deprive cancer patients of their lives.

2559-3—I specifically would like the following data included in the PEIS — isotope quantity, quality and availability particularly for research isotopes and isotopes with high specific activity. It is essential that a domestic supply of these isotopes be identified as well as the current production facilities. The PEIS should include DOE's facilities including reactors, cyclotrons and accelerators

Response to Commentor No. 2559

2559-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

2559-2: DOE notes the commentor's views. The selection of facilities and site locations for accomplishing expanded civilian nuclear energy research and development and isotope production missions is not a political decision. DOE's Record of Decision for the NI PEIS will be based on a number of factors including environmental impacts, public input, costs, nonproliferation impacts, schedules, technical assurance, and other policy and programmatic objectives.

2559-3: DOE notes the commentor's views. For the purposes of analyses in the NI PEIS, a representative set of isotopes was selected on the basis of the recommendations of the Expert Panel, medical market forecasts, reviews of medical literature, and more than 100 types of ongoing clinical trials that use radioisotopes for the treatment of cancer and other diseases. These isotopes are listed in Table 1-1 of Volume 1, along with a brief description of their medical and/or industrial applications. Unlike Table C 1 of Volume 2, which lists representative isotopes that could be produced using FFTF, the isotopes listed in Table 1-1 include both reactor- and accelerator- produced isotopes. The absence of any specific isotope from the Table 1-1 should not be interpreted to mean that it would not be considered for production under the proposed action. Rather, these isotopes are a representative sample of possible isotopes that could be produced, and DOE expects that the actual isotopes and specific amounts produced as a result of the proposed action would vary from year to year in response to the focus of clinical research and the specific market needs occurring at that time. Therefore, the NI PEIS cannot identify how short-lived isotopes that will be produced by DOE in the future will be transported to treatment centers, as requested by the commentor. DOE also does not believe that a cost-benefit analysis of radioisotope therapy alone or in combination with older treatments is warranted and is not, therefore, included in the NI PEIS. While some existing DOE reactors other than those considered in the NI PEIS may possess the potential capability or capacity to support research isotope production, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without disturbing the existing missions of these facilities.

2559-4: DOE notes the commentor's support for Alternative 1, Restart FFTF, and concern regarding medical wastes. Medical wastes are regulated by the U.S. EPA and authorized states. It is not under DOE's purview.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2559: Jerome Peltier, Mayor, (Cont'd)
City of West Richland

and address which of these isotopes will come from which source. Current committed missions in DOE facilities should be accounted for, and the methods for meeting both mission and isotope demands should be identified. The PEIS should further identify where short-lived isotopes will be produced and how they will be transported to treatment centers. The PEIS should contain a cost/benefit analysis of radioisotope therapy alone or in combination with older treatments such as surgery, chemotherapy and external beam radiation. This study should be based on statistics presented for the various FDA approved cancer radioisotope treatments and clinical studies.

2559-4—The final waste minimization plans should include an analysis of all the waste associated with cancer treatment. The plan should address FFTF waste as well as the waste from the medical community. Cancer patients today produce a lot of waste, from both surgery waste and chemotherapy, which are both toxic and infectious. Currently these wastes are being stored in 55-gallon drums in hallways, under stairwells, on loading bays and even in parking lot spaces at many hospitals and treatment centers. These wastes represent an unrecognized hazard that far exceeds the hazard of the waste that will be produced at FFTF.

Response to Commentor No. 2559

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2583: James Polleri

2583-1—The report also includes some vitally important plans such as a statement in the summary report that DOE proposes to enhance its existing nuclear infrastructure to provide for the three needs of isotope production, production of Pu-238 for space batteries and research and development. In my opinion and in those of many others, the successful meeting of these needs is of vital importance to America's future, including both personal health and our national energy security.

The FFTF offers many advantages compared with the other PEIS alternatives. For example the use of an existing facility rather than a new facility and lesser environmental impacts. In addition, the FFTF would make a positive contribution to nonproliferation by transmuting PU-239 in both existing FFTF and German reactor fuel. In view of these and other considerations, alternative #1, restart FFTF, should be identified as the preferred alternative in the PEIS.

2583-2—Some improvements that should be made in the PEIS are as follows: One, a table should be included, preferably in the summary report, that identifies which of the 30 medical isotopes that are covered by the EIS can be made in each facility in sufficient specific activity, purity and quantity for commercial purposes. Without such information, a valid comparison cannot be made between the relative merits of each facility and the environmental impacts.

2583-3—Two, a table should be added, preferably in the summary report, that provides a comparison of attributes for the various facilities such as neutron volume, flux level, thermal temperature, et cetera. This will allow the reader to readily evaluate the relative merits of each facility based on facility capability and environmental impact.

2583-4—Three, the comparisons between the various facilities with respect to the number of latent cancers that are potentially developed by the public that are given in the summary report figures do not appear to be statistically meaningful. If true, the figures should be deleted or a note added to the figures that addresses the uncertainty.

2583-5—Four, transportation [and environmental impacts of replacing fuel and ATR, higher and new research reactor during the 35-year operating period should be addressed in the PEIS]. Without inclusion of these impacts, the PEIS is incomplete and potentially misleading.

Response to Commentor No. 2583

2583-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

2583-2: DOE notes the commentor's views. For the purposes of analyses in the NI PEIS, a representative set of isotopes was selected on the basis of the recommendations of the Expert Panel, medical market forecasts, reviews of medical literature, and more than 100 types of ongoing clinical trials that use radioisotopes for the treatment of cancer and other diseases. These 37 representative isotopes are listed in Table 1-1 of Volume 1, along with a brief description of their medical and/or industrial applications. Unlike Table C-1 of Volume 2, which lists representative isotopes that could be produced using FFTF, the isotopes listed in Table 1 1 include both reactor- and accelerator- produced isotopes. The absence of any specific isotope from the Table 1-1 should not be interpreted to mean that it would not be considered for production under the proposed action. Rather, these isotopes are a representative sample of possible isotopes that could be produced, and DOE expects that the actual isotopes and specific amounts produced as a result of the proposed action would vary from year to year in response to the focus of clinical research and the specific market needs occurring at that time.

2583-3: The summary of environmental impacts (Volume 1, Section 2.7.1) has been revised and reformatted in the Final NI PEIS. Section 2.7.3, Comparison of Mission Effectiveness Among Alternatives, has been revised in the Final NI PEIS to identify the medical isotopes that can be produced using accelerator technology (Alternative 3) and reactor technology alternatives (Alternatives 1 and 4). The designs for Alternatives 3 and 4 were developed to a level of detail that was adequate to assess the environmental impacts associated with the construction and operation of the facilities and the technical feasibility of meeting the mission objectives.

2583-4: The comparison of expected latent cancer fatalities provided for each of the alternatives provides information that can be used to differentiate between the environmental impacts of a range of reasonable alternatives. The radiological risks are, indeed, small and similar. However, the sizes and similarities of the values for public risk are useful information for the public and the Department's decision makers. While the results shown in the figures are statistically meaningful, the physical significance of estimated values for latent cancer fatalities at low dose rates is currently an issue of scientific debate. Some scientist believe that the linear, no threshold theory is valid. Some scientist believe that there is a threshold below which radiation dose is not harmful. Neither side can present conclusive proof. Calculations of radiological health effects in this NI PEIS are based on the

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2583: James Polleri (Cont'd)

2583-6—Four, [transportation] and environmental impacts of replacing fuel and ATR, higher and new research reactor during the 35-year operating period should be addressed in the PEIS. Without inclusion of these impacts, the PEIS is incomplete and potentially misleading.

2583-7—In a very recent report on the Heart of American Website, the title is given of “Tokimara Japan’s nuclear disaster could easily happen at Hanford, an uncontrolled nuclear reaction of criticality, especially if the FFTF reactor is restarted.” The statement that there is a similar risk to our region due to FFTF restart is incorrect. Concerns were raised in the report regarding processing fuel to go on the FFTF and the processing of irradiated targets with nitric acid. If additional FFTF fuel is needed later, it would not be located at Hanford, but in a commercial facility. If processing of targets will be done at Hanford, criticality safety controls will be imposed and strictly enforced with emphasis on engineer safety features. However, not mentioned in the Heart of America report is that Pu-238 and 237 cannot be critical in any amount when mixed with water or nitric acid. Also, no criticality has ever occurred in the free world, excluding reactor cores in critical facilities, involving fuel that was in solid, non-solution form.

Response to Commentor No. 2583

linear, no threshold theory because it is conservative. Numerical values calculated for the range of reasonable alternatives are presented, regardless of the relative size of the impact.

2583-5: Periodic replacement of nuclear fuel at the reactors identified in the comment would be part of normal reactor operations. Use of the operating reactors (ATR and HFIR) would result in a change of the mission profile, but no increased useage of fuel. Therefore, transportation impacts are not within the scope of the NI PEIS. For Alternative 4 - Construct New Research Reactor the impacts of providing fuel to the reactor are in the scope of the NI PEIS. The low-enriched uranium fuel for the new research reactor would be made in the United States and transported commercially. The per-shipment risk factors are shown in Table J-5, and the impacts are included in Alternative 4. See sections 4.6 1.2.11, 4.6.2.2.11 and 4.6.3.2.11.

2583-6: Periodic replacement of nuclear fuel at the reactors identified by the commentor would be part of reactor operations. For presently operating reactors, the proposed use of ATR and HFIR would result in no incremental impacts to involved workers, to individuals in the general public, or to other environmental resources. This is because these reactors would already be operating to provide other irradiation services (Sections 4.4.1.1.9 and 4.4.7.1.9 of the NI PEIS). For this same reason, there would be no incremental impacts associated with transporting fuel for these reactors. Normal operations of the new research reactor (which includes spent fuel handling), would result in an annual dose to the maximally exposed individual member in the general public of 0.000068 mrem. This dose is well below the EPA’s Clean Air Act standard of 10 mrem per year that is cited in DOE Order 5400.5 (see section 4.6.1.2.9). Doses to workers would also be small. Fuel handling accidents are discussed in section 4.6 1.2.10 and Appendix I of the PEIS. Risks to the public are seen to be small, with no latent cancer fatalities expected from 35 years of operations. Transportation of uranium fuel is addressed in Section 4.6.1.2.11; risks to the public and to transport workers during normal transportation or postulated accidents would also be small, with no fatalities expected.

2583-7: The commentor correctly concluded that a criticality accident during processing is not expected. Both neptunium-237 and plutonium-238 would be stored in shielded containers in quantities and configurations that preclude criticality. Target preparation and postirradiation processing would be carried out in batches involving quantities well below those at which criticality could occur.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

**Commentor No. 2585: Gerald Pollet
Heart of America Northwest**

2585-1—And earlier this summer, we were encouraged that some members of this community were brave and courageous enough to say they would engage in a dialogue with opponents of FFTF to try to find common ground. And indeed it is clear to me that takes some courage in this community. Because what we have heard tonight representative of four nights is that many in the community think that the way to change public policy is by character assassination. By calling people liars. By saying they are fanatics. And then when all is said and done and that is over with, they would like us to work with them to continue to secure over a billion dollars a year in clean-up funding every year and help us convince members of Congress how vital our information is about the jeopardy to the Columbia River or the risk of a high level tank leak or the risks of the 300 area. And they would like our support to accelerate the clean-up of the 300 area, something actually my organization has advocated for a decade because of the risks in the 300 area. And to get more money to do that, which will take quite a bit more money than the current target budgets, at a time when the current target budget for 2002 is over \$200 million short of what is required to meet the Hanford clean-up agreement. \$200 million short.

But why should anyone in the world listen to us because we are fanatics, we are lunatics, we lack integrity, we can't do math. But you'd like our support. Unlike less than a decade and a half ago, when my organization first started working on clean-up and we came to this community and we said, let's create a Hanford Clean-up Task Force to build support for funding Hanford clean-up, which was just at \$30 million a year at that time. And a leading elected official summarized how many people may still feel about clean-up when that official was quoted in the paper as saying, "Talking about clean-up is like dragging a dead skunk through town." And he wanted to have no part of it.

Well, why doesn't the EIS consider simply raising the 306 and 325 buildings as part of the accelerated clean-up and using new facilities. Simple. Change the cost picture.

A lot has been said about how FFTF and related operations won't have any impact on clean-up programs and costs. You can't clean up the 300 area to an unrestricted status and meet DOE planning guidelines. You can't meet MOCA, state clean-up law, or CERCLA unless you close these buildings and build new ones if you want to restart FFTF. That ought to be in the EIS.

2585-2—Let's talk about those risks in the 300 area, one of our concerns about the current proposal for FFTF. The proposal for FFTF relies on use of the 306 and 325 buildings. There are serious risks here. I quote, "The consequences for a major fire event occurring at the 325 building according to the latest draft 325 safety analysis report are 11 REM ED to the off-site MEI, maximum exposed

Response to Commentor No. 2585

2585-1: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. Additionally, the DOE was tasked by Congress in the Atomic Energy Act of 1954, as amended, to "ensure the availability of isotopes for medical, industrial, and research applications, meeting the nuclear material needs of other federal agencies, and undertaking research and development of activities related to development of nuclear power for civilian use." The purpose of this PEIS is to determine the environmental and other impacts to accomplishing this mission from all reasonable existing and new DOE resources. The FFTF, 306E, and the 325 Facility at the Hanford Site were included in the listing of existing DOE resources that was assessed for this mission. Regarding the accelerated cleanup of the 300-area, the 300 Area Revitalization Plan provides for continued multi-program R&D operations in the 300 Area, including operation of various laboratories, office facilities, and services. It also provides for consolidation (but not complete elimination) of radiological operations, with support for Hanford Site facility transition and environmental restoration efforts. The plan does not require closure of the 325 and 306-E buildings as long as they are needed for active research projects. Operation of these facilities would not violate any existing agreements between DOE and stakeholders or other legal obligations, nor would it affect ongoing or planned environmental restoration and facility transition activities.

2585-2: With regard to the analyses in the Building 325 Safety Analysis Report, the fire scenario referred to in the comment represents the maximum credible fire at the facility based on a recent fire hazards analysis by an independent organization. A fire of the severity evaluated in the Safety Analysis Report is categorized as "extremely unlikely" for purposes of establishing the facility safety basis, which implies a frequency between 1 in 1 million and one in ten thousand years. Based on the history of fires involving radiological facilities at Hanford, that estimate is likely on the conservative side. In addition, the radionuclide releases for the fire scenario are based on a hypothetical maximum radionuclide inventory in the facility and conservative estimates of the fraction of material that could be released in the event. The facility does not currently operate with anywhere near that maximum inventory, nor would it in the future. Administrative controls

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***Commentor No. 2585: Gerald Pollet (Cont'd)
Heart of America Northwest***

individual, 91 REM ED to the on-site MEI. Now 91 REM, in fact, would be the public dose under Keith Kline's current vision for Hanford clean-up, which is to accelerate clean-up of the 300 area except for these facilities and invite, in his own words, the public in on a regular basis. Take down the fence, have a bike path and open it up for public use. So the public would be at the doorstep of an operating facility with a potential 91 REM dose. That dose is 670 times at least higher than any dose for fire discussed in this Programmatic Environmental Impact Statement. It is written by the same agency, and yet that type of risk is not disclosed. And it is a devastating risk that I think everyone in this community is concerned about, cleaning up in the 300 area.

The additional oral comments were submitted in written form and are addressed in the responses to Commentor No. 158.

Response to Commentor No. 2585

maintain the total radionuclide inventory in the facility well below the maximum evaluated in the Safety Analysis Report. The current Safety Analysis Report analyzes dose to a maximally exposed individual member of the public on the near river shore, and the onsite colocated worker is within 100 meters of the facility in the worst case downwind direction. If DOE decisions regarding access to the 300 Area change the location of the safety basis public maximally exposed individual, the total allowable radionuclide inventory in the facility would be adjusted to keep the potential dose within DOE guidelines for any credible accident scenario. Processing of medical isotopes at Building 325 for missions described in the NI PEIS would be conducted within administrative controls on radionuclide inventory in effect at the time. Therefore the risk to a member of the public from all activities in the facility, including medical isotope processing, would remain within the approved facility safety analysis wherever that individual might be located. The results of the NI PEIS accident analyses for medical isotope processing are lower than the results for corresponding events in the Safety Analysis Report because the NI PEIS radionuclide inventories are based on realistic production quantities and needs of the medical community, not on the hypothetical maximum radionuclide inventory for all work conducted in the facility. The Safety Analysis Report bounds the cumulative accident risk from all activities at the 325 building, and the medical isotope missions described in the NI PEIS would be expected to contribute a relatively small fraction of that total if the work were conducted there.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

*Commentor No. 2593: Jim Price
Aid to Legislative Democrats*

2593-1—I'm the Chair of the Aid to Legislative Democrats. I wanted to go on record as stating that our committee has passed a resolution in support of the FFTF restart for medical isotopes. We believe it's the right thing to do, and we believe it's the prudent thing to do, and we urge the Department of Energy to restart the FFTF for medical isotopes.

Response to Commentor No. 2593

2593-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2594: Marianne Price
County Democratic Organization

2594-1—I'm a candidate for the State House of Representatives in the Eight District, and I am also the State Committeewoman for the County Democratic Organization. I'd like to go on record by affirming our district's desire that the FFTF be restarted for the purpose of production of medical isotopes that we feel are so vital to human care.

Response to Commentor No. 2594

2594-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor: Arundel Pritchett

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 2081.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor: *Kathryn Roberg*

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 429.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2610: Robert Roener

2610-1—I support the restart of the FFTF. I believe it to be the only alternative identified in the PEIS that could fulfill all the requirements you have set forward.

Response to Commentor No. 2610

2610-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2576: Bob Schenter
Citizens for Medical Isotopes

2576-1—I want to address the issue of the ability of FFTF to make research isotopes. As a nuclear physicist, I was a site manager and involved with the production of medical research isotopes from the period of 1985 through 1996, and I was the Hanford site manager on that. During that period, we produced a large number of medical isotopes for research very effectively and very cost effectively. And I would plan to provide the information to challenge the concept and the quotes about that FFTF is not effective in producing research isotopes. It will play a very major role in producing research isotopes.

I have two examples. In 1990, we sent to the Children's Hospital in Boston an isotope of osmium that was produced in the FFTF that was used for blood flow studies for the research devoted to looking at blood flow in premature babies. In addition, there are over 60 medical isotopes produced in various manners that piggyback with other missions and this was done very cost effectively. And I will submit some of the detailed written information from institutions such as the Children's Hospital and National Institute of Health commenting on the quality of these research isotopes.

Response to Commentor No. 2576

2576-1: DOE notes the commentor's views that FFTF can adequately and cost effectively support DOE's medical research isotope mission when "piggybacked" with other missions.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor: Charity C. Schweiger

The oral comments were submitted in written form and are addressed in the responses to Commentor Nos. 383 and 430.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor: *Pat Schweiger*

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 267.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2570: Peggy Scott

2570-1—But what about the risks of operating FFTF to provide these treatments for the public? With our current mode of treatment, more than 400,000 people are expected to die from cancer during the next 35 years in Seattle, Portland and Spokane and tri-cities areas alone. During that same time, the PEIS concluded that not a single cancer fatality would occur as a result of operating FFTF, even if there was a severe accident. Operating the FFTF to produce life-saving isotopes is not a health risk to the citizens of the Pacific Northwest, cancer is. So I am asking you what is your perspective? Should we deny the hope of an effective cancer treatment to the 42 million Americans who in the next 35 years will discover often too late that they have cancer? I know what my answer is.

Response to Commentor No. 2570

2570-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2575: Stan Scott

2575-1—I have a comment that I want to read about the PEIS, but first there is a couple of things I heard tonight I wanted to clarify. The first was an absolutely correct statement by Owen Lowe that we do have accelerator technologies that allow us to make neutrons from spallation. I wanted to also point out that the low energy cyclotron can in no way produce those. The minimum threshold energy for that reaction is 200 million electron volts. The low energy cyclotron in the PEIS does 30 million to 70 million electron volts. It is also a very small machine at only 300 to 500 microamps, and is not at all what we need to produce large quantities of therapeutic isotopes.

2575-2—The second thing I wanted to talk about was I picked up some what I would call anti-FFTF propaganda in the back generated by Heart of America Northwest. I won't call it anti-nuclear because we heard earlier that the young lady said they were not an anti-nuclear organization. Now I do have some detailed knowledge in the area of medical isotopes. I have studied them for the last five years. I also was on the DOE's expert panel for forecasting the future demand of isotopes. So when I read through here, I felt a little upset at some of the comments in here. There is just enough truth in here to make things slightly believable. But those with some knowledge know that there are many that are also complete fabrications. One such statement is, "For instance, the Hanford forecast uses a rate of growth of medical isotope usage that would grow from one percent of the public per year using medical isotopes to 99 percent." I have always wondered what kind of curriculum law students have. But Jerry I know one thing now for sure and that is it doesn't have enough math and science.

2575-3—But my comments tonight will focus on the third major objective of the programs outlined in the PEIS, which is to enhance the nation's nuclear research and development needs for civilian applications.

Although this application is somewhat hard to define, you recently released a strategic plan from your own office and NERAC's long term nuclear energy research and development plan which has also been just released provides some hard goals and objectives which must be taken into consideration when the ultimate alternative is picked.

It is plain to see that the no-action alternative, alternative 2, the use of existing operation facilities, and alternative 5, permanent shutdown of the FFTF can in no way meet the vision, mission, goals and objectives towards meeting America's nuclear technology future and should not be considered in the final decision making process.

Response to Commentor No. 2575

2575-1: DOE notes the commentor's views on the restart of FFTF.

2575-2: DOE notes the commentor's views and observations.

2575-3: The NERAC plan has been considered in the preparation of the NI PEIS (see Chapter 1 of Volume 1) and will be considered in the Record of Decision. The commentor is correct in stating that the No Action Alternative, Alternative 2, Use Only Existing Operational Facilities, and Alternative 5, Permanently Deactivate FFTF, do not meet all the projected nuclear infrastructure needs. However, as noted in Section 1.5, it is possible during the Record of Decision process that a combination of alternatives could be selected such that all missions would be met to some degree.

2575-4: The commentor's observations about nuclear technology and the restart of FFTF are noted. Volume 1, Section 2.7.1.2.3 of the Draft NI PEIS presents a comparison of mission effectiveness among alternatives. This section has been revised in the Final NI PEIS (see Section 2.7.1.8, "Comparison of Mission Effectiveness Among Alternatives") to provide the reader a better understanding of the medical isotopes that can be produced using accelerator technology (Alternative 3) and reactor technology alternatives (Alternatives 1 and 4).

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2575: Stan Scott (Cont'd)

2575-4—On the other hand, your vision that the benefits of nuclear technology to our society can and should be expanded and your mission to advance the application of nuclear technology by investing in new or innovative opportunities for its expanded use could not be better served than by a restart of the FFTF. This facility is the premier research reactor in the world. And to allow it to remain dormant or worse yet to shut it down in light of our nation's needs is unconscionable. The PEIS should also provide a summary of the real capabilities of the various options to meet all three of the stated mission objectives. Until such a comparison is done, a valid decision will not be made. Based on my 21 years working in the nuclear technology field, I am confident that the FFTF will stand head and shoulders above any other facility towards meeting America's nuclear technology future.

Response to Commentor No. 2575

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2580: Dan Simpson

2580-1—I conclude that the restart of operation of the FFTF should be a key element in your programs, the programs covered by this PEIS together with utilization of existing thermal neutron reactor radiation facilities to the extent of their capability and availability. In other words, restart of the FFTF needs to be the most important element but continued utilization of existing facilities and perhaps expanded utilization of existing facilities would probably also be appropriate.

In conclusion, the thorough analyses by DOE have shown that restart of the FFTF and operation as a neutron irradiation facility is in the national interest. Furthermore, a long period of operation of this service can be expected. The FFTF was conceived, designed and built to develop advanced technology for civilian nuclear program needs. It was subject to high standards and exacting criteria. The safety of the design and adequacy of the safety analysis were confirmed by detailed independent review by the Nuclear Regulatory Commission staff and the National Advisory Committee on reactor safeguards. The FFTF remains today a modern facility with a demonstrated record of safe and successful operation. It was designed for irradiation of diverse materials and components in the reactor core, provides inherent flexibility that fits well with the missions of isotope production. Both the facility design and its procedures are consistent with such uses. For example and in particular, there are well developed procedures for safety analysis, review and approval of different types of irradiation target specimens.

2580-2—The PEIS states that alternative 1, restart of the FFTF, provides the greatest vision and effectiveness of the alternatives evaluated. Recent news reports on the cost analysis indicate that analysis confirms that the Fast Flux Test Facility is the most effective means for meeting the entire suite of missions proposed by DOE.

2580-3—The PEIS indicates no environmental impact bar to any of the alternatives, that is any of them can be done within appropriate regulations, sound practices and standards.

2580-4—The report indicates to me from my interpretation of it that the national mission needs would be best met by a combination of the fast neutron reactor and one or more thermal reactors available for irradiation services. FFTF restart is the obvious path for fast reactor capability. ATR is an excellent thermal radiation reactor facility but limited in availability due to prior decommission. It would be logical to utilize the radiation capability of Canadian reactors in cooperation with Canada that has been made in the past. At some point we can anticipate that both the FFTF capability and thermal neutron irradiation capability will be exceeded — additional capability will be needed, at which point the construction of the new research reactor would become logical. A key reason for

Response to Commentor No. 2580

2580-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

2580-2: DOE notes the commentor's opinion.

2580-3: DOE notes the commentor's statement that the NI PEIS indicates no bars to any of the alternatives with respect to environmental impacts.

2580-4: The commentor's support of FFTF and ATR with the potential for a new research reactor in the future is noted. As stated in PEIS Volume 1, Section 2.6.1, the use of Canadian reactors was considered and dismissed because this does not meet the programmatic issue of enhancing the United States infrastructure to support the missions described in the PEIS. The commentor is correct in stating that some radioisotopes require fast neutrons for their production while others require thermal neutrons.

2580-5: DOE notes the commentor's view. DOE considers Alternative 3, Construction of New Accelerators, a reasonable alternative for large scale isotope production and evaluates the environmental impacts associated with the construction and operation of the accelerators and associated support facilities in the NI PEIS.

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Commentor No. 2580: Dan Simpson (Cont'd)

providing both fast reactor and thermal reactor irradiation capability is to produce the wide variety and purity of isotopes for which there is a need. Some isotopes are produced most effectively and efficiently in a high energy neutron flux of a fast reactor and others by thermal neutrons. FFTF target assemblies can be configured to accomplish thermal energy neutron irradiations as well as the more direct utilization of the existing Fast Flux capability, which may be the higher value utilization of FFTF.

2580-5—It appears from the information provided that the particle accelerators — at least I don't find much support for particle accelerators for the purpose of large scale isotope production.

Response to Commentor No. 2580

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2602: Laura Smith

2602-1—I find it unacceptable that the environmental impact statement considers only the short term, especially when one of the costs is something as lasting as nuclear wastes. Especially threatening are the low level wastes which are disposed in unlined, unfiltered ditches.

2602-2—Please heed the subcommittee for isotopes research and production committee of the Nuclear Energy Research Advisory Committee when they conclude, and I quote, that the FFTF will not be a viable source of research radioisotopes. Anticipated income from sales likely will not meet expectations, thereby curtailing operations and reducing the FFTF's capability to produce research radioisotopes in a timely and cost efficient manner.

Response to Commentor No. 2602

2602-1: The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed actions for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders. The Hanford Site's 200 Area's Low-Level Waste Burial Ground are regulated by DOE under the Atomic Energy Act of 1954, as amended, and under DOE Order 435.1, Radioactive Waste Management. The 200 Area's Low-Level Burial Ground also contain the following three active permitted mixed waste trenches whereby mixed low-level waste is both stored and disposed of: (1) Trench 31 is a permitted, lined Subtitle C disposal trench that is currently utilized for greater than 90-day storage of mixed low-level radioactive waste; (2) Trench 34 is permitted, lined Subtitle C disposal trench currently utilized for the disposal of mixed low level radioactive waste that has been treated and is compliant with Land Disposal restrictions; and (3) Trench 94 is a permitted, unlined disposal trench utilized for the disposal of decommissioned naval reactor components. Use of Trench 94 for naval reactor compartments is authorized under a special exemption from the State of Washington Department of Ecology (Ecology). Currently, the Low-Level Burial Ground has a Part A Permit approved by Ecology under the State of Washington Dangerous Waste Regulations, State of Washington Administrative Code (WAC) 173-303, and, as such, is an interim status treatment, storage, and disposal (TSD) unit under the Resource Conservation and Recovery Act (RCRA). The permitted active and future mixed waste units of the Low-Level Burial Ground meet all regulatory requirements of WAC 173-303 and RCRA and will be incorporated into the Hanford Site RCRA Facility Part B Permit and will operate under final status regulations. In early June 2000, a working draft of the Hanford Site RCRA Facility Part B Permit application was submitted to Ecology.

2602-2: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC,

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Commentor No. 2602: Laura Smith (Cont'd)

Response to Commentor No. 2602

established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1 2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs. The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities. DOE has taken the Expert Panel and NERAC report recommendations under consideration in developing the range of alternatives evaluated in the NI PEIS. These reports were made available to the public at the NI PEIS public information centers and on the Internet at www.nuclear.gov.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2592: Dea Strand

2592-1—I believe it would be a tremendous waste if we don't restart FFTF, if only from the standpoint of the isotopes to fight cancer.

Response to Commentor No. 2592

2592-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2586: Thomas Tenforde

2586-1—I am speaking here tonight as a staunch advocate for the restart of the Fast Flux Test Facility to produce medical isotopes and to conduct other nuclear services and science missions of importance to the United States. The need for FFTF as a major supplier of isotopes for the treatment of cancer, cardiovascular disease and other human health problems is beyond question. At the present time, as others have said, there are no other reactors in the United States with the capabilities of FFTF for producing medical radioisotopes and currently the U.S. must rely on foreign suppliers for many of the isotopes used, both for the diagnosis and treatment of disease. In addition to its remarkable capabilities for producing isotopes for medicine, industry and research, the FFTF has demonstrated its capability for safe and reliable operations over a 10-year period dating from the early 1980's to 1992.

2586-2—My recommendation to DOE, however, goes beyond just the restart of FFTF for producing isotopes to treat cancer and other diseases. There are several diagnostic isotopes in short supply such as iodine 123 which is used in imaging to detect tumors of the brain and other soft tissues. These isotopes can only be produced by cyclotrons. My opinion and strong recommendation to DOE is that a hybrid option should be chosen in which FFTF is restarted and in addition for a relatively small incremental cost on the order of 15 percent, the cyclotron with an energy of 50 to 100 MEV and a high beam current should be constructed at an existing DOE site that has existing radiochemical processing capabilities.

This cyclotron would then be used to provide a reliable year-round supply of diagnostic isotopes that are not available from accelerator sources at the present time. Because the programmatic EIS considers both the FFTF and a low energy cyclotron option, only site specific environmental documentation would be required for the cyclotron option in order to implement this full course of action. These additional NEPA studies could be carried out in parallel with the initial stages of work required to start FFTF, thereby avoiding any additional delays in reactivating FFTF.

The combined FFTF and low energy cyclotron option would provide the capability to produce the full set of radioisotopes needed by nuclear medicine physicians for the diagnosis and treatment of cancer and other diseases as well as for medical research. It is in my opinion the optimal approach to take for improving the quality of healthcare of Americans in a cost effective manner that uses the full range of technology offered by modern nuclear medicine.

Response to Commentor No. 2586

2586-1: DOE notes the commentor's support for a combination of Alternative 1, Restart FFTF, and Alternative 3, Construct New Accelerator(s).

2586-2: See response to comment 2586-1.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2603: Elise Thatcher

2603-1—With regard to medical possibilities from the Fast Flux Test Facility here in eastern Washington, a committee developed by the United States Department of Energy reviewed the Fast Flux Test Facility and determined that the use and start of this facility is not only a viable source of medical isotopes but is not cost effectively. Recently, two facilities in Canada have been started solely for the purpose of developing medical isotopes, which will be a possible source for the United States.

In May of this year, NASA contacted the U.S. Department of Energy and disclosed that new technology, which is to be used in the future, will need approximately

2603-2—one-fifth of the plutonium-238 that was previously needed by NASA. This is a product which is to be developed by the Fast Flux Test Facility in the future, if it is started.

2603-3—Finally, it is important to address the results of the Fast Flux Test Facility here in the tri-cities area in the state of Washington. Any waste to be produced during the start-up and use of the Fast Flux Test Facility is to be laid in unlined and unregulated dishes in the Hanford area. This leads to a projected amount of 5,000 cubic meters of low level waste.

2603-4—After reviewing the greater political, medical, and local levels of the Fast Flux Test Facility and the ramifications which it will cause, I support alternative five.

Response to Commentor No. 2603

2603-1: DOE has sought independent analysis of trends in the use of medical isotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert bodies, the Expert Panel and the NERAC. In 1998, the Expert Panel, which convened to forecast future demand for medical isotopes, estimated that the expected growth rate of medical isotope use during the next 20 years would range from 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by NERAC, established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. DOE has adopted these growth projections as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at levels consistent with the Expert Panel findings. Section 1 2.1 of Volume 1 was revised to incorporate this information and to clarify DOE's role in fulfilling the U.S. research and commercial isotope production needs. The conclusions presented in the NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000 regarding the suitability of FFTF to produce research isotopes in a timely and cost efficient manner were made in the context of the facility producing research isotopes as its sole mission. It would not be cost effective to restart FFTF for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of FFTF for the production of larger quantities of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints on its operational feasibility, the NI PEIS only evaluates the use of FFTF when coupled with the other stated missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without impacting the existing missions of these facilities. DOE has taken the Expert Panel and NERAC report recommendations under consideration in developing the range of alternatives evaluated in the NI PEIS. These reports were made available to the public at the NI PEIS public information centers and on the Internet at www.nuclear.gov. The United States currently purchases approximately 90 percent

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2603: Elise Thatcher (Cont'd)

Response to Commentor No. 2603

of its medical isotopes from foreign producers, most notably Canada. However Canada only supplies a limited number of economically attractive commercial isotopes (primarily molybdenum-99), and it does not supply research isotopes or the diverse array of medical and industrial isotopes considered in the NI PEIS. As such, reliance on Canadian sources of isotopes to satisfy projected U.S. isotope needs would not meet DOE's mission requirements. The commentor noted that Canada is constructing two new reactors for the production of medical isotopes. These reactors will replace an aging Canadian reactor that is currently producing molybdenum-99. With the addition of the two new Canadian reactors, the United States is assured that Canada will continue to provide a reliable supply of this vital isotope in the future. DOE's intent is to complement commercial sector capabilities to ensure that a reliable supply of isotopes is available in the U.S. to meet future demand, and to encourage the commercial sector to privatize the production of isotopes that have established applications to a level that would support commercial ventures. Section 1.2.1 of Volume 1 has been revised to clarify DOE's isotope production role and other producers' capabilities to fulfill U.S. isotope needs.

2603-2: A May 22, 2000, correspondence from NASA to DOE identified that NASA no longer has a planned requirement for small radioisotope thermoelectric generator (SRTG) power systems. This does not mean that NASA no longer requires DOE to provide the necessary plutonium-238 to support deep space missions. Rather, the suspension of SRTG development efforts was conducted in order to permit reprogramming of funds to support development of a new radioisotope power system based on a Stirling technology generator. This new radioisotope power system, referred to in the subject correspondence, requires 1/3 less plutonium as its fuel source. However, the Stirling technology is developmental and NASA has requested in a September 22, 2000 letter to DOE that the plutonium-238 needed for large RTG may be maintained as a backup. Section 1.2.2 of Volume 1 was revised to further clarify the purpose and need for reestablishing a domestic plutonium-238 production capability to support NASA space exploration missions.

2603-3: As identified in Section 4.3.1.1.13 of the NI PEIS, the restart of FFTF would generate about 63 cubic meters of additional radioactive waste (e.g., solid low-level radioactive waste) annually, in addition to nonhazardous wastes. This would account for about 2,205 cubic meters of additional radioactive waste to be generated over the 35-year period of nuclear infrastructure operations and is small in comparison to the waste generated by current Hanford activities. It is DOE's policy that all wastes be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and

*Comments from the Richland, Washington, Public Hearing (August 31, 2000)**Commentor No. 2603: Elise Thatcher (Cont'd)**Response to Commentor No. 2603*

state laws and regulations and applicable DOE orders. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The Hanford Site 200 Area's Low-Level Waste Burial Ground is regulated by DOE under the Atomic Energy Act of 1954, as amended, and under DOE Order 435.1, Radioactive Waste Management. The 200 Area's Low-Level Burial Ground also contain the following three active permitted mixed waste trenches whereby mixed low-level waste is both stored and disposed of: (1) Trench 31 is a permitted, lined Subtitle C disposal trench that is currently utilized for greater than 90-day storage of mixed low-level radioactive waste; (2) Trench 34 is permitted, lined Subtitle C disposal trench currently utilized for the disposal of mixed low level radioactive waste that has been treated and is compliant with Land Disposal restrictions; and (3) Trench 94 is a permitted, unlined disposal trench utilized for the disposal of decommissioned naval reactor components. Use of Trench 94 for naval reactor compartments is authorized under a special exemption from the State of Washington Department of Ecology (Ecology). Currently, the Low-Level Burial Ground has a Part A Permit approved by Ecology under the State of Washington Dangerous Waste Regulations, State of Washington Administrative Code (WAC) 173-303, and, as such, is an interim status treatment, storage, and disposal (TSD) unit under the Resource Conservation and Recovery Act (RCRA). The permitted active and future mixed waste units of the Low-Level Burial Ground meet all regulatory requirements of WAC 173-303 and RCRA and will be incorporated into the Hanford Site RCRA Facility Part B Permit and will operate under final status regulations. In early June 2000, a working draft of the Hanford Site RCRA Facility Part B Permit application was submitted to Ecology.

2603-4: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

**Commentor No. 2555: Robert J. Thompson, Mayor,
City of Richland, WA**

2555-1—The city [Richland] has stated in several letters to the Department of Energy over the past years that we unequivocally support the use of FFTF for production of isotopes for medicine, space missions as well as other research and development projects. In 1996, we formed an advisory committee with over 30 participants from a wide spectrum of interests in our community. They studied the use of FFTF and other Hanford facilities for isotope production and plutonium disposition. The committee concluded that the FFTF, which was designed to operate with MOX fuel has more than a 20-year remaining life and should be used to produce medical isotopes and other products. Operating the facility has added the advantage of disposing of the surplus weapons and material by converting it to reactor fuel and irradiating it to the spent fuel standard, which makes the material unavailable for weapons.

2555-2—In the City of Richland, we are trying to do something that is unique in government. We are looking at a return on an investment perhaps for the first time. That is not something the government is particularly known for. But the idea is when you spend your money, you spend it wisely. And you don't waste the money that you have spent. This is a two-fold proposition. One, if you have to create some new accelerators, there is a time for the new EIS's that are going to have to be prepared and the tremendous cost that is going to be generated. Not only do you have that cost, but you also have the downside of not being able to produce medical isotopes. And I have a very difficult time when I go out in the community and I see people and I go and I have people who have been ill in my family with cancer and tell them, well what we have got to do is we have got to wait about another 10 or 15 years while we go through another EIS study because we decided to forget starting FFTF. That just doesn't make sound policy sense from an economic standpoint and from an emotional standpoint, a humanistic standpoint. And I think sometimes we lose sight of that as well.

2555-3—And one final comment. I think there is a lot of concern and there is a lot of emotion that comes into these issues, especially when I listen to people who are against the restart of FFTF. And I think their concern was invalid in this respect. I think Doc touched on this point of view. We have got two separate pools of money in regards to where the funding restart would come from FFTF as opposed to a clean-up mission. The City of Richland has probably gone out on a limb in regards to supporting monument status of the Columbia River. I have four children. There are plutonium plumes that head for the river. You think it is not in my interest and in my family's interest to have that clean-up not go on? If in any respect that I and my fellow council members felt that clean-up would not go on based on the restart of FFTF, we wouldn't be here. We would not be supporting the restart. It is that important. But my family's concern is paramount and my role is to protect the health and safety of the citizens of Richland. We are going to do that and we can do both.

Response to Commentor No. 2555

2555-1: DOE notes the commentor's support for Alternative 1, Restart FFTF, and opposition to Alternative 3, Construct New Accelerator(s). It should be pointed out that the NI PEIS evaluated the operation of FFTF under Alternative 1 for 35 years.

2555-2: See response to comment 2555-1.

2555-3: DOE notes the commentor's support for Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are a high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. The missions described in Section 1.2 of Volume 1 would not impact ongoing Hanford cleanup activities. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2 of Appendix N, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

**Commentor No. 2573: Amber Waldref
Heart of America Northwest**

2573-1—Just one response to Representative Hastings' comments about weapons grade plutonium. He said — just to make it clear, it is weapons grade plutonium that will be used to produce Pu-238. MOX fuel and highly enriched uranium are both weapons grade and this is a nonproliferation issue which I am going to talk about later. At last October's public scoping hearings, different issues were identified that Ms. Brown spoke about today to be included in the PEIS, and I just want to address some of them because I believe they haven't been adequately addressed in the PEIS. The number one issue is the nonproliferation — separate nuclear infrastructure nonproliferation impacts assessment will be completed, so unfortunately I don't have that before me right now. I am very curious about the document, because according to U.S. nonproliferation policy, at this time it strongly discourages the use of highly enriched uranium fuel in civilian research and test reactors. And in the event that a decision is made to restart FFTF, if low enriched uranium fuel is not technically feasible, then highly enriched uranium fuel will be used, and this is a nonproliferation issue. So that is the first point I found that wasn't adequately addressed.

2573-2—Secondly, the transition of FFTF stewardship after it is deactivated. The comment I had was in the cost report, DOE added the cost of the deactivation of FFTF to each alternative except the restart. So in my mind, it was a huge error because it skewed it in favor of restarting FFTF because the cost of shutting it down was not included. And it is unclear to me how this can be left out. Because eventually I hope we intend to deactivate the reactor after the 35 year mission. So that was another error that I found.

[And so just in conclusion, I am not convinced that the PEIS adequately addresses...] The errors in the cost analysis, which I mentioned,...

2573-3—And also the restart of FFTF and budget constraints. DOE has made a commitment that implementation of the record of decision will not divert or reprogram budgeted funds designated for Hanford clean-up. And I just wanted to point out that part of the tri-party agreement has been to shut down the FFTF reactor. In 1995, it was supposedly supposed to be shutdown, deactivated and decommissioned and the money saved each year would go to clean-up. And now with the Department of Energy looking at clean-up, which is so important and which is continuing to go on, it is saying that the current budget is not going to meet the deadlines and the timelines for clean-up. So in my mind it makes sense to use the money for clean-up.

2573-4—And so just in conclusion, I am not convinced that the PEIS adequately addresses these issues from the previous hearing,

2573-5—[And so just in conclusion, I am not convinced that the PEIS adequately addresses these issues from the previous hearing,]

Response to Commentor No. 2573

2573-1: DOE notes the nonproliferation concern expressed in the comment, and can assure that its proposed action in the PEIS supports U.S. nonproliferation goals. This has been confirmed by the Nuclear Infrastructure Nonproliferation Impact Assessment, published in September 2000. Although this policy analysis is not required under NEPA, DOE considers it to be an essential element in the decision-making process for the DOE nuclear infrastructure, and has included a summary of the assessment in Appendix Q in the Final NI PEIS. It may also be found on the DOE NE web site (<http://www.nuclear.gov>). In the event that a decision is made to restart FFTF, the first six years of operation would use existing onsite mixed oxide fuel. DOE expects that an additional 15-year supply of mixed oxide fuel in Europe, owned by Germany, would be available for FFTF. The Nuclear Infrastructure Nonproliferation Impact Assessment for the NI PEIS alternatives stated that using the two different sources of existing mixed oxide (MOX) fuel for FFTF (existing FFTF fuel and German MOX fuel) is consistent with U.S. nonproliferation policy, and, additionally, represents a safe, low-cost opportunity to reduce civilian plutonium without chemical or bulk processing. This would afford substantial nonproliferation benefits, since as indicated in the comment, the plutonium in the MOX, if extracted by chemical processing would be of weapons grade. DOE's approach to potential use of HEU fuel in the FFTF is also consistent with U.S. nonproliferation policy. The FFTF is an existing research reactor capable of performing its research missions using HEU fuel, if MOX fuel is not available. U.S. nonproliferation policy provides for such a circumstance as part of the effort to reduce and discourage HEU use. During the period of MOX fuel use, in compliance with U.S. nonproliferation policy directives, DOE's Office of Nonproliferation and National Security would undertake a study under the Reduced Enrichment for Research and Test Reactors (RERTR) Program to consider the technical feasibility of using low enriched uranium to fuel the FFTF. Under this nonproliferation protocol, if use of low enriched uranium fuel is found feasible, it will be used; if found infeasible for meeting assigned missions in the FFTF, an already existing research reactor, policy would allow DOE to subsequently procure highly enriched uranium fuel for use in that facility. This approach is consistent with U.S. nonproliferation policy.

2573-2: Deactivation of FFTF is not part of implementing Alternative 1, Restart FFTF. Deactivation of FFTF is part of implementing Alternatives 2, 3, 4, and 5 and including the cost of FFTF deactivation in the implementation costs for these alternatives is appropriate. The Cost Report was structured to identify the implementation costs of the various alternatives so the Secretary of Energy would have this information along with other data for consideration.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2573: Amber Waldref (Cont'd)
Heart of America Northwest

or that it justifies the need to restart up FFTF for the proposed plutonium-238 or medical isotope production mission.

[And so just in conclusion, I am not convinced that the PEIS adequately addresses these issues from the previous hearing...]

... the failure to include the information from the NERAC report which was released before this PEIS which recommends that FFTF not be considered as a viable source of research radioisotopes — we have heard that tonight — which is the only type of — the research radioisotopes are the only type being considered as far as I know in this study.

2573-6—[And so just in conclusion, I am not convinced that the PEIS adequately addresses...] ... the lack of information on nuclear waste disposal management ...

2573-7—So this leads me to call for the most prudent course of action which is to not choose FFTF for any of these missions. I propose that we shut it down, alternative 5, and use the money for clean-up as promised.

Response to Commentor No. 2573

2573-3: DOE notes the commentor's opposition to Alternative 1, Restart FFTF, and concerns regarding the existing cleanup mission at Hanford. Although beyond the scope of this NI PEIS, ongoing activities to remediate existing contamination at Hanford are high priority to DOE. The Hanford Site environmental restoration activities are conducted in accordance with the Tri-Party Agreement (i.e., Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy). This agreement specifies milestones and schedules for restoration of all parts of the Hanford Site. DOE remains committed to upholding this agreement. Hanford Site cleanup is funded through the DOE Environmental Management Program Office. The stated missions considered in this PEIS would be funded by the DOE Office of Nuclear Energy, Science and Technology, which has no funding connection to cleanup and waste management activities. Therefore, the alternatives delineated in the NI PEIS would not have an impact on Hanford cleanup activities. If the decision is made to shutdown the FFTF then cleanup dollars will be needed to deactivate the facility, which will impact the Hanford cleanup budget.

2573-4: DOE assumes that the commentor is concerned that the NI PEIS does not adequately address the issues of cost, nuclear nonproliferation, and funding for Hanford cleanup which were raised during the NI PEIS scoping hearings. The costs and nuclear nonproliferation impacts of proposed actions are not required by NEPA and CEQ regulations to be included in a PEIS. DOE prepared a separate Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment to provide additional pertinent information to the Secretary of Energy so that he may make an informed decision with respect to the alternatives presented in the NI PEIS. Such ancillary documents need only be made available to the public prior to any decision being made under CEQ regulations (40 CFR Part 1505.1(e)). Nevertheless, DOE mailed these documents to more than 730 interested parties on August 24 and September 8, 2000, respectively. Both reports were made available immediately upon release on the NE web site (<http://www.nuclear.gov>) and in the public reading rooms. DOE has also provided summaries of the Cost Report and Nuclear Infrastructure Nonproliferation Impact Assessment in Appendixes P and Q, respectively in the Final NI PEIS. Although beyond the scope of this NI PEIS, ongoing Hanford cleanup activities are high priority to DOE. Funding for Hanford cleanup is addressed in DOE's previous response to the commentor (2573-3).

2573-5: DOE has sought independent analysis of trends in the use of medical radioisotopes, and of its continuing role in this sector, consistent with its mandates under the Atomic Energy Act. In doing so, it established two expert

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

*Commentor No. 2573: Amber Waldref (Cont'd)
Heart of America Northwest*

Response to Commentor No. 2573

committees. In 1998, an Expert Panel convened to forecast future demand for medical isotopes estimated that the expected growth rate of medical isotope use during the next 20 years will range between 7 to 14 percent per year for therapeutic applications, and 7 to 16 percent per year for diagnostic applications. These findings were later reviewed and endorsed by DOE's Nuclear Energy Research Advisory Committee (NERAC), established in 1999 to provide DOE with expert, objective advice regarding the future form of its isotope research and production activities. The growth projections were also adopted by DOE as a planning tool for evaluating the potential capability of the existing nuclear facility infrastructure to meet programmatic requirements. In the period since the initial estimates were made, the actual growth of medical isotope use has tracked at a rate consistent with the Expert Panel findings. For nearly 50 years, DOE has actively promoted the use of isotopes to improve the health and well-being of U.S. citizens. DOE's use of its unique technologies and capabilities to develop isotopes for civilian purposes has enabled the widespread application of medical isotopes seen today. While its market share is a small fraction of total world radioisotope production, DOE remains the key provider for a large number of isotopes that are used in relatively small quantities by individual researchers at universities and hospitals. Because their application is initially experimental, these isotopes are not generally purchased in large enough quantities to make their production financially attractive to private industry. DOE's intent is to compliment commercial sector capabilities to ensure that a reliable supply of isotopes is available in the U.S. to meet future demand, and to encourage the commercial sector to privatize the production of isotopes that have established applications to a level that would support commercial ventures. The conclusions presented in the "NERAC Subcommittee for Isotope Research and Production Planning Final Report, April 2000" regarding the suitability of the Fast Flux Test Facility (FFTF) to produce research isotopes in a timely and cost-efficient manner were made in the context of the facility producing research isotopes as its sole mission. DOE agrees that the FFTF's large size and configuration are not particularly well suited for the singular purpose of producing small quantities of various research isotopes. However, sustained operation of the FFTF for the production of both research and commercial isotopes would be viable if operated in concert with producing plutonium-238 and conducting nuclear energy research and development for civilian applications. As the NERAC report states: "In limited instances, the DOE possesses unique resources, e.g., the high flux of fast neutrons and large irradiation volume in FFTF, that could be utilized for the production of some radioisotopes, but is best suited for commercial interests who might consider its use for isotope production." In recognition of these constraints

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Commentor No. 2573: Amber Waldref (Cont'd)
Heart of America Northwest

Response to Commentor No. 2573

on its operational feasibility, the NI PEIS only evaluates use of the FFTF when coupled with the other proposed missions. While some existing reactors may possess the potential capability or capacity to support research isotope production, as suggested in the NERAC report, it is unlikely that reliable, increased production of these isotopes to support projected needs could be accomplished without disturbing the existing missions of these facilities. Through a Memorandum of Understanding with NASA, DOE provides radioisotope power systems, and the plutonium-238 that fuels them, for space missions that require or would be enhanced by their use. In addition, under the National Space Policy issued by the Office of Science and Technology Policy in September 1996, and consistent with DOE's charter under the Atomic Energy Act, DOE is responsible for maintaining the capability to provide the plutonium-238 needed to support these missions. There are approximately 9 kilograms (19.8 pounds) of plutonium-238 in the U.S. inventory available to support future NASA space missions; no viable alternative to using plutonium-238 to support these missions currently exists. Based on NASA guidance to DOE on the potential use of radioisotope power systems for upcoming space missions, it is anticipated that the existing plutonium-238 inventory will be exhausted by approximately 2005. Without an assured domestic supply of plutonium-238, DOE's ability to support future NASA space exploration missions may be lost.

2573-6: DOE notes the commentor's concern regarding waste generation and management. The NI PEIS addressed the environmental impacts due to the treatment, storage, and disposal of the waste generated by the proposed action for all alternatives and alternative options. Waste minimization programs at each of the proposed sites are also addressed. These programs will be implemented for the alternative selected in the Record of Decision. The waste generated from any of the proposed alternatives in the NI PEIS will be managed (i.e., treated, stored and disposed) in a safe and environmentally protective manner and in compliance with all applicable Federal and state laws and regulations and applicable DOE orders.

2573-7: DOE notes the commentor's support for Alternative 5, Permanently Deactivate FFTF, and opposition to Alternative 1, Restart FFTF. The U.S. Congress funds the Hanford cleanup through the Office of the Assistant Secretary for Environmental Management (EM), and the FFTF through the Office of Nuclear Energy, Science and Technology (NE). The nuclear infrastructure missions described in Section 1.2 of Volume 1 would also be funded by NE, which has no funding connection to Hanford cleanup activities. As stated in Section N.3.2, implementation of the nuclear infrastructure alternatives would not divert or reprogram budgeted funds designated for Hanford cleanup, regardless of the alternative(s) selected.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2608: Dave Watris

2608-1—I say let's get on with the alternative one. Use the FFTF whether or not we use FMEF, but I encourage highly the use of FMEF as a support facility for FFTF.

Response to Commentor No. 2608

2608-1: DOE notes the commentor's support for Alternative 1, Restart FFTF, especially Options 3 and 6, which use FMEF as a support facility for FFTF.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2604: Avi Weiner

2604-1—I support the restart of FFTF for radioisotopes.

Response to Commentor No. 2604

2604-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

**Commentor No. 2611: Gerald Woodcock
American Nuclear Society**

2611-1—FFTF needs to be restarted for several reasons, the principal one of which is that people right now today are dying due to the lack of radionuclides and the radioisotopes necessary for their treatment for not only cancer, but for a variety of brain studies, bone studies, and other medical procedures.

2611-2—The EIS needs to consider the cost to, not only American society, but to civilization around the world if FFTF does not operate and if its products are not made available.

Response to Commentor No. 2611

2611-1: DOE notes the commentor's support for Alternative 1, Restart FFTF.

2611-2: The estimated costs of the range of reasonable alternatives are presented in the Cost Report, summarized in Appendix P of the Final NI PEIS. However, the Cost Report is not a cost-benefit analysis. While it is reasonable to believe that the benefits of medical isotopes are substantial, the purpose of this NI PEIS is to describe the nuclear infrastructure missions (Section 1.2 of Volume 1), a range of reasonable alternatives for satisfying the mission requirements (Section 2.5 of Volume 1), and the environmental impacts that would result from implementation of the alternatives. According to 40 CFR Section 1502.23, if a cost-benefit analysis exists, it must be reported and summarized in the NI PEIS.

Comments from the Richland, Washington, Public Hearing (August 31, 2000)

Commentor No. 2587: Richard O. Zimmerman

2587-1—I attended last night's hearing in Seattle and the comments regarding the hidden code words really intrigued me. That was spoken by the wonderful tie-dyed gentleman that typically always attends and is featured for sending jam to famous people. Anyway, it piqued my curiosity. And with the aid of the CD-ROM, I was able to analyze when I got home from Seattle today a code word for myself buried within the PEIS. I counted this particular word 386 times in the draft PEIS. I went through the entire document. Not just the summary, as it appears maybe some people did for comments today. Though largely combined with other words, the word stands as a strong reminder of the responsibility of the DOE and associated contractors no matter what EIS alternative is chosen. Let me now state what the code word is in the forms it is provided in the PEIS. Safety, public safety, environmental safety, safety of workers, safety shipments, nuclear safety, plant safety, criticality safety, system safety, operational safety, safety features, reactor safety, safety performance, safety design, safety considerations, safety factors, health and safety, safety structures, safety impacts, safety rods, safety and reliability, safety analysis, safety and security, safety technologies, safety significance, federal safety objectives, safety basis, safety impact, and finally safety laws. This code word is not hidden from view. It is one that I truly believe every FFTF employee holds dear to their heart

2587-2—...and I come in support of the restart of FFTF.

The additional oral comment was submitted in written form and is addressed in the response to Commentor No. 396.

Response to Commentor No. 2587

2587-1: DOE notes the commentor's view on the priority of safety to FFTF employees.

2587-2: DOE notes the commentor's support for Alternative 1, Restart FFTF.

Comments from the Arlington, Virginia, Public Hearing (September 6, 2000)

***Commentor: Ernest S. Chaput
Economic Development Partnership***

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 992.

Comments from the Arlington, Virginia, Public Hearing (September 6, 2000)

***Commentor: Rick Edwards
Framatome Cogema Fuels***

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 993.

Comments from the Arlington, Virginia, Public Hearing (September 6, 2000)

Commentor: Marc Garland

The oral comments were submitted in written form and are addressed in the responses to Commentor No. 991.