EA-1050

U. S. DEPARTMENT OF ENERGY
FINDING OF NO SIGNIFICANT IMPACT FOR THE TEST AREA NORTH POOL STABILIZATION PROJECT AT THE IDAHO NATIONAL ENGINEERING LABORATORY

Agency: U. S. Department of Energy (DOE)
Action: Finding of No Significant Impact (FONSI)

SUMMARY: The DOE-Idaho Operations Office has prepared an environmental assessment (EA) for the proposed Test Area North (TAN) Pool Stabilization Project at the Idaho National Engineering Laboratory (INEL). The purpose of this project is to remove the Three Mile Island (TMI) core debris, Loss-of-Fluid Tests fuels (LOFT) and government-owned commercial spent nuclear fuels (SNF) from the TAN storage pool, provide an environmentally sound method for interim storage, and stabilize the storage pool. This action will be conducted in a manner that ensures protection of human health and the environment.

The *Department of Energy Programmatic Spent Nuclear Fuel Management and Idaho National Engineering Laboratory Environmental Restoration and Waste Management Programs Final Environmental Impact Statement (DOE/EIS-0203-F)*, hereafter referred to as the FEIS, analyzed the cumulative environmental impacts of spent nuclear fuel management on the INEL including the consolidation of SNF at the Idaho Chemical Processing Plant (ICPP) and the proposed TAN Pool Stabilization Project. The Record of Decision (ROD) for this FEIS makes a decision to consolidate spent fuels currently stored at various locations at the INEL at ICPP as funding allows but deferred the decision on the TAN Pool Stabilization Project pending further project definition, funding priorities, or appropriate review under National Environmental Policy Act (NEPA). This EA was prepared to provide the further NEPA review identified in the ROD and address the site specific environmental impacts of the TAN Pool Stabilization Project.

The EA examined the potential environmental impacts of the proposed action and evaluated reasonable alternatives, including the no action alternative in accordance with the Council on Environmental Quality Regulations (40 CFR Parts 1500-1508). The proposed action analyzed in the EA would remove the canisters of TMI core debris and commercial fuels from the TAN Pool and transfer them to the ICPP for interim dry storage in an Interim Storage System (ISS) until an alternate storage location other than at the INEL, or a permanent federal SNF repository is available. The TAN Pool would be drained and placed in an industrially and radiologically safe condition for refurbishment or eventual decommissioning. The EA evaluated environmental impacts associated with (a) constructing an Interim Storage System (ISS) at ICPP; (b) removing the TMI and commercial fuels from the pool and transporting them to ICPP for placement in the ISS, and (c) draining and stabilizing the TAN Pool. Miscellaneous hardware would be removed and decontaminated or disposed of in the INEL Radioactive Waste Management Complex (RWMC). This EA also described the environmental consequences of the no action alternative. Based on the analysis in the EA, the action will not have a significant effect on the human environment within the meaning of NEPA and 40 CFR Sections 1508.18 and 1508.27.

While the EA evaluated the impacts associated with the overall scope of the TAN Pool Stabilization Project, this FONSI is limited to actions that are within the scope of DOE's decision-making authority. The DOE is applying to the Nuclear Regulatory Commission (NRC) for licensing of: a) the transportation of the spent nuclear fuel and debris to ICPP and b) the construction and operation of the ISS. While these actions are outside of the scope of DOE's decision-making authority, they will be evaluated by the NRC as part of their independent NEPA evaluation and decision-making process on these matters.

Selected Action: The selected action consists of the following elements, each of which are described or evaluated in the attached EA on the pages referenced:

- Proceed with the application for NRC licensing of the transportation and Interim Storage System (ISS). This will require development of the design for the ISS and transportation system to further refine information for the evaluation of impacts associated with these systems. The NRC will use this information to conduct their evaluation of the license application and NEPA analysis (pp. 7, 9).

- Continue with design and testing of a system to remove commercial fuels and canisters of TMI core debris from the storage pool, dewatering the canisters, and prepare the canisters and commercial fuels for transport;

- Upon NRC approval of the ISS location and method of transportation, DOE will:

  dewater the TMI canisters, remove the canisters from the storage pool, and prepare them for transport (p. 8);

  remove the LOFT and commercial fuels from the storage pool, drip-dry the fuels in the TAN Hot Shop, and prepare the fuels for transport (p. 8);

  remove hardware from the storage pool, decontaminate reusable hardware, and dispose of the remaining hardware as low-level waste at the RWMC (p. 8);

  drain the storage pool, treat the pool water with an ion exchange system or other suitable treatment system, and discharge the treated water in compliance with applicable state and federal regulations (p. 9);

  stabilize the pool to place it in an industrially and radiologically safe condition for refurbishment or decommissioning (pp. 9, 17).

Schedule: The NRC licensing action is scheduled to begin in Fiscal Year 1996 and would be conducted in a manner so as to comply with the schedule stipulated in the October 16, 1995 Settlement Agreement between DOE and the State of Idaho. This schedule identifies that the TMI fuel (core debris) will be placed in the interim dry storage facility by June 1, 2001. Also, as stipulated in the Settlement Agreement, DOE has consulted with the State of Idaho concerning the location of the interim dry storage system within the INEL.

SUMMARY OF IMPACTS: The following is a summary of the impacts evaluated in the EA at the referenced pages and presented in relation to the significance criteria described in 40 CFR 1508.27.

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

- The selected action will resolve the issue of potential future vulnerabilities associated with the storage pool (pp.1-5).
- There are no adverse impacts associated with:
  - Construction activities (p. 25);
  - Radiation emissions and exposure (pp. 25-29);
  - Storage pool water treatment and discharge (pp. 27-29);
  - Generation of radioactive and nonradioactive wastes (pp. 28-29);
  - Socioeconomic factors (pp. 29).

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

- Public exposure to radiation will be below levels known to cause adverse health effects (pp. 27, 33).
- The highest probability of a cancer fatality in the public resulting from a "worst case" accident scenario is below the average cancer mortality rate (pp. 29-32).
- Worker exposure during canister handling, dewatering, and transporting is within acceptable limits established by DOE (pp. 26-28).

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

- No unique characteristics of the geographical area will be impacted by the project (p. 29).

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 project will result in no significant adverse effects on the quality of the human environment.

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

- No unique, uncertain, or unknown risks to, or effects on, the human environment will result from the operational or cumulative impacts associated with the project.

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.

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

- There are no significant cumulative impacts associated with the project (p. 33-34). The cumulative impacts of reasonably foreseeable related actions have been evaluated in the FEIS. The interim storage of spent nuclear fuel at INEL is addressed in Volume I of the FEIS and the impacts of the TAN Pool Stabilization Project are addressed in Volume II. The FEIS ROD, issued May 30, 1995, identified the TAN Pool Stabilization Project as one of the projects that would be constructed under the selected alternative for INEL, the Modified Ten Year Plan (Modified Alternative B in the FEIS).

  Comments were received on the draft version of this FONSI asserting that an EIS, rather than an EA, should be prepared for the TAN Pool Stabilization Project. As stated above, the FEIS has been prepared that addresses the programmatic management of spent nuclear fuel across DOE as well as the cumulative impacts of spent nuclear fuel management and related actions at the INEL. This EA compliments the FEIS with additional detailed site and project specific description and environmental analysis. (See Appendix A of the EA for DOE-ID's responses to comments.) The Department of Energy is also applying for an NRC license for the ISS and transportation aspects of the project. NEPA analysis for the transportation of the spent nuclear fuel and debris to ICPP and the construction and operation of the ISS will be conducted by the NRC as part of their regulatory review.

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

- No cultural resources are anticipated to be impacted (pp. 25, 29). The TAN Storage Pool and Hot Shop are potentially eligible for listing on the National Register of Historic Places, however, this action will not modify these structures (p. 25).

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

- No threatened or endangered species or critical habitat will be affected by the action (p. 29).

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

- The project will not violate any federal, state, or local law.

DETERMINATION: Based on analysis presented in the attached EA, I have determined that this project 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 and I am issuing this FONSI.

INFORMATION: Copies of the EA and FIES are available from: Brad Bugger, Office of Communications, MS-1214, Idaho Operations Office, U. S. Department of Energy, 850 Energy Drive, Idaho Falls, Idaho, 83403-3189, or by calling (208) 526-0833 or the toll-free INEL citizen inquiry line (800)708-2680.

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.

Issued at Idaho Falls, Idaho on this 6TH day of May, 1996.

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Manager, Idaho Operations Office