

1 INTRODUCTION

1.1 Background

The U.S. Nuclear Regulatory Commission (NRC) is considering whether to issue a license, pursuant to 10 CFR Part 72, for construction and operation of an independent spent nuclear fuel storage installation (ISFSI) at the Idaho National Engineering and Environmental Laboratory (INEEL) (formerly the Idaho National Engineering Laboratory), which is located in southeast Idaho. This action would be taken in response to an application filed with NRC by the Foster Wheeler Environmental Corporation (FWENC) on November 19, 2001 (NRC, 2002a). To support its licensing decision, NRC determined that an environmental impact statement (EIS) is required by the NRC National Environmental Policy Act (NEPA)-implementing regulations in 10 CFR Part 51.

During the last 40 years, the U.S. Department of Energy (DOE) and its predecessor agencies have generated, transported, received, stored, and reprocessed spent nuclear fuel (SNF) at the DOE facilities nationwide. Part of this SNF originated from non-DOE domestic licensed facilities, including training, research, and test reactors at universities; commercial reactors; and government-owned installations for which DOE has contractual obligations to accept SNF. Most of the SNF at the INEEL, originally destined for reprocessing, is currently stored in conditions only acceptable for short-term storage. Current storage at INEEL consists of aging aboveground facilities, including wet storage pools, and dry underground storage facilities. Deterioration of these SNF facilities is a potential concern because of their location over the Snake River Plain Aquifer, a major water source for the region.

A Settlement Agreement dated October 17, 1995, among DOE, the U.S. Navy, and the State of Idaho requires, among other things, the transfer and dry storage of SNF until it can be removed from Idaho. As part of the DOE effort to meet terms of this 1995 Settlement Agreement, the DOE contracted with FWENC to design, license, construct, and operate the proposed ISFSI at the INEEL to provide interim dry storage for portions of the SNF currently in storage. The SNF to be stored at the proposed ISFSI includes SNF resulting from operation of the Peach Bottom Unit 1 nuclear power reactor, which was licensed by the Atomic Energy Commission and operated between 1966 and 1974. SNF from the Shippingport Light Water Breeder Reactor, which ceased operation in 1984, and SNF from training, research, and isotope research reactors built by General Atomic (TRIGA reactors) are also to be stored at the proposed ISFSI.

DOE previously issued a record of decision (DOE, 1995a) pertaining to its SNF

On October 17, 1995, DOE, the U.S. Navy, and the State of Idaho entered into **The 1995 Settlement Agreement**. This agreement ended years of litigation between the federal government and the state regarding waste removal and environmental cleanup of the INEEL in the cases of *Public Service Company of Colorado v. Batt*, CV-91-0035-S-EJL (D. Idaho) and *United States v. Batt*, CV-91-0065-S-EJL (D. Idaho). According to terms of The 1995 Settlement Agreement, Idaho agreed to allow shipments of specified amounts of certain types of SNF to be received at the INEEL and to process DOE permit applications in a timely manner. DOE agreed, among other things, to initiate procurement of dry storage facilities to replace wet storage and below-ground facilities, employ multipurpose canisters to prepare SNF for disposal, and complete removal of all SNF from the state by 2035.

Introduction

1 management program, later amended to reflect the Settlement Agreement (DOE, 1996a). The
2 record of decision documents the DOE programmatic decision to pursue the “regionalization by
3 fuel type” and the INEEL site-specific decision to pursue the “modified Ten-Year plan.” One
4 project to manage SNF is described in the record of decision as a dry fuel storage facility that
5 “will accommodate receipt and storage of various fuel types currently in inventory at the [Idaho
6 National Engineering and Environmental Laboratory] and the fuels projected to be received at
7 the [INEEL]” (DOE, 1995a). The ISFSI proposed by FWENC, which this EIS addresses, will be
8 located on the INEEL property adjacent to the Idaho Nuclear Technology and Engineering
9 Center (INTEC) facilities.

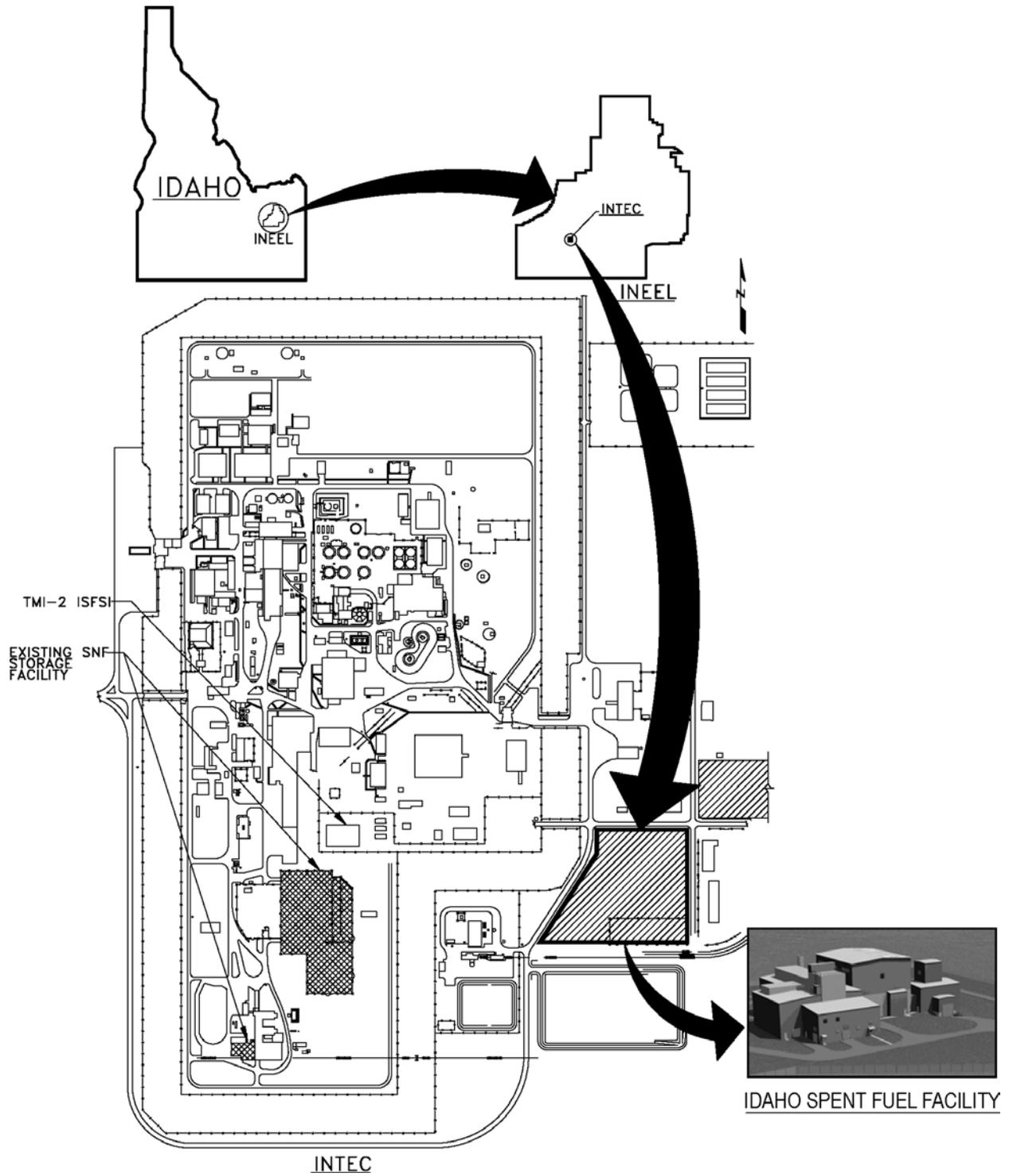
10
11 The DOE decisions were based, in part, on the information and analyses contained in the final
12 programmatic SNF EIS (DOE, 1995b). Volume 2 of the DOE programmatic SNF EIS evaluates
13 potential impacts of the SNF management program at INEEL with additional information on
14 foreseeable projects, including a generic analysis of a facility similar to the proposed Idaho
15 Spent Fuel Facility.

17 **1.2 The Proposed Action**

18
19 The proposed action considered in this EIS is the construction, operation, and decommissioning
20 of an ISFSI. On November 19, 2001, FWENC filed an application with NRC for a license to
21 receive, package, transfer, and store SNF and other radioactive materials associated with SNF
22 at an ISFSI at the INEEL in Butte County, Idaho. NRC accepted the license application for
23 docketing in June 2002 (NRC, 2002a). As part of its license application, FWENC submitted an
24 environmental report and a safety analysis report (FWENC, 2001a,b). This new installation, if
25 approved, will be situated on an 3.2-ha [8-acre] site located adjacent to the INTEC facility, about
26 4.8 km [3 mi] north of the INEEL Central Facilities Area (Figure 1-1). The proposed Idaho Spent
27 Fuel Facility would be designed, constructed, and operated by FWENC per contract to DOE.
28 DOE has leased the site to FWENC for the planned operating life of the installation.

29
30 The proposed ISFSI, which is referred to herein as the proposed Idaho Spent Fuel Facility,
31 would store SNF and associated radioactive material from the Peach Bottom Unit 1
32 High-Temperature, Gas-Cooled Reactor; the Shippingport Light Water Breeder Reactor, and
33 various TRIGA reactors. All the SNF (Peach Bottom and Shippingport) and slightly more than
34 two thirds (1,100 of 1,600 elements) of the TRIGA SNF is currently stored within INTEC.
35 Potential locations of the remaining TRIGA fuel and potential environmental impacts of its
36 transport to INEEL have previously been evaluated by DOE in earlier NEPA documents (DOE,
37 1995b, Volume 1, Appendix E; 1996b, Volume 1, Section 2) and the associated records of
38 decision (DOE, 1995a, 1996a,c).

39
40 If NRC approves the FWENC license application, DOE plans to transfer the SNF to the
41 proposed Idaho Spent Fuel Facility when that facility becomes operational. These transfers
42 would occur completely within the boundaries of the INEEL site and would comply with INEEL
43 procedures and DOE requirements. On arrival at the proposed Idaho Spent Fuel Facility, the
44 SNF would be (i) removed from the containers in which it is currently stored, (ii) visually
45 inspected, (iii) inventoried, (iv) placed into new storage containers, and (v) placed into interim
46 storage. The storage containers are intended to be packaged for transportation and shipped to
47 a national high-level waste (HLW) repository when it becomes available. The potential



1

Figure 1-1. Location of the Proposed Idaho Spent Fuel Facility (FWENC, 2001b)

Introduction

1 environmental impacts of on-site SNF transfers within INEEL have been documented by DOE in
2 earlier NEPA documents (DOE, 1995a,b). An environmental checklist will be used to verify
3 whether the actual impacts are within the expected range (FWENC, 2003).

4
5 If approved, the proposed Idaho Spent Fuel Facility will receive, repackage, and provide interim
6 dry storage for

- 7
- 8 • 1,601.5 elements of Peach Bottom reactor SNF;
- 9 • 2,971 rods of Shippingport reactor SNF; and
- 10 • Approximately 1,600 elements of TRIGA SNF.

11
12 The Peach Bottom and Shippingport reactors ceased operation in 1974 and 1983, respectively.
13 Because of the lengthy cooling period since final operation, these fuels produce relatively low
14 decay heat compared to typical commercial SNF. The TRIGA SNF originated from TRIGA
15 reactors worldwide. Although the age of the TRIGA SNF varies, it also generates low decay
16 heat because of the design and operational characteristics of the TRIGA reactors.

17 18 **1.3 Purpose and Need for the Proposed Action**

19
20 The purpose and need for the proposed Idaho Spent Fuel Facility is to implement, in part, the
21 portion of the DOE SNF management program and INEEL record of decision (DOE, 1995a,
22 1996a) concerning construction of a dry SNF storage facility. Implementation also would allow
23 DOE to satisfy, in part, its commitments in the 1995 Settlement Agreement to procure dry
24 storage facilities to replace wet storage and below-ground facilities, employ multipurpose
25 canisters to prepare SNF for disposal, and complete removal of all SNF from Idaho by 2035.
26 These objectives would be accomplished at the proposed Idaho Spent Fuel Facility by

- 27
- 28 • Receiving SNF generated at the Peach Bottom Unit 1 High-Temperature, Gas-Cooled
29 Reactor; the Shippingport Light Water Breeder Reactor; and various TRIGA reactors;
- 30
- 31 • Transferring SNF from the DOE storage containers in which it is currently stored at
32 INTEC into new storage containers; and
- 33
- 34 • Placing the storage containers into an ISFSI licensed by NRC per 10 CFR Part 72.

35
36 Additionally, DOE specified the canister dimensions in its original request for proposal for the
37 construction of the Idaho Spent Fuel Storage Facility to meet the anticipated criteria of a
38 national HLW geologic repository and facilitate eventual removal of the SNF from the proposed
39 Idaho Spent Fuel Facility and the INEEL.

40 41 **1.4 NRC Regulation of the Proposed Idaho Spent Fuel Facility**

42
43 On November 19, 2001, FWENC filed an application with NRC for a license per 10 CFR Part 72
44 to receive, transfer, and possess SNF and operate an ISFSI at the INEEL in Butte County,
45 Idaho. If approved, the initial term of the license would be for 20 years, with the option for
46 additional renewals (10 CFR 72.42) (FWENC, 2001c, Appendix A). The NRC decisionmaking
47 process includes an environmental and safety review of the construction and operation of the
48 proposed Idaho Spent Fuel Facility. On completion of both reviews, NRC will decide whether to
49 grant a license with or without conditions, or deny the FWENC request.

1 As required in 10 CFR 51.102(a),
 2 any NRC decision on this action
 3 will be accompanied by a public
 4 record of decision. The record of
 5 decision may be integrated into
 6 any other record prepared by NRC
 7 in connection with the action [10
 8 CFR 51.103(b)].

9
 10 The NRC regulations for an ISFSI
 11 are contained in 10 CFR Part 72.
 12 Compliance with these regulations
 13 will provide reasonable assurance
 14 that the design and operation of
 15 the proposed Idaho Spent Fuel
 16 Facility will provide adequate

17 protection for public health and safety. The NRC regulations for compliance with NEPA are
 18 contained in 10 CFR Part 51. Consistent with NEPA, the NRC regulations require an EIS be
 19 completed for Federal actions that significantly affect the quality of the human environment.
 20 The NRC previously determined that licensing an away-from-reactor ISFSI requires the
 21 preparation of an EIS [10 CFR 51.20(b)(9)]. Because the proposed location for the Idaho Spent
 22 Fuel Facility is at a site not occupied by a nuclear power reactor, NRC is, therefore, preparing
 23 an EIS for the environmental review associated with this licensing action.

24

25 **1.5 Scope of This Environmental Analysis**

26

27 As required by NEPA, NRC used the scoping process to solicit public involvement and
 28 comment, and to identify, in general, the issues that need to be addressed in an EIS. The
 29 scoping process has also helped NRC to identify significant issues requiring indepth analysis.
 30 Such information has been used by NRC in preparing this EIS to support the decision whether
 31 to issue a license to FWENC for the proposed Idaho Spent Fuel Facility. During the scoping
 32 process, commenters noted that previous NEPA analyses have been prepared by DOE for
 33 INEEL (DOE, 1995b; 2002a) and by NRC for the Three-Mile Island Unit 2 ISFSI situated within
 34 the INTEC facility (NRC, 1998). Based on the scoping process, NRC reviewed the relevant
 35 sections of these previous EISs in preparing this EIS. Adequacy of the existing NEPA analyses
 36 prepared by DOE and NRC for actions at the INEEL facility (DOE, 1995b, 2002a; NRC, 1998)
 37 has been examined within the context of the proposed action and supplemented and updated
 38 as necessary. Because the scope of the proposed Idaho Spent Fuel Facility EIS is limited to
 39 the licensing action now being reviewed by NRC, issues related to decisions already made by
 40 DOE or NRC will be addressed by referencing the appropriate existing NEPA analysis and by
 41 summarizing the information, as appropriate. Development of this EIS has also been closely
 42 coordinated with development of the safety evaluation report prepared by NRC to evaluate the
 43 health and safety impacts of the proposed action.

44

Background Information on the NRC Safety Review Process

The NRC safety review of an ISFSI includes the preparation of a detailed report published as a Safety Evaluation Report. This publicly available report is based, in part, on the Safety Analysis Report submitted by the applicant (i.e., FWENC). The Safety Evaluation Report also includes the NRC review of technical issues such as adequacy of the facility design to withstand external events (e.g., earthquakes, floods, and tornadoes); radiological safety of facility operation, including doses from normal operations and accidents; emergency response plans; physical security of the facility; fire protection; maintenance and operating procedures; and decommissioning. NRC also performs a detailed safety review of the storage containers against design criteria contained in 10 CFR Part 72. The NRC standards for protection against radiation are contained in 10 CFR Part 20.

Introduction

1.5.1 Issues Studied in Detail

The notice of intent (NRC, 2002b) proposed several areas for detailed discussion in this EIS as they relate to the proposed action.

- Health and Safety: potential public and occupational consequences from construction, routine operation, transportation, and credible accident scenarios;
- Waste Management: types of wastes expected to be generated, handled, and stored and the potential consequences to public safety and the environment;
- Water Resources: surface and groundwater hydrology, water use and quality, and the potential impacts of the proposed action;
- Air Quality: meteorological conditions, ambient background levels, pollutant sources, and the potential impacts of the proposed action;
- Earth Resources: physical geography, topography, geology, and soil characteristics;
- Ecological Resources: wetlands, aquatic and terrestrial resources, economically and recreationally important species, and threatened and endangered species;
- Socioeconomic: demography, economic base, labor pool, housing, transportation, utilities, public services/facilities, education, recreation, and cultural resources;
- Natural Disasters: floods, tornadoes, volcanic activity, and seismic events;
- Cumulative Effects: impacts from past, present, and reasonably foreseeable actions at and near the site;
- Indirect Effects: transportation to the Idaho Spent Fuel Facility;
- Unavoidable Adverse Impacts: negative impacts of the proposed action and any mitigative measures; and
- Environmental Justice: any potential disproportionately high and adverse impacts to minority and low-income populations.

No additional issues were raised during the public scoping process (Appendix A). Detailed analysis of the effects of operation of the proposed facility on human health and safety are considered in the safety evaluation report prepared by the NRC.

1.5.2 Issues Eliminated from Detailed Study

Issues not directly related to the assessment of potential impacts from the proposed action now being considered were eliminated from detailed study in this EIS. The lack of indepth discussion in the EIS, however, does not mean that an issue lacks value. Issues beyond the scope of this EIS may not yet be ripe for resolution, have already been decided, or are more appropriately discussed and decided in other venues. Examples of items not analyzed in detail

1 include health and safety issues that will be considered in detail in the safety evaluation report
2 prepared by NRC and summarized in this EIS, past DOE decisions related to the management
3 of SNF at INEEL, and terrorist activities. Other issues that will not be addressed in detail are
4 summarized next.

- 5
6 • Land Use: The area that would be used for the proposed Idaho Spent Fuel Facility is
7 adjacent to the INTEC industrial facility. The area is currently used for construction
8 laydown and is disturbed from its natural state with only approximately 5-percent
9 vegetative cover (FWENC, 2001a). The land is outside areas on INEEL used for grazing
10 and will not prevent access to areas not already restricted. Only 3.2 ha [8 acres] are to
11 be committed to the proposed facility, with an additional 4.1 ha [10 acres] to be disturbed
12 as a construction laydown area. These two areas represent a small percentage of the
13 2,305-km² [890-mi²] INEEL.
- 14
15 • Noise: The proposed Idaho Spent Fuel Facility would be adjacent to an industrial facility
16 already regulated by INEEL procedures that establish workplace noise limits in
17 compliance with Occupational Safety and Health Administration standards. The site is at
18 least 5 mi [8 km] away from public areas, and noise associated with the construction
19 and operation of the proposed facility is not expected to exceed current noise levels
20 at INTEC.
- 21
22 • Scenic and Visual Resources: The proposed Idaho Spent Fuel Facility would be
23 adjacent to INTEC, an industrial facility similar in structure and appearance. The site is
24 at least 8 km [5 mi] away from public areas, and neither air emissions associated with
25 the construction and operation of the proposed facility nor the facility itself are expected
26 to alter the current visual/aesthetic resources surrounding INTEC.

27
28 These issues will be summarized in this EIS, however, detailed analyses will not be conducted,
29 and readers are referred to existing studies (DOE, 1995b; 2002a).

30 **1.5.3 Scoping Process**

31
32
33 On July 26, 2002, NRC published a notice of intent to prepare an EIS for the proposed Idaho
34 Spent Fuel Facility (NRC, 2002b). In this notice of intent, NRC announced the public scoping
35 period would extend until September 16, 2002. Announcements of the scoping process were
36 provided on the NRC Idaho Spent Fuel Facility web page
37 (<http://www.nrc.gov/waste/spent-fuel-storage/idaho-spent-fuel.html>) and in the following
38 local newspapers:

- 39
40 • *The Idaho News*, Idaho Falls, Idaho (Sunday, August 4, and Wednesday, August 7,
41 2002); and
- 42
43 • *The Idaho Statesman*, Boise, Idaho (Sunday, August 4, and Wednesday,
44 August 7, 2002).

Introduction

1 During the public comment period, NRC received about 15 written comments from
2 two organizations. The public comments, discussed in the scoping summary report
3 (Appendix A), were categorized under the following issue headings:

- 4
- 5 • NEPA Issues;
- 6 • Policy Issues;
- 7 • Ecology, Air, and Water;
- 8 • Cumulative Impacts;
- 9 • Human Health Impacts;
- 10 • Waste Management;
- 11 • Security and Terrorism; and
- 12 • INEEL Infrastructure and Existing Conditions.

13

14 The scoping process was used to help identify those issues to be discussed in detail in this EIS
15 (see Section 1.5.1) and those issues that are either beyond the scope of this EIS or are not
16 directly related to the assessment of potential impacts from the proposed action (see
17 Section 1.5.2). Additional issues, beyond those identified in the scoping process, will be
18 discussed in this EIS.

19

20 **1.6 Applicable Regulatory Requirements, Permits, and** 21 **Regional Consultations**

22

23 There are numerous applicable regulations, Federal and State licenses, permits, and other
24 approvals required for the protection of the environment in connection with construction and
25 operation of the Idaho Spent Fuel Facility. The NRC consultations are documented in
26 Appendix B. Status of the negotiations between FWENC and the responsible regulatory
27 agencies is provided in Section 12 of FWENC (2001a).

28

29 **1.6.1 Applicable Statutes, Regulations, and Permits**

30

31 **1.6.1.1 Federal Statutes and Regulatory Requirements**

32

33 The following Federal statutes are applicable to the proposed action:

- 34
- 35 • The Atomic Energy Act of 1954, as amended (42 USC §2011 et seq.), gives NRC
36 authority to license and regulate the possession, use, storage and transfer of byproduct
37 and special nuclear materials to protect public health and safety and the common
38 defense and security. Section 202(3) of the Energy Reorganization Act of 1974, as
39 amended (42 USC §5801 et seq.), permits NRC to license and regulate the DOE
40 facilities used primarily for the receipt and storage of HLWs resulting from activities
41 licensed by the Atomic Energy Act. If the license application for the proposed Idaho
42 Spent Fuel Facility is approved, it will be operated per an NRC license.
- 43
- 44 • The American Indian Religious Freedom Act of 1978 (42 USC §1996 et seq.) reaffirms
45 Native American religious freedom in the First Amendment and ensures the protection to
46 Native Americans to believe, express, and exercise their religious traditions. According
47 to this law, sacred locations and traditional resources integral to the practice of their
48 religions, as well as access to those locations, are protected.

- 1 • The Archaeological Resources Protection Act, as amended (16 USC §470aa et seq.),
2 requires a permit for excavation or removal of archaeological resources from publicly
3 held or Native American lands. If archaeological resources are discovered and
4 removed, they are to remain the property of the United States. If a resource is found on
5 land owned by a Native American tribe, the tribe must give its consent before a permit is
6 issued, and the permit must contain terms or conditions requested by the tribe. Because
7 the proposed construction area for the Idaho Spent Fuel Facility is on government-
8 owned property and has been thoroughly surveyed, it is unlikely that any unknown sites
9 will be discovered. If any resources are found, however, requirements of the
10 Archaeological Resources Protection Act will be followed.
11
- 12 • The Clean Air Act, as amended (42 USC §7506 et seq.), establishes regulations to
13 ensure air quality and authorizes individual states to manage permits. Compliance with
14 the Idaho Administrative Procedures Act 58.01.01, and Rules for the Control of Air
15 Pollution in Idaho meets Clean Air Act requirements (40 CFR Part 52).
16
- 17 • Section 402(a) of the Clean Water Act, as amended (33 USC §344 et seq.), establishes
18 water quality standards for contaminants in surface waters. The Clean Water Act
19 requires a National Pollutant Discharge Elimination System (NPDES) permit before
20 discharging any point source pollutant into U.S. waters. Although the
21 U.S. Environmental Protection Agency (EPA) can delegate permission, administration,
22 and enforcement of the NPDES program to individual states, the State of Idaho does not
23 have this delegation. There are no anticipated process discharges from the proposed
24 facility, however, storm water and snow melt runoff from the proposed Idaho Spent Fuel
25 Facility must be considered as part of the NPDES permitting process. DOE filed for a
26 Construction General Permit in accordance with 40 CFR Part 122. By its provisions,
27 FWENC is required to submit a notice of intent (EPA Form 3510-9) at least 2 days prior
28 to the start of construction. The INEEL facility maintains storm water pollution
29 prevention plans for industrial and Construction activities (DOE, 2001, 1998). A
30 site-specific Construction Storm Water Pollution Prevention Plan will be developed, but
31 does not need to be submitted to EPA. The proposed Idaho Spent Fuel Facility is
32 exempt from the industrial activities storm water permit, because it is not included in
33 EPA-identified sectors or subsectors requiring this permitting process (EPA, 2000).
34
- 35 • The Endangered Species Act, as amended (16 USC §1531 et seq.), is intended to
36 prevent the further decline of endangered and threatened species and to restore these
37 species and their habitats. The Act is jointly administered by the U.S. Departments of
38 Commerce and the Interior. Section 7 of the Act requires consultation with the U.S. Fish
39 and Wildlife Service to determine whether endangered and threatened species or their
40 critical habitats are known to be in the vicinity of the proposed action.
41
- 42 • The Native American Graves Protection and Repatriation Act of 1990 (25 USC §3001
43 et seq.) directs the Secretary of the Interior to administer the development of procedures
44 and monitor unexpected discoveries of graves or grave-related artifacts that may be
45 unearthed during ground disturbing activities on federal or Tribal owned lands. The
46 proposed location for the Idaho Spent Fuel Facility is on heavily disturbed land that has
47 been surveyed for archeological resources. Although it is unlikely that an undiscovered
48 site will be found, construction activities will be monitored to ensure that requirements of
49 this Act will be followed in the event that resources are discovered.

Introduction

- 1 • Section 106 of the National Historic Preservation Act of 1966, as amended
2 (16 USC §470 et seq.), and its implementing regulations in 36 CFR Part 800 protect
3 cultural and historic resources. If a particular Federal activity may affect an historic
4 property resource, coordinations with the State Historic Preservation officer are also
5 undertaken to ensure that potentially significant sites are properly identified and
6 appropriate mitigative actions are implemented. In 2001, the Idaho State Historical
7 Society (State Historic Preservation Office) was consulted by the Cultural Resources
8 Management Office at INEEL regarding the potential construction activities of the
9 proposed Idaho Spent Fuel Facility. A letter was sent by the Cultural Resources
10 Management Office to the Idaho State Historical Society seeking concurrence that the
11 proposed construction activities would not affect any historic properties. The Idaho
12 State Historical Society replied in a letter dated May 4, 2001, that the project could be
13 completed with no effect to historic properties (Idaho State Historical Society, 2001).
14
- 15 A Memorandum of Agreement was negotiated in 1998 between DOE, Idaho Field Office,
16 and Idaho State Historic Preservation Office for the Fuel Receiving and Storage building
17 (CPP-603) within the INTEC boundaries and was submitted to the Advisory Council on
18 Historic Preservation pursuant to 36 CFR 800.6 (A). The Memorandum of Agreement
19 recognizes that the Fuel Receiving and Storage building will be “fully or partially
20 decontaminated and dismantled (D&D) for reasons of environmental concern, human
21 health and safety, security, and economy.” Although the construction of the proposed
22 Idaho Spent Fuel Facility is not the impetus for the removal of the Fuel Receiving and
23 Storage building, once the fuel has been transferred from that building to the proposed
24 Idaho Spent Fuel Facility, the building will be in a more ready state for removal as
25 referenced in the Memorandum of Agreement. The Memorandum of Agreement states
26 the stipulations and requirements to be followed before and after the removal of the Fuel
27 Receiving and Storage building.
28
- 29 • The Nuclear Waste Policy Act of 1982, as amended (42 USC §10101 et seq.),
30 authorizes federal agencies to develop a geologic repository for the permanent disposal
31 of SNF and HLW. The Act specifies the process for selecting a repository site and
32 constructing, operating, closing, and decommissioning the repository. DOE would apply
33 for an NRC license according to regulations in 10 CFR Part 63. SNF that would be
34 stored at the proposed Idaho Spent Fuel Facility would eventually be transported to a
35 repository that becomes available, in accordance with the DOE shipment schedules.
36
- 37 • The Occupational Safety and Health Act of 1970, as amended (29 USC §651 et seq.),
38 establishes standards to enhance safe and healthy working conditions in places of
39 employment throughout the United States. The Act is administered and enforced by the
40 Occupational Safety and Health Administration, a U.S. Department of Labor agency.
41 The Occupational Safety and Health Administration jurisdiction is limited to safety and
42 health conditions that exist in the workplace environment. In general, per the Act, it is
43 the duty of each employer to furnish all employees with a place of employment free of
44 recognized hazard likely to cause death or serious physical harm. Employees have a
45 duty to comply with the occupational safety and health standards and all rules,
46 regulations, and orders issued according to the Act. Occupational Safety and Health
47 Administration regulations (published in Title 29 of the Code of Federal Regulations)
48 establish specific standards for a safe and healthful working environment. DOE places
49 emphasis on compliance with these regulations at DOE facilities and prescribes through

1 DOE orders the Occupational Safety and Health Act standards that contracts shall meet,
2 as applicable to the work at government-owned, contractor-operated facilities (DOE
3 Order 5480.1B, 5483.1A). DOE keeps and makes available the various records of minor
4 illnesses, injuries, and work-related deaths required by Occupational Safety and Health
5 Administration regulations.
6

- 7 • The Resource Conservation and Recovery Act (RCRA), as amended (42 USC §692
8 et seq.), requires EPA to establish standards for hazardous waste generators. As
9 identified in 40 CFR Part 272, compliance with the requirements of the Idaho Hazardous
10 Waste Management Program (Idaho Administrative Procedures Act 58.01.05) will meet
11 requirements for permission, administration, and enforcement of RCRA.
12
- 13 • The Safe Drinking Water Act, as amended [42 USC §300 (F) et seq.], is intended to
14 protect the quality of the public water supplies and sources of drinking water. The
15 implementing regulations, administered by the EPA unless delegated to the states,
16 establish standards applicable to public water systems. Other programs established by
17 the Safe Drinking Water Act include the Sole Source Aquifer Program, the Wellhead
18 Protection Program, and the Underground Injection Control Program. The Snake River
19 Plain Aquifer below the INEEL and the proposed Idaho Spent Fuel Facility is classified
20 as a sole source aquifer.
21
- 22 • Executive Order 11988 (Floodplain Management) directs Federal agencies to establish
23 procedures to ensure that the potential effects of flood hazards and floodplain
24 management are considered for any action undertaken in a floodplain and that floodplain
25 impacts be avoided to the extent practicable.
26
- 27 • Executive Order 12898 (Environmental Justice) directs Federal agencies to achieve
28 environmental justice by identifying and addressing, as appropriate, disproportionately
29 high and adverse human health or environmental effects of its programs, policies, and
30 activities on minority populations and low-income populations in the United States and
31 its territories and possessions. The Order creates an Interagency Working Group on
32 Environmental Justice and directs each Federal agency to develop strategies within
33 prescribed time limits to identify and address environmental justice concerns. The Order
34 further directs each Federal agency to collect, maintain, and analyze information on the
35 race, national origin, income level, and other readily accessible and appropriate
36 information for areas surrounding facilities or sites expected to have a substantial
37 environmental, human health, or economic effect on the surrounding populations, when
38 such facilities or sites become the subject of a substantial Federal environmental
39 administrative or judicial action, and to make such information publicly available.
40
- 41 • Executive Order 13007 (Indian Sacred Sites) directs Federal agencies, to the extent
42 permitted by law and not inconsistent with agency missions, to avoid adverse effects to
43 sacred sites and to provide access to those sites to Native Americans for traditional
44 religious practices.
45
- 46 • Executive Order 13175 (Consultation and Coordination with Indian Tribal Governments)
47 directs Federal agencies to establish consistent consultation and collaboration with tribal
48 governments in the development of Federal policies that are relative to tribal interests, to

Introduction

1 strengthen relationships between Federal and tribal governments, and to maintain
2 significant communications.

4 **1.6.1.2 State Licenses and Permits**

5
6 Prior to submitting the November 2001 license application to NRC, FWENC consulted with the
7 Idaho Department of Environmental Quality–Idaho Falls Regional Office, which is responsible
8 for the geographic area that includes INEEL. The Idaho regional administrator is responsible for
9 approving the Permit to Construct. As part of these consultations, FWENC committed to submit
10 a Permit to Construct Categorical Exemption request at least 1 year prior to beginning
11 construction at the proposed facility. FWENC also consulted with the Idaho Department of
12 Environmental Quality INEEL Oversight Committee on August 15, 2001.

13
14 State permits include

- 15
16 • The State of Idaho regulates pollutant emissions through the Idaho Administrative
17 Procedures Act 58.01.01, Rules for the Control of Air Pollution in Idaho. Because the
18 proposed Idaho Spent Fuel Facility is not a major facility as defined by the Idaho
19 Administrative Procedures Act 58.01.01, Part 006.55, and expected radionuclide
20 emissions are less than 1 percent of the site boundary dose limit of 10 mrem/yr
21 [0.1 mSv/yr], the proposed Idaho Spent Fuel Facility will be exempt from the need for a
22 National Emission Standards for Hazardous Air Pollutants application. FWENC will
23 submit a Permit to Construct Categorical Exemption request to the Idaho Department of
24 Environmental Quality prior to any construction activities (FWENC, 2001a).
- 25
26 • The State of Idaho regulates hazardous waste through the Idaho Administrative
27 Procedures Act 58.01.05, Rules and Standards for Hazardous Waste and incorporates
28 the EPA RCRA requirements. FWENC is considered a conditionally exempt,
29 small-quantity generator of hazardous waste {<100 Kg [220 lb] of hazardous waste per
30 month} at the proposed Idaho Spent Fuel Facility, and is thus exempt from the need for
31 a RCRA permit per 40 CFR 270.1(c)(2)(iii).

33 **1.6.2 Consultations**

34
35 FWENC consulted with the INEEL Cultural Resource Management Office for information on the
36 historic, scenic, archaeological, architectural, and cultural aspects of the site of the proposed
37 Idaho Spent Fuel Facility (Idaho State Historical Society, 2001). A supplemental report was
38 prepared and provided as an appendix to the FWENC environmental report (FWENC, 2001a).
39 In preparing this EIS, NRC consulted with the Idaho State Historic Preservation Office to identify
40 other parties to the proposed action and to confirm previous findings of no adverse impacts to
41 historic properties. DOE currently maintains an INEEL Architectural Properties Management
42 Plan and is party to a Memorandum of Agreement with the Idaho State Historic Preservation
43 Office (Braun, 2002; DOE, 2002a).

44
45 NRC consulted with the U.S. Fish and Wildlife Service (see Appendix B) to determine the status
46 of endangered and threatened species that may be present at the site of the proposed Idaho
47 Spent Fuel Facility and to evaluate the proposed action for compliance with the Endangered
48 Species Act.

1 As part of the INEEL Long-Term Stewardship Strategic Plan (DOE, 2002b), DOE has committed
2 to keep the Shoshone–Bannock Tribes informed of activities on INEEL. At INEEL facility, DOE
3 and the Shoshone–Bannock Tribes of the Fort Hall Reservation entered into an agreement in
4 principle to govern formal communication.

6 **1.6.3 Cooperating Agencies**

7
8 During the scoping process, no federal, state, or local agencies were identified as potential
9 cooperating agencies in the preparation of this EIS.

11 **1.6.4 Organizations Involved in the Proposed Action**

12
13 Three organizations have specific roles in the proposed action:

14
15 DOE and its subcontractors operate and manage the activities at INEEL through the DOE Idaho
16 Operations Office. These activities include managing SNF storage in accordance with the terms
17 of the 1995 Settlement Agreement. With regard to the proposed action, DOE is responsible for
18 moving the SNF from its current location at INTEC to the proposed Idaho Spent Fuel Facility
19 adjacent to INTEC. DOE will retain ownership of the SNF stored in the proposed Idaho Spent
20 Fuel Facility and will remain financially responsible for the eventual decontamination and
21 decommissioning of the facility. According to terms of the 1995 Settlement Agreement, DOE is
22 responsible for removing the SNF from Idaho prior to 2035.

23
24 FWENC is the license applicant. An indirect wholly owned subsidiary of Foster Wheeler Ltd.,
25 FWENC would design, construct, and initially operate the proposed Idaho Spent Fuel Facility
26 per contract with DOE. According to terms of the contract, the specific fuel to be stored at the
27 applicant facility consists of Cores 1 and 2 from the Peach Bottom Unit 1, High-Temperature,
28 Gas-Cooled Reactor that operated from March 1966 until October 1974; various reflector
29 modules and rods from Shippingport, an experimental light water breeder reactor that ceased
30 operation in 1983; and SNF assemblies from various TRIGA reactors.

31
32 NRC is the licensing agency. NRC has the responsibility to evaluate the license application for
33 compliance with the NRC regulations associated with dry storage installations. These include
34 standards for protection against radiation in 10 CFR Part 20 and requirements for independent
35 storage of SNF in 10 CFR Part 72. To fulfill the NRC responsibilities in NEPA, the
36 environmental impacts of the proposed action will be evaluated against the requirements of
37 10 CFR Part 51 and documented in this EIS.

39 **1.7 References**

40
41 Braun, J.B. "INEEL Architectural Properties Management Plan." INEEL/EXT-02-1338. Idaho
42 Falls, Idaho: DOE, Idaho Operations Office. 2002.

43
44 DOE. "Idaho High-Level Waste and Facilities Disposition Final Environmental Impact
45 Statement." DOE/EIS-0287-F. Idaho Falls, Idaho: DOE, Idaho Operations Office. 2002a.

46
47 ———. DOE/ID-11008, Rev. 0, "INEEL Long-Term Stewardship Strategic Plan." Idaho Falls,
48 Idaho: DOE, Idaho Operations Office. 2002b.

Introduction

- 1 ———. DOE/ID-10431, "INEEL Storm Water Pollution Prevention Plan for Industrial Activities."
2 Idaho Falls, Idaho: DOE, Idaho Operations Office. 2001.
3
- 4 ———. DOE/ID-10425(98), "INEEL Storm Water Pollution Prevention Plan for Construction
5 Activities—Generic Plan." Idaho Falls, Idaho: DOE, Idaho Operations Office. 1998.
6
- 7 ———. "Programmatic Spent Nuclear Fuel Management and Idaho National Engineering
8 Laboratory Environmental Restoration and Waste Management Programs." *Federal Register*.
9 Vol. 61. pp. 9441–9443. March 8, 1996a.
10
- 11 ———. DOE/EIS-0218-F, "Proposed Nuclear Weapons Nonproliferation Policy Concerning
12 Foreign Research Reactor Spent Nuclear Fuel Environmental Impact Statement." Washington,
13 DC: DOE, Idaho Operations Office. 1996b.
14
- 15 ———. "Record of Decision for the Final Environmental Impact Statement on a Proposed
16 Nuclear Weapons Nonproliferation Policy Concerning Foreign Research Reactor Spent Nuclear
17 Fuel: Notice." *Federal Register*. Vol. 61. pp. 25092–25103. May 17, 1996c.
18
- 19 ———. "Environmental Statements Availability, etc; Programmatic Spent Nuclear Fuel
20 Management and Idaho National Engineering Laboratory Environmental Restoration and Waste
21 Management Programs." *Federal Register*. Vol. 60. pp. 28680–28696. June 1, 1995a.
22
- 23 ———. DOE/EIS-0203-F, "Department of Energy Programmatic Spent Nuclear Fuel
24 Management and Idaho National Engineering Laboratory Environmental Restoration and Waste
25 Management Programs Final Environmental Impact Statement." Idaho Falls, Idaho: DOE,
26 Idaho Operations Office. 1995b.
27
- 28 EPA. "Final Reissuance of National Pollutant Discharge Elimination System (NPDES) Storm
29 Water Multi-Sector General Permit for Industrial Activities." *Federal Register*. Vol. 65.
30 pp. 64746–64795. October 30, 2000.
31
- 32 FWENC. "Foster Wheeler Environmental Corporation Idaho Spent Fuel Facility Response to
33 NRC Request for Additional Information Related to Environmental Review." Letter (March 7)
34 from R.D. Izatt to NRC. NRC Docket No. 72-25, TAC No. L20768. FW-NRC-ISF-03-0048.
35 Richland, Washington: FWENC. 2003. [The preceding document is available for public review
36 through the NRC electronic reading room at <http://www.nrc.gov/reading-rm/adams.html>.]
37
- 38 ———. "Environmental Report, Idaho Spent Fuel Facility." NRC Docket No. 72-25.
39 ISF-FW-RPT-0032. Morris Plains, New Jersey: FWENC. 2001a.
40
- 41 ———. "Safety Analysis Report, Idaho Spent Fuel Facility." NRC Docket No. 72-25.
42 ISF-FW-RPT-0033. Morris Plains, New Jersey: FWENC. 2001b.
43
- 44 ———. "License Application, Idaho Spent Fuel Facility." NRC Docket No. 72-25.
45 ISF-FW-RPT-0127. Morris Plains, New Jersey: FWENC. 2001c.
46

- 1 Idaho State Historical Society. "Idaho Spent Fuel Facility, Idaho National Engineering and
2 Environmental Laboratory (INEEL)." Letter (May 4) from S.P. Neitzel to B.R. Pace, INEEL.
3 Boise, Idaho: Idaho State Historical Society. 2001. [The preceding document is available for
4 public review through the NRC electronic reading room at
5 <http://www.nrc.gov/reading-rm/adams.html>.]
6
- 7 NRC. "Foster Wheeler Environmental Corporation, Idaho Spent Fuel Facility; Notice of
8 Docketing, Notice of Consideration of Issuance, and Notice of Opportunity for a Hearing for a
9 Materials License for the Idaho Spent Fuel Facility." *Federal Register*. Vol. 67.
10 pp. 43358–43359. June 27, 2002a.
- 11
12 ———. "Foster Wheeler Environmental Corporation's Proposed Idaho Spent Fuel Facility;
13 Notice of Intent to Prepare an Environmental Impact Statement and Conduct Scoping Process."
14 *Federal Register*. Vol. 67. pp. 48953–48956. July 26, 2002b.
- 15
16 ———. NUREG–1626, "Final Environmental Impact Statement for the Construction and
17 Operation of an Independent Spent Fuel Storage Installation to Store the Three Mile Island
18 Unit 2 Spent Fuel at the Idaho National Engineering and Environmental Laboratory."
19 Washington, DC: NRC. March 1998.