

**U.S. DEPARTMENT OF ENERGY  
FINDING OF NO SIGNIFICANT IMPACT FOR THE DECONTAMINATION AND  
DISMANTLEMENT OF THE ADVANCED REACTIVITY MEASUREMENT FACILITY  
AND COUPLED FAST REACTIVITY MEASUREMENTS FACILITY AT THE IDAHO  
NATIONAL ENGINEERING AND ENVIRONMENTAL LABORATORY**

**Agency:** U. S. Department of Energy (DOE)

**Action:** Finding of No Significant Impact (FONSI)

**Summary:** The DOE prepared a Draft Environmental Assessment (EA) for the proposed “Decontamination and Dismantlement of the Advanced Reactivity Measurement Facility and Coupled Fast Reactivity Measurement Facility at the Idaho National Engineering and Environmental Laboratory” (DOE/EA-1310).

The EA was prepared in accordance with the Council on Environmental Quality (CEQ) Regulations for implementing the National Environmental Policy Act (NEPA) (40 CFR 1500-1508), and the DOE NEPA Implementing Procedures (10 CFR 1021). Under DOE's NEPA Implementing Procedures, the decontamination and decommissioning (D&D) of test and research reactors normally requires the preparation of an environmental impact statement (EIS). The Advanced Reactivity Measurement Facility (ARMF) and the Coupled Fast Reactivity Measurement Facility (CFRMF) are research reactors located at the Test Reactor Area (TRA) on the Idaho National Engineering Laboratory (INEEL). The proposed action involves their removal and disposal, which falls within the category of D&D. In general, the preparation of an EIS for the D&D of large reactors is appropriate because of factors such as residual contamination, residual environmental risk, and risk to workers. ARMF and CFRMF are small, about the size of a typical washing machine, and are suspended in a water-filled canal within building TRA-660. The level of residual contamination, risk to the environment, or worker hazard associated with the removal and disposal of those reactors would be very small. Because of these factors, the DOE Idaho Operations Office (DOE-ID) decided to prepare an EA to determine whether there would be any significant environmental impacts associated with the proposed action and reasonable alternatives, including the no action alternative. The Draft EA was released for a 30-day public review and comment period on September 17, 1999 and no comments were received. Based on the analysis in the Draft EA that indicated there would be no significant impact, DOE has decided to proceed with the action as proposed.

**Selected Action:** The primary steps include the following (with EA Sections noted in parentheses): 1) removing and disposing of all radiologically contaminated equipment and hazardous materials from TRA-660 (pp 9, 10). 2) dismantling the reactors (p 10), 3) dismantling the neutron radiography facility (p 10), and 4) draining, then decontaminating and backfilling the canal that contained ARMF and CFRMF (p 11). The D&D of these reactors and their associated components would result in about 1,327 cubic feet of sanitary waste, 6,636 cubic feet of low level radioactive waste (LLW), and about 25 cubic feet of mixed radioactive and hazardous waste. The sanitary waste would be disposed of at an INEEL sanitary landfill, the LLW would be disposed of at the INEEL Radioactive Waste Management Complex, and the mixed waste would be disposed of at a licensed facility off the INEEL.

**Analysis:** Based on the analysis in the EA, the proposed action would not have a significant effect on the human environment within the meaning of NEPA. The term “significantly” and the significance criteria are defined by the CEQ Regulations for implementing NEPA at 40 CFR 1508.27. The significance criteria are addressed below and referenced to the corresponding analysis in the EA.

1) Beneficial and adverse impacts [40 CFR 1508.27 (b)(1)]:

The selected action will decontaminate and dismantle radiologically contaminated and hazardous components and equipment in TRA-660, to allow future use by other programs. The action will reduce the potential risk of radioactive exposure and release of hazardous constituents from the facility (Sec. 1.1, pp 1).

The analysis indicates there are no adverse impacts associated with implementing the proposed action concerning: Air Emissions and radiation exposure (Sec.4.1.1, pp 14, 15); Waste Generation and Disposition (Sec. 4.1.2, pp 15 - 17); Historical Resources (Section 4.1.3, p 18); Worker Health and Safety (Sec. 4.1.5, pp18, 19); Biological resources (Sec. 4.1.7, p 19)

2) Public health and safety [40 CFR 1508.27 (b)(2)]:

The analysis indicates that public exposure to radiation or hazardous contaminants will be below levels known to cause adverse health effects and below regulatory limits (Sec. 4.1.1, pp 14, 15); worker exposure during the D&D activities will be well below the DOE and INEEL dose limits (Sec. 4.1.1, p 15); and airborne contaminant emissions would be extremely low and doses to the worker and public would be below health-based regulatory levels (Sec. 4.1.1, pp 14, 15).

3) Unique characteristics of the geographical area [40 CFR 1508.27 (b)(3)]:

The analysis indicates no unique characteristics of the geographical area (INEEL and TRA) will be impacted by the project (Sec. 3, p.13 and Sec. 4.1.4, p.18).

4) Degree to which effects on the quality of the human environment are likely to become highly controversial [40 CFR 1508.27 (b)(4)]:

The analysis indicates implementing the proposed action will result in no significant effects on the quality of the human environment and the opportunity provided for public comment indicated that the proposed action or the impacts identified are not highly controversial.

5) Uncertain or unknown risks on the human environment [40 CFR 1508.27 (b)(5)]:

The analysis indicates no unique, uncertain, or unknown risks to, or effects on the human environment will result from impacts associated with implementing the proposed action.

6) Precedent for future actions [40 CFR 1508.27 (b)(6)]:

The project does not set a precedent for future actions that may have significant effects or represent a decision in principle about a future consideration.

7) Cumulatively significant impacts [40 CFR 1508.27 (b)(7)]:

The analysis indicates there are no impacts associated with implementing the proposed action which, when added to other past, present, and reasonably foreseeable future actions would result in a cumulatively significant environmental impact (Sec. 4.4, p. 20).

8) Effect on cultural or historical resources [40 CFR 1508.27 (b)(8)]:

Building TRA-660 is considered to be eligible for nomination to the National Register of Historic Places. In 1997, the Idaho State Historic Preservation Officer (SHPO) was consulted as required by Section 106 of the National Historic Preservation Act, regarding potential adverse effects to TRA-660 resulting from D&D activities. On November 12, 1997, a Memorandum of Agreement (MOA) among the DOE-ID, SHPO, and Advisory Council on Historic Preservation was signed, detailing mitigation requirements established through the consultation process. The MOA identified substantive requirements that must be met prior to commencing with the selected alternative. All stipulations listed in this MOA must be complied with prior to the commencing project activities.

9) Effect on threatened or endangered species or critical habitat [40 CFR 1508.27 (b)(9)]:

The analysis indicates no threatened or endangered species or critical habitat will be affected by implementing the proposed action (Sec. 4.1.7, p 19).

10) Violation of Federal, State, or Local law [40 CFR 1508.27 (b)(10)]:

The analysis indicates implementing the proposed action will not violate any federal, state, or local law (Sec. 5, p.21).

**Determination:** Based on the analysis presented in the attached EA, and on public comment received on the draft predecision EA, I have determined that the proposed action does not constitute a major federal action significantly affecting the quality of the human environment. Therefore, preparation of an environmental impact statement is not required.

Issued at Idaho Falls, Idaho on this 9th day of March, 2000.

/signed/  
B. A. Cook  
Manager, Idaho Operations Office

Copies of the EA and FONSI are available from: Kathy Whitaker, Environmental Management, MS-1117, [whitakkb@id.doe.gov](mailto:whitakkb@id.doe.gov), or Brad Bugger, Communications Division, [buggerbp@id.doe.gov](mailto:buggerbp@id.doe.gov), Idaho Operations Office, U. S. Department of Energy, MS 1214, 850 Energy Drive, Idaho Falls, Idaho, 83403-3189, or by calling the toll-free INEEL citizen inquiry line (800)708-2680. The documents will be posted on the INEEL's Environmental Management website at <http://environment.inel.gov/nepa.cfm>.

For further information on the NEPA process contact: Roger Twitchell, NEPA Compliance Officer, MS-1216, U. S. Department of Energy, 850 Energy Drive, Idaho Falls, Idaho, 83403-3189, (208) 526-0776.