

LESSONS LEARNED QUARTERLY REPORT 1ST QUARTER FY 1995

**Office of NEPA Policy and Assistance
U.S. Department of Energy**

March 1, 1995

INTRODUCTION

To foster continuing improvement of the Department's National Environmental Policy Act (NEPA) compliance program, the Secretarial Policy Statement on NEPA, issued June 13, 1994, requires the Office of Environment, Safety and Health to solicit comments from the NEPA Document Manager, the NEPA Compliance Officer, and team members after completing each environmental impact statement and environmental assessment on lessons learned in the process, and to distribute a quarterly summary to all NEPA Compliance Officers and NEPA Document Managers.

This second quarterly report summarizes the lessons learned for documents completed between October 1 and December 31, 1994. It is based on responses to the revised questionnaire that was provided for use during January 1995, and includes information on direct and indirect NEPA process costs and on total project costs. Additionally, the report includes a feature story on lessons learned during preparation of the F-Canyon Plutonium Solutions Environmental Impact Statement.

Some of the material presented here reflects personal views of individual questionnaire respondents, which (appropriately) may be inconsistent. Therefore, unless indicated otherwise, views reported herein should not be interpreted as recommendations from the Office of Environment, Safety and Health.

In a few instances, the report presents cumulative data for this reporting period and the first period. Relative to the conditions that prevailed before the Secretarial Policy Statement, these data are encouraging.

The next quarterly report will cover environmental impact statements and environmental assessments completed during the second quarter of fiscal year 1995 (January 1 through March 31, 1995). Please report on environmental impact statements and environmental assessments as they are completed. Questionnaires for all such documents completed between January 1 and March 31, 1995 are due by May 1, 1995. Completed questionnaires should be mailed or faxed (202-586-7031) directly to the Office of NEPA Policy and Assistance. The next quarterly report will be issued on June 1, 1995.

ABOUT THIS LESSONS LEARNED QUARTERLY REPORT

According to Office of NEPA Policy and Assistance records, the Department of Energy (DOE) completed 15 environmental assessments and 3 environmental impact statements during the first quarter of fiscal year 1995 (from October 1 to December 31, 1994). For the purposes of this report, the approval of a final environmental impact statement or the NEPA decision for an environmental assessment represent document completion.

As of February 27, 1995, the Office received 25 questionnaires covering 13 of the 15 environmental assessments and all of the environmental impact statements. Questionnaire respondents included 11 NEPA Compliance Officers, 6 NEPA Document Managers, 1 Project Manager and 7 others (i.e., team members, Office of NEPA Policy and Assistance staff, contractors, and NEPA specialists).

NEPA DOCUMENT PREPARATION TIMES

The median time reported for the completion of 15 environmental assessments (from the NEPA determination to the Finding of No Significant Impact) was 15 months; the completion times ranged from about 1 month to about 40 months (see chart on right). For the July 1 to September 30, 1994 reporting period and this reporting period, cumulatively, the median time to prepare 29 environmental assessments was 15 months.

For this reporting period, the times reported for completion of the 3 environmental impact statements (from publication of the notice of intent to the approval of the final environmental impact statement) were 7 months, 61 months, and 11 months (see chart on right). For the July 1 to September 30, 1994 reporting period and for this reporting period, cumulatively, the median time to prepare 8 environmental impact statements was 19 months.

Questionnaire respondents indicated that of the 15 total documents for which scheduling information was reported on for this quarter, 5 environmental assessments and 1 environmental impact statement were completed on schedule; 7 environmental assessments and 2 environmental impact statements were not completed on schedule. Also, for 6 environmental assessments and 1 environmental impact statement, the NEPA process was initiated early enough to avoid being on the critical path. For 3 environmental assessments and 1 environmental impact statement, questionnaire respondents disagreed as to whether the NEPA process had begun early enough, some (for each project) reporting that the process had begun in time, and some that it had not.

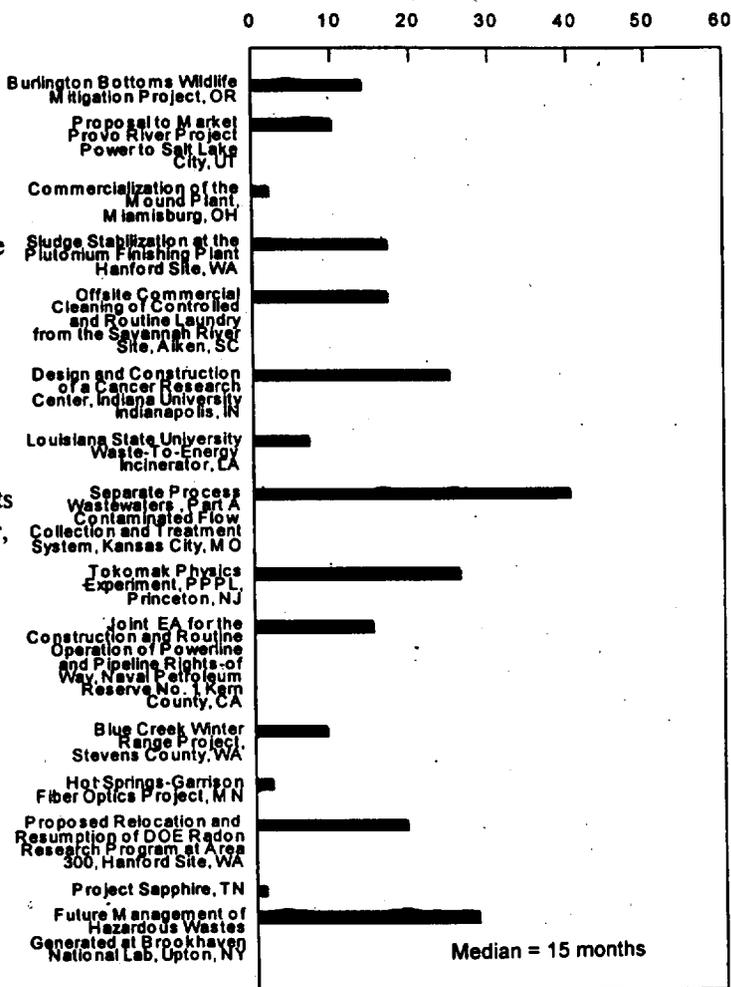
Respondents identified the following as measures that facilitated timely completion of their NEPA documentation:

- ◆ concurrent review;
- ◆ frequent and open communication with team members;

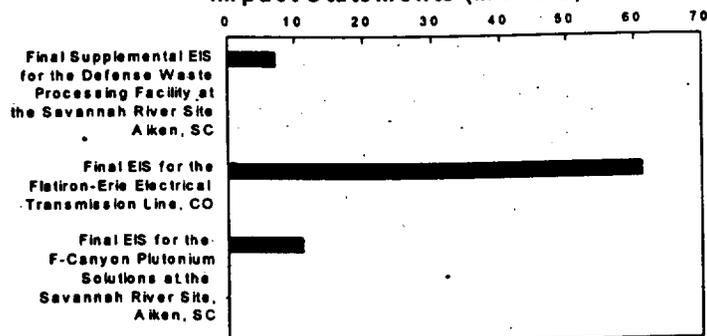
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Completion Time for Environmental Assessments (months)



Completion Time for Environmental Impact Statements (months)



- ◆ conference calls;
- ◆ effective guidance from Headquarters project offices; and
- ◆ meetings with all involved parties.

Circumstances that were mentioned as hindering timely NEPA document completion were:

- ◆ the need to develop a strategy and policy to deal with a special issue (i.e., electromagnetic fields);
- ◆ public controversy over proposed action;
- ◆ changes in scope of proposed action; and
- ◆ too many reviewers, reviews not performed quickly enough.

NEPA COST DATA

Document Managers and one NEPA Compliance Officer reported cost data for 7 of the 15 environmental assessments and all 3 of the environmental impact statements completed during the reporting period. Of the 7 projects for which NEPA budget data were reported, respondents indicated that 2 environmental assessments and 1 environmental impact statement were completed within budget, while 2 environmental assessments and 2 environmental impact statements were reported as over budget.

For the purposes of this report, NEPA process costs are defined as the costs that would not have been incurred except for the NEPA process. Direct costs are defined as the total dollars expended for NEPA support contractors. Indirect costs are defined as any other costs incurred (e.g., travel), and include total program office and field office Federal staff resources (FTE-years).

Of the 5 environmental assessments for which direct cost data were reported, the median direct cost was \$40,000 and the average direct cost was \$123,000, with a range of \$11,000 to \$550,000. Total project costs were reported for only 2 environmental assessments. Of these, the NEPA process costs reported represented 0.1% and 0.3% of the total project costs.

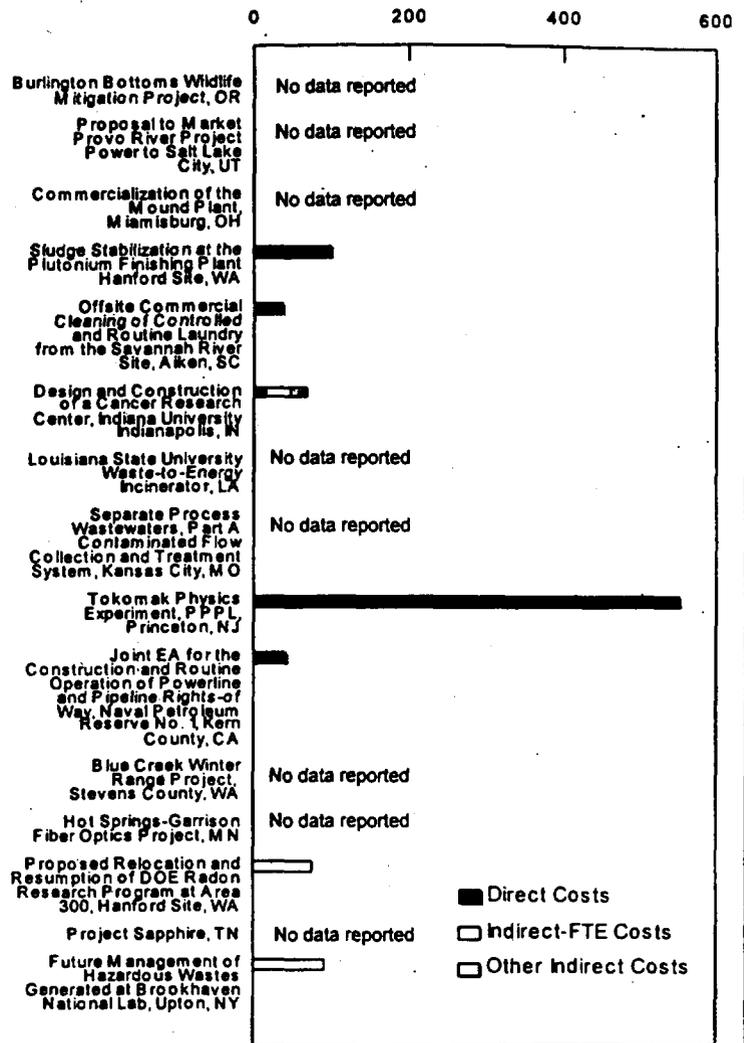
Of the 3 environmental impact statements for which direct cost data were reported, the costs were \$1,067,000, \$87,000 and \$215,000. The corresponding indirect costs were \$338,000, \$45,000, and \$298,000. NEPA document costs represented 0.05%, 8.4% and 0.3% of the total project costs, respectively.

Cost data are not available for several of the documents for reasons including:

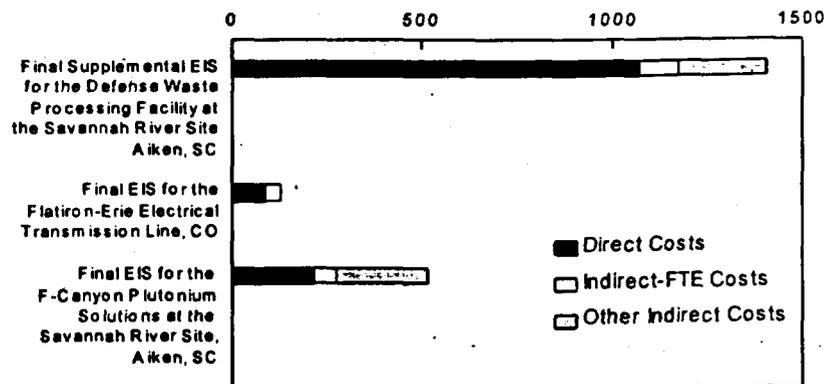
- ◆ accounts not specific for environmental assessments; and/or
- ◆ document budget not developed.

Using the direct cost data gathered for both this and the first (July 1 to September 30, 1994) reporting period, the median direct cost for preparation of

Costs of Environmental Assessments (thousands of dollars)



Costs of Environmental Impact Statements (thousands of dollars)



12 environmental assessments was \$58,000 and for preparation of 7 environmental impact statements was \$305,000.

NEPA DOCUMENT CONTENT

In response to our request that respondents describe specific problems and/or innovative approaches used regarding 1) determining reasonable alternatives, 2) data collection, and 3) impact analysis, a wide variety of helpful information was provided, as discussed below.

Determining Reasonable Alternatives: DOE held joint scoping meetings for three Savannah River Site environmental impact statements. Two commenters stated that discussing several related environmental impact statements together at scoping meetings helped the public to understand the relationship among the documents and reduced the cost of holding the meetings.

Scoping was accomplished in two phases. First, workshops were held early in the scoping period to educate the public about the proposed documents and the Savannah River Site in general. These workshops were informal and interactive, with small discussion groups; the workshops gave DOE a good early indication of what types of scoping comments might be received. Second, formal scoping meetings were

held close to the end of the scoping period. This overall approach was beneficial because public concerns were similar for all three projects, and public concerns and suggestions were brought to the forefront early. Thereby, DOE was better able to address concerns and incorporate suggestions. Several positive letters from public groups recognized DOE's attempts to communicate and incorporate suggestions.

Data Collection: One respondent stated it was advantageous to decentralize the data collection process by forming teams responsible for specific parts of documents. Another respondent noted that early planning meetings conducted by Project Teams helped to identify data/analysis needs. Indian tribe data and resource experts were also effectively used.

Impact Analysis: One commenter reported a positive experience using local Indian tribes and resource experts to help assess impacts. Another respondent reported that impact analysis was confusing because it involved a large number of alternatives and addressed many different materials.

THE DOCUMENT PREPARATION PROCESS

Respondents noted the following as measures that facilitate effective DOE teamwork:

- ◆ frequent and effective communication with all team members;
- ◆ dedicated teams and specific points of contact;
- ◆ document managers empowered to make key decisions; and
- ◆ committed senior DOE managers.

Factors that hamper DOE teamwork include:

- ◆ lack of communication; and
- ◆ multi-agency/party review.

With regard to teamwork between DOE and its support contractors, commonly-noted facilitating measures included concurrent review of documents by DOE and contractors, extensive use of electronic mail, and conference calls.

With regard to successful aspects of public involvement, one respondent stated that getting the public involved early in the planning stages increased the public's knowledge of the proposed action and

made the involvement successful. Another encouraged holding public meetings in an informal format (without barriers like tables or podiums), using videos to introduce the project, and using non-traditional locations to "bring DOE to the public." Regarding unsuccessful aspects of public involvement, one commenter stated that rigidly formal public scoping meetings do not work well.

Thirteen of the 25 respondents stated that the public responded favorably to the NEPA process, and one stated that the public was discouraged by the NEPA process in general. (Some of these respondents stated that the public was initially hostile but became more supportive after learning more about the proposed plans.)

Eight of the 25 respondents indicated a need for further guidance relating to the preparation of environmental assessments or environmental impact statements. One respondent stated that there is a need for NEPA regulations to be more specific regarding incineration projects. Another respondent suggested that NEPA considerations should be implemented at the very beginning of the grant cycle/conceptual stage.

With regard to the availability of resources, 7 respondents indicated this was a problem, while 10 respondents said resource availability was not a problem. The most often noted deficiency was in qualified personnel to work on the documents.

EFFECTIVENESS OF THE NEPA PROCESS

When asked how the NEPA process was used in agency planning and decision making, 8 questionnaire respondents stated that the process was not useful or was only minimally useful. These respondents stated that the NEPA process was not effective, only used because it was required, or not used at all. However, 13 others stated that the process was useful for a variety of reasons including:

- ◆ it instigated thorough examination of alternatives, sometimes resulting in lower costs;
- ◆ it constituted the entire agency planning and decision making process; and
- ◆ it kept the public well informed.

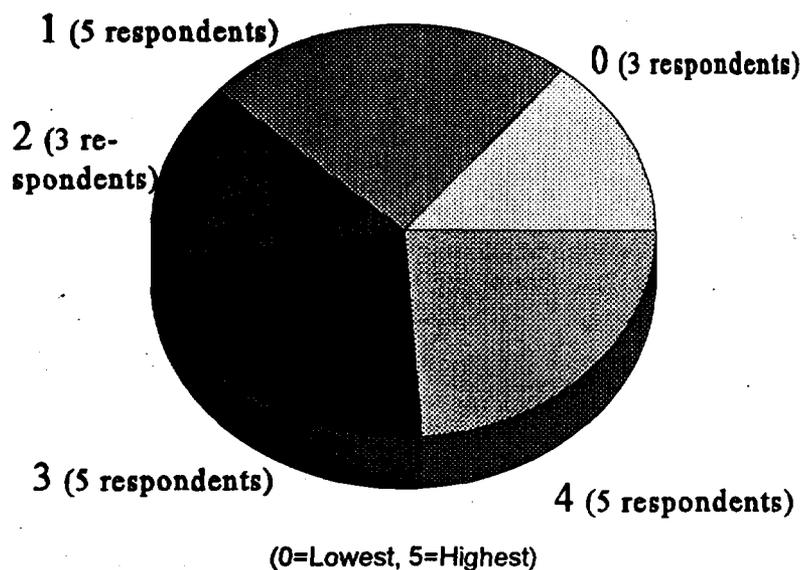
One respondent wrote that the NEPA process was "very useful in identifying the proposed route and that an existing Right-of-Way for a water pipeline was currently under trespass on Bureau of Land Management administered lands." The respondent further stated, by utilizing the NEPA process and looking at realistic alternatives, DOE was able to rule out various options and alternatives and justify on the basis of environmental impacts...the preferred route;

Some respondents offered miscellaneous comments regarding lessons learned, as described below.

One respondent reported, "this environmental assessment was an excellent example of teamwork at its best." The respondent further stated, "this environmental assessment was developed in record time, and proved to be a valuable decision making tool."

Another respondent noted several lessons learned pertaining to document quality and public participation. Regarding document quality the respondent stated, "The Operations Office should perform some level of quality control before transmitting drafts to the headquarters review team. This will allow more efficient focus of the review on substantive rather than editorial comments." Additionally, "When the review team is not dedicated solely to one review, care should be taken to balance

Effectiveness of the NEPA Process



additionally, this was the most cost effective route."

The pie chart above illustrates how respondents rate the effectiveness of the NEPA process with respect to influence on decision making on a scale of 0 to 5 ("5" using NEPA as an important planning tool, and "0" viewing the NEPA process as "another permit" for a decision already made).

OTHER LESSONS LEARNED

the need for quick turnaround with the need for realistic time to read, consider and develop the comments. The reviewers cannot do justice to the draft in too brief a time."

Regarding public participation and the scope of public concern at the Defense Waste Processing Facility (Savannah River Site, SC), the same respondent noted, "The public is not just concerned with latent cancer fatalities, which is normally the only radiation effect we discuss. They suspect that nonlethal cancers and birth defects are more prevalent."

REMINDER: Lessons Learned Questionnaires for all NEPA documents completed during the second quarter of FY 95 should be submitted as soon as possible after document completion, but no later than May 1, 1995. (Fax: 202-586-7031)

FEATURE STORY

The F-Canyon Plutonium Solutions Environmental Impact Statement Savannah River Site*

In July of 1994, after issuing the Notice of Intent (3/94) to prepare an Environmental Impact Statement (EIS) on Interim Management of Nuclear Materials at the Savannah River Site, the Department of Energy determined that potentially significant safety concerns existed associated with approximately 85,000 gallons of solutions containing plutonium-239 and uranium-238 at the F-Canyon chemical separations facility at the Savannah River Site. Accordingly, the Department decided to prepare, on an urgent schedule, a separate EIS for the proposed stabilization of these solutions, which had been stored much longer than intended under the design and routine operation of the canyon. The proposed action was to process F-Canyon plutonium solutions into forms that could be stored with less risk to the public and worker health and safety and to the environment. Alternatives evaluated included: no action, processing to plutonium metal, processing to plutonium oxide, and vitrification.

The F-Canyon Plutonium Solutions EIS was successfully completed in 5 months (from EIS determination (7/29/94) to issuance of the final EIS (12/30/94) and Record of Decision (2/1/95)) at a cost of approximately \$560,000. The preparation process was streamlined by relying heavily on existing data and analyses for impact estimates. Additionally, the Savannah River team, composed of federal and contractor employees, completed their review requirements by organizing a single integrated, five-day review session, with headquarters staff from affected organizations. During this five-day session effective use of administrative support to make revisions and reprints of documents overnight allowed the next day's work to proceed quickly and efficiently.

The EIS itself incorporated a number of effective approaches that implement "Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements" (May 1993). Alternatives were compared to "Other Decision Factors" considered to be relevant or of interest, such as the implementation schedule, new facilities required, and the sensitivity of the resulting material form with respect to the Department's policy on nonproliferation of nuclear weapons. The Affected Environment chapter confined the discussion to those resources where impacts might be expected to occur and eliminated detailed discussion of those resource areas where impacts would not occur. The Environmental Impacts chapter paralleled that discussion. These techniques helped sharply define the issues and provide a clear basis for choice among alternatives.

Two additional lessons were learned during the preparation of the EIS. The first is that the early involvement of budget and finance staff is essential. Budgets drive schedules and it is difficult to generate accurate environmental data, particularly cumulative impact information for reasonably foreseeable actions, without planning information from budget and finance personnel. Also, information needed as a basis for estimating impacts should be verified before being used and publishing the results. Good data are necessary for impact analysis, and different numbers published in different contexts confuse the public and decision makers, and result in a need to explain the differences and possibly reevaluate impacts.

* Based on information provided by Drew Grainger, R.T. Brock, and Karl Waltzer, Savannah River Site, and the Office of NEPA Policy and Assistance.

Environmental Impact Statements Completed Between September 1 and December 31, 1994.

Environmental Impact Statement (Document Number)	Project Location	Program	EPA Rating
Final Supplemental EIS for the Defense Waste Processing Facility at the Savannah River Site (DOE/EIS-0082-S)	Aiken, South Carolina	Environmental Management	EC-2
Final EIS for the Flatiron-Erie Electrical Transmission Line (DOE/EIS-0159)	Boulder, Colorado	Western Area Power Administration	EC-2
Final EIS for the F-Canyon Plutonium Solutions at the Savannah River Site (DOE/EIS-0219)	Aiken, South Carolina	Defense Programs/ Environmental Management	EC-2

ENVIRONMENTAL PROTECTION AGENCY (EPA) RATING DEFINITIONS:

Environmental Impact of the Action

- LO -- Lack of Objections
- EC -- Environmental Concerns
- EO -- Environmental Objections
- EU -- Environmentally Unsatisfactory

Adequacy of the Impact Statement

- Category 1 -- Adequate
- Category 2 -- Insufficient Information
- Category 3 -- Inadequate

Environmental Assessments Completed Between September 1 and December 31, 1994

Environmental Assessment (Document Number)	Project Location	Program
Proposal to Market Provo River Project Power to Salt Lake City (DOE/EA-0999)	Salt Lake City, Utah	Western Area Power Administration
Commercialization of the Mound Plant (DOE/EA-1001)	Miamisburg, Ohio	Environmental Management
Sludge Stabilization at the Plutonium Finishing Plant, Hanford Site (DOE/EA-0978)	Richland, Washington	Environmental Management
Offsite Commercial Cleaning of Controlled and Routine Laundry from the Savannah River Site (DOE/EA-0990)	Aiken, South Carolina	Defense Programs
Design and Construction of a Cancer Research Center, Indiana University (DOE/EA-0965)	Indianapolis, Indiana	Energy Research
Burlington Bottoms Wildlife Mitigation Project (DOE/EA-0928)	Oregon	Bonneville Power Administration
The Louisiana State University Waste-To-Energy Incinerator (DOE/EA-0952)	Baton Rouge, Louisiana	Energy Efficiency and Renewable Energy
Separate Process Wastewaters, Part A Contaminated Flow Collection and Treatment System, Kansas City Plant (DOE/EA-0859)	Kansas City, Missouri	Defense Programs
Tokamak Physics Experiment at the Princeton Plasma Physics Laboratory (DOE/EA-0889)	Princeton, New Jersey	Energy Research
Blue Creek Winter Range Project (DOE/EA-0939)	Stevens County, Washington	Bonneville Power Administration
Hot Springs-Garrison Fiber Optics Project (DOE/EA-1002)	Montana	Bonneville Power Administration
Proposed Relocation and Resumption of the DOE Radon Research Program at Area 300, Hanford Site (DOE/EA-0921)	Richland, Washington	Energy Research
Project Sapphire	Oak Ridge, Tennessee	Fissile Materials Disposition
Future Management of Hazardous Wastes Generated at Brookhaven National Laboratory (DOE/EA-0808)	Upton, New York	Environmental Management
Joint Environmental Assessment for the Construction and Routine Operation of a 12 kV Overhead Powerline Right-of-Way, and Formal Authorization for a 10-Inch and 8-Inch Fresh Water Pipeline Right-of-Way, Naval Petroleum Reserve No.1 (DOE/EA-0962)	Kern County, California	Fossil Energy