

January 29, 2003

Mr. Ronald D. Izatt
ISF Facility Manager
Foster Wheeler Environmental Corporation
3200 George Washington Way, Suite G
Richland, WA 99352

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION RELATED TO THE
ENVIRONMENTAL REVIEW FOR THE IDAHO SPENT FUEL FACILITY
APPLICATION (TAC NO. L20768)

Dear Mr. Izatt:

The staff of the Nuclear Regulatory Commission (NRC) has reviewed Foster Wheeler Environmental Corporation's (FWENC) environmental and safety analysis reports submitted in connection with your November 19, 2001, license application to construct and operate the Idaho Spent Fuel Facility, an Independent Spent Fuel Storage Installation (ISFSI). As specified in 10 CFR 51.29, "Scoping - Environmental Impact Statement," the NRC staff performed an evaluation to determine the scope of the environmental impact statement (EIS) and identify the significant issues to be analyzed in depth. The scoping report was issued on December 2, 2002. The NRC staff, with the assistance of the Center for Nuclear Waste Regulatory Analyses (CNWRA), has completed its initial environmental review of your application and has determined that additional information is required to complete the draft EIS.

Enclosed is the staff's initial request for additional information (RAI) related to the environmental review. We request that you respond to each item in the RAI. As discussed with your staff, your response to the enclosed RAI is requested within 30 working days of this request. If you are unable to meet that date, please notify us as soon as possible and provide your new response date and the reasons for the delay. The staff will then assess the impact of the new response date and will issue a revised schedule. We are willing to discuss and clarify the enclosed RAI as necessary.

Mr. R. D. Izatt

-2-

Please reference Docket No. 72-25 and TAC No. L20768 in future correspondence related to this licensing action and the associated environmental review. If you have any questions, please contact me at (301) 415-7684.

Sincerely,

/RA/

Matthew Blevins, Project Manager
Environmental and Low-Level Waste Section
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards

Docket No.: 72-25
TAC No.: L20768

Enclosure: Request for Additional Information

Mr. R. D. Izatt

-2-

January 29, 2003

Please reference Docket No. 72-25 and TAC No. L20768 in future correspondence related to this licensing action and the associated environmental review. If you have any questions, please contact me at (301) 415-7684.

Sincerely,

/RA/

Matthew Blevins, Project Manager
Environmental and Low-Level Waste Section
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards

Docket No.: 72-25
TAC No.: L20768

Enclosure: Request for Additional Information

cc: Mailing List

DISTRIBUTION: NMSS/DWM r/f EPAB r/f PUBLIC LKokajko JRHall
NJensen, OGC BSpitzberg, RIV SGagner, OPA AChowdhury,CNWRA
DTurner, CNWRA

DOCUMENT NAME: G:\DWM\EPAB\MXB\RAI_1.WPD

Log No.: 03-008

ADAMS Accession No. ML030300075

OFC	DWM:NMSS	SC:DWM:NMSS				
NAME	MBlevins:rmc	SFlanders				
DATE	01/ 29 /03	01/ 29 /03				

OFFICIAL RECORD COPY

This document should/should not be made available to the PUBLIC MB 1/29 /03
(Initials) (Date)

**REQUEST FOR ADDITIONAL INFORMATION SUPPORTING THE ENVIRONMENTAL
IMPACT STATEMENT FOR THE PROPOSED IDAHO SPENT FUEL FACILITY
DOCKET NO. 72-25
TAC NO. L20768**

This request for additional information (RAI) report contains a compilation of additional information requirements identified to date by the U.S. Nuclear Regulatory Commission (NRC) staff, for preparing the Environmental Impact Statement (EIS) on the proposed Idaho Spent Fuel Facility adjacent to the Idaho Nuclear Engineering and Technology Center (INTEC) on the Idaho National Engineering and Environmental Laboratory (INEEL). The information requested is based on the general requirements for preparing an EIS in Section 102(2)(C) of the National Environmental Policy Act of 1969, as amended (NEPA), NRC's NEPA implementing regulations (10 CFR Part 51), NRC regulations for licensing an independent spent fuel storage installation (ISFSI) (10 CFR Part 72), and the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA (40 CFR Parts 1500–1508). The requested information is needed in sufficient detail to support the staff's independent environmental impact analysis of the proposed project and alternatives. In preparing these RAIs, the staff have also considered earlier RAIs submitted to Foster Wheeler Environmental Corporation (FWENC) to support the preparation of the safety evaluation report (Hall, 2002).

Citations to relevant NRC regulatory requirements are included for each of the following sections. References to the Environmental Report and Safety Analysis Report prepared by the license applicant (FWENC) are to those versions provided to the NRC in November 2001 (FWENC, 2001a,b).

1. TRANSPORTATION

The EIS must assess the potential transportation impacts. The following RAI items are identified to ensure compliance with 10 CFR 51.41, 51.45, 51.61, 51.71, 51.80(b)(1), and 72.108.

- 1-1 Clarify the location of all spent nuclear fuel (SNF) that is expected to be stored in the proposed facility, identify all fuel that is not presently located at the INEEL facility that is expected to be transported to the site, and clarify whether the environmental impacts of shipping all remaining fuel (to be shipped) have been assessed. Current documentation on the proposed action is unclear regarding whether spent fuel will be shipped to INEEL. For example, the Safety Analysis Report states "FWENC was awarded a contract...to...place into interim storage, SNF currently stored, *or scheduled to be stored*, at the INEEL...." This statement implies that some fuel remains to be transported to the INEEL site. The environmental report (FWENC, 2001a, Section 7.2) states "Transport of spent nuclear fuel will not involve movement over public highways." The U.S. Department of Energy (DOE) SNF Programmatic EIS appears to address all anticipated spent fuel shipments for 40 years into the future (DOE, 1995, Volume 2, Part A, Tables 5.11-7, 5.11-8, 5.11-12); however, it is unclear whether all the anticipated spent fuel shipments associated with the proposed action are included in this 1995 assessment.

Enclosure

- 1-2 Provide the DOE procedures that will be used to conduct SNF transfers within the INEEL. Provide a map showing the proposed transfer routes from current interim storage facilities to the proposed facility. Also, estimate the potential environmental impacts of such transfers. The DOE will be responsible for transferring SNF from current storage locations to the proposed Idaho Spent Fuel Facility, (FWENC, 2001a, Section 1.3). This is a connected action to the proposed action, and its impacts must be considered in the EIS.
- 1-3 Provide information evaluating the transportation impacts associated with proposed facility construction activities. This should include the estimated increase in traffic volumes on local roads and related impacts.

2. RESOURCES NEEDED FOR CONSTRUCTION

The EIS must assess the potential impacts of gathering the materials that would be used for the construction of the proposed Idaho Spent Fuel Facility. The following RAI item is identified to ensure compliance with 10 CFR 51.41, 51.45, 51.61, 51.71, 51.80(b)(1), and 72.98.

- 2-1 Provide estimates of the amounts of water that will be needed for concrete and dust suppression during the construction of the proposed facility. This information is required to evaluate impacts on water supply during construction of the proposed facility.

3. AIR QUALITY

The EIS must assess the potential air quality impacts from constructing and operating the proposed facility. The following RAI items are identified to ensure compliance with 10 CFR 51.41, 51.45, 51.61, 51.71, 51.80(a), and 72.90(e) and 72.98(b).

- 3-1 Provide additional information concerning fugitive dust emissions for the construction phase. This information should include emission levels or concentrations of fugitive dust and how these values compare to the relevant standards. For uncontaminated fugitive dust, relevant standards are particulate levels. If the soil is deemed contaminated, these relevant standards would also include radionuclides and toxic pollutants (mercury, chromium, and arsenic).
- 3-2 Provide information concerning the estimated levels of vehicular emissions during the construction phase and how these values compare to the relevant standards.
- 3-3 Clarify the statement in the Environmental Report (FWENC, 2001a, Section 5.3) that the Idaho Spent Fuel Facility will have no chemical discharges. This statement is interpreted to mean that during the operation phase, the Idaho Spent Fuel Facility will not emit any nonradiological (National Ambient Air Quality Standard criteria or toxic) airborne pollutants. If this interpretation is incorrect, then FWENC should provide information concerning the estimated levels of nonradiological airborne emissions during the operation phase and how these values compare to the relevant standards.
- 3-4 Provide the exemption permit letter or documentation indicating that the backup diesel generator is an exempt source.

- 3-5 Provide the Spill Prevention Plan for the chemicals listed in Table 3-1 of the Environmental Report (FWENC, 2001a). If a Spill Prevention Plan does not exist, provide whatever procedures do exist to serve that purpose.
- 3-6 Provide quantification or technical support for statements made in the Environmental Report (FWENC, 2001a, Section 5.6) concerning air quality impact of vehicular emissions during the operation phase. These statements indicate that vehicles will add to the cumulative amount of exhaust at the INEEL, but that the vehicular exhaust is within limitations and will not adversely affect the environment.

4. PUBLIC AND OCCUPATIONAL HEALTH AND SAFETY

The EIS must assess the impacts to public and occupational health and safety from constructing and operating the proposed facility. The following RAI items are identified to ensure compliance with 10 CFR 51.41, 51.45, 51.61, 51.71, 51.80(a), and 72.90(e) and 72.98(b).

- 4-1 Provide collective dose estimates for workers involved in construction of the facility.
- 4-2 Provide organ doses, skin dose in particular, for the workers (e.g., millwrights and machinists who perform maintenance and repair) expected to receive an annual dose close to 0.01 Sv [1 rem] in Table 7.4-2 of the Safety Analysis Report (FWENC, 2001b).
- 4-3 Provide units for all plots in the Environmental Report (e.g., for example, effluent concentration plots in Section 2.3.4 of FWENC (2001a).
 - a. Provide consistent use of conventional dose units. For example, in Table 7.6-2 of the Safety Analysis Report (FWENC, 2001b), collective doses are defined as person-rem in the caption yet tabulated under units of mrem/yr. Present collective dose over the entire period of facility operation in units of person-rem.
- 4-4 Provide locations for farms and livestock grazing in the vicinity of INEEL. In Section 5.2.2 of the Environmental Report (FWENC, 2001a) the ingestion pathway offsite dose calculation considers: (1) game animals, (2) aquatic life, and (3) plants.
 - a. Provide an offsite dose calculation that includes ingestion of animal products from livestock.
- 4-5 Provide baseline dose at the proposed Idaho Spent Fuel Facility from any existing contamination as well as effluents and direct radiation from INTEC and INEEL sources.
- 4-6 Provide estimates of occupational dose and dose to the public during the 27-year storage period.
- 4-7 Provide estimates of dose from fuel-handling and fuel storage operations to the noninvolved worker at the Idaho Spent Fuel Facility boundary.

5. GEOLOGY AND HYDROLOGY

The EIS must assess the potential impacts on geology and hydrology from constructing and operating the proposed facility. The following RAI items are identified to ensure compliance with 10 CFR 51.41, 51.45, 51.61, 51.71, 51.80(b)(1), 72.90(b), (e), and (f), 72.98, 72.100, and 72.122.

- 5-1 Address radiological and nonradiological contamination of the soil and its impact during the construction phase. The Environmental Report (FWENC, 2001a) states that the preoperational environmental radiation program is based in part on the consideration that the Idaho Spent Fuel Facility site is not radiologically contaminated. Data provided in Table 4-8 of the Idaho High-Level Waste and Facilities Disposition EIS (DOE, 2002) indicate that soils in the vicinity of INTEC have been contaminated by both radiological and toxic nonradiological constituents during past site activities.
 - a. Provide the data supporting the consideration that the Idaho Spent Fuel Facility site soil is not contaminated, or address the radiological and toxic nonradiological impacts on air quality from resuspension of these pollutants in the air from construction disturbances of contaminated soil. Information would include estimated emission inventories and comparison to applicable standards.
- 5-2 Clarify whether drinking water from INTEC wells and distribution systems has exceeded EPA maximum contaminant levels and State of Idaho drinking water limits for volatile organic compounds for years prior to or since 1999. Supporting documentation on public health impacts of current operations (DOE, 2002, Section 4.11) only provides data for 1999. A year of compliance for a facility with many years of operating experience does not provide sufficient information to establish a compliance history. More complete information on the compliance history is necessary to describe the existing environmental conditions for the proposed action.

6. ECOLOGICAL RESOURCES

The EIS must assess the potential impacts on ecological resources from constructing and operating the proposed Idaho Spent Fuel Facility. The following RAI items are identified to ensure compliance accordance with 10 CFR 51.41, 51.45, 51.61, 51.71, 51.80(a), 72.90(e), and 72.98(b).

- 6-1 Provide information about any unique features of the proposed building (i.e., size, design, heat output) compared to other buildings in the area that would make it a preferential place for bird or other wildlife habitat. If there are such features, identify measures available to mitigate any potential harm to these wildlife or prevent their use of the facility as habitat.
- 6-2 Provide information that supports statements that the proposed construction site and laydown area are previously disturbed. Identify any previous construction activity at the site and evaluate whether the lack of native vegetation at the proposed areas results from these activities or is a secondary impact of nearby activities at the INTEC.

7. HISTORIC, CULTURAL, AND PALEONTOLOGICAL RESOURCES

The EIS must assess the potential impacts on cultural resources from constructing and operating the proposed facility. The following RAI items are identified to ensure compliance with 10 CFR 51.41, 51.45, 51.61, 51.71, 51.80(a), 72.90(e), and 72.98(b). In addition, Council on Environmental Quality regulations in 40 CFR 1508.8 require an assessment of potential effects on historic, cultural, and aesthetic resources, whether direct, indirect, or cumulative. In addition, 40 CFR 1508.27(b)(8) calls for examination of the extent to which an action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historic resources. Various federal statutes may also require consideration of other specific Native American concerns.

- 7-1 Provide a map showing buildings on INTEC that are eligible for listing in the National Register of Historic Places and indicate their position relative to likely transfer routes from the current storage locations to the proposed Idaho Spent Fuel Facility.
- 7-2 Provide a current status on the listing of these eligible buildings, including a discussion of why they are eligible.
- 7-3 Provide a copy of the Memorandum of Agreement between INEEL and the State Historic Preservation Officer, and a copy of Braun (1998) referenced in Section 4.4 of DOE (2002).
- 7-4 Clarify whether the cultural resource survey provided in Appendix B of the Environmental Report (FWENC, 2001a) covers the area for the construction laydown northeast of the proposed site. The Environmental Report and Safety Analysis Report (FWENC, 2001a,b) typically refer to a 10-acre area, as opposed to the four acres indicated in Appendix B.

8. ENVIRONMENTAL JUSTICE

The EIS must assess the impacts of constructing and operating the proposed facility as they relate to environmental justice issues in the region. The following RAI items are identified to ensure compliance with 10 CFR 51.41, 51.45, 51.61, 51.71, 51.80(a), 72.90(e), 72.98(b), and Executive Order 12898.

- 8-1 Provide information to determine whether the proposed action in conjunction with traditional activities and/or food consumption patterns could lead to adverse health impacts to low income or minority groups in the affected area. If available, provide a breakdown by stakeholder groups.
- 8-2 Provide low-income population data based on the 2000 Census, if available. Figure 4-21 in DOE (2002) is based on 1990 Census data.

9. WASTE MANAGEMENT

The EIS must assess the impacts associated with waste management activities at the proposed Idaho Spent Fuel Facility. The following RAI items are identified to ensure compliance with 10 CFR 51.41, 51.45, 51.50, 51.61, 51.71, and 51.80(a).

- 9-1 Provide waste generation rates for each year from 1988 through the most recent year the data were collected. The description of past solid waste generation at INEEL (DOE, 2002, Section 4.14.1) provides volumes of waste disposed at the Landfill Complex averaged from 1988 through 1992 and for individual years 1996 and 1997, and the average from 1998 through 2001.
- 9-2 Provide documentation or references containing an estimate of the solid low-level radioactive waste disposal capacity of the Radioactive Waste Management Complex. This information would provide perspective regarding the potential impacts of estimated solid low-level radioactive waste generation from the proposed action.

10. ENVIRONMENTAL MONITORING

The EIS must assess appropriate environmental monitoring at the proposed Idaho Spent Fuel Facility. The following RAI items are identified to ensure compliance with 10 CFR 51.41, 51.45, 51.50, 51.61, 51.71, 51.80(a), 72.90(e), 72.98(b), 72.122(h)(4), and 72.126(c). In addition, 40 CFR 1505.2(c) and 1505.3 call for the adoption of monitoring and enforcement programs where applicable. The information requested below will assist the staff in determining the extent of any monitoring that should be required.

- 10-1 Provide information concerning any possible nonradiological contamination of the soil at the Idaho Spent Fuel Facility site. According to Section 6.1.3.1 of the Environmental Report (FWENC, 2001a), investigations to determine the Idaho Spent Fuel Facility site geotechnical characteristics included collecting soil samples. However, no information was included to indicate if the soil was analyzed for nonradiological components (FWENC, 2001a). Data provided in Table 4-8 of the Idaho High-Level Waste and Facilities Disposition EIS (DOE, 2002) indicate that soils in the vicinity of INTEC have been contaminated by three toxic nonradiological constituents (mercury, chromium, and arsenic) during past site activities.
- 10-2 Provide nonradiological monitoring information for the construction and operation phases if it is determined that the soil is contaminated with toxic pollutants.
- 10-3 Provide clarification concerning monitoring of nonradiological effluents in the stack. A statement in Section 6.3.1.2 of the Environmental Report (FWENC, 2001a) reads, "Nonradiological airborne effluents are monitored at the sources." A statement in Section 5.3 of the Environmental Report (FWENC, 2001a) reads, "The Idaho Spent Fuel Facility will have no chemical or biocide discharges". The NRC interprets these statements to mean that since no chemical (nonradiological) effluents are discharged (i.e., no source), no nonradiological monitoring of the stack will be performed." If this is incorrect, FWENC should indicate what nonradiological monitoring will be performed at the Idaho Spent Fuel Facility stack and, if none, cite any applicable exemption (i.e. from the State or EPA).

11. COST/BENEFIT ANALYSIS

To complete its assessment and recommendation regarding the proposed facility, the staff must weigh costs and benefits of the proposed facility and alternatives (10 CFR 51.71). The following RAI items are identified to ensure compliance with 10 CFR 51.41, 51.45(c), 51.61, 51.71(d) and (e), 51.80(a), 72.90(e), and 72.98(b).

- 11-1 Provide detailed cost components and assumptions that have gone into the cost/benefit assessment contained in the Environmental Report (FWENC, 2001a, Section 11). The cost information and assumptions should include a breakdown of costs and avoided costs by current and/or alternative waste storage sites. They should also identify costs and avoided costs that have been included in the cost/benefit analysis in sufficient detail that the reasonableness of these costs and avoided costs can be determined.

REFERENCES

Braun, J. B. Lockheed Martin Idaho Technologies Company, Idaho Falls, Idaho, personal communication with M. J. Spry, Portage Environmental, Inc., Idaho Falls, Idaho, May 28, 1998.

DOE. "Idaho High-Level Waste and Facilities Disposition Final Environmental Impact Statement." DOE/EIS-0287-F. Idaho Falls, Idaho: DOE. 2002.

DOE. "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. Idaho Falls, Idaho: DOE. 1995.

FWENC. "Environmental Report, Idaho Spent Fuel Facility." NRC Docket No. 72-25, ISF-FW-RPT-0032. Morris Plains, New Jersey: FWENC. November 2001a.

FWENC. "Safety Analysis Report, Idaho Spent Fuel Facility." NRC Docket No. 72-25, ISF-FW-RPT-0033." Morris Plains, New Jersey: FWENC. November 2001b.

Hall, J.R. (NRC), Washington, DC. Letter to R. Izatt (FWENC), Richland, Washington. Request for Additional Information for the Idaho Spent Fuel Facility Application (TAC NO. L23389). October 25, 2002.

Addressee List
Letter Dated: January 29, 2003

Mr. Ronald D. Izatt
ISF Facility Manager
Foster Wheeler Environmental Corporation
3200 George Washington Way, Suite G
Richland, WA 99352

Mr. Jan Hagers
TMI/FSV Licensing Project Manager
U.S. Department of Energy
Idaho Operations Office
850 Energy Drive
Idaho Falls, ID 83401-1563

Mr. Doug Walker
Senior Health Physicist/NRC Liason
State of Idaho INEEL Oversight Program
900 N. Skyline Drive, Suite C
Idaho Falls, ID 83402

Mr. Wayne Pierre
Federal Facility Section
U.S. Environmental Protection Agency
(M/S HW-124)
Seattle, WA 98101

Ms. Gail Willmore
INEEL Technical Library
1776 Science Center Drive
Idaho Falls, ID 83402

Ms. Kathleen E. Trever
Coordinator-Manager
INEEL Oversight Program
1410 North Hilton
Boise, ID 83706

Mr. James C. Saldarini
Licensing Manager
Foster Wheeler Environmental Corporation
1000 The American Road
Morris Plains, NJ 07950

Mr. George Freund
Coalition 21
P.O. Box 51232
Idaho Falls, ID 83405

Mr. Steve Laflin, Chairman
INEEL Committee
Idaho Falls Chamber of Commerce
P.O. Box 50498
Idaho Falls, ID 83405-0498

Mr. Chuck Broscious
Environmental Defense Institute
P.O. Box 504
Troy, ID 83843

Mr. Stanley Hobson
Chairman, INEEL EM Site Specific
Advisory Board
c/o Jason Associates Corp.
477 Shoup, Suite 201
Idaho Falls, ID 83402

Chairman, Tribal Business Council
The Shoshone-Bannock Tribes
P.O. Box 306
Fort Hall, ID 83203

Snake River Alliance
310 E. Center, Room 205
Pocatello, ID 83201

Mr. Thomas C. Poindexter, Esq.
Winston & Strawn
1400 L Street, N.W.
Washington, DC 20005-3502

Erik Ringelberg
Keep Yellowstone Nuclear Free
P.O. Box 4838
Jackson, WY 83001