For the Nuclear Regulatory Commission.

E. William Brach,

Director, Spent Fuel Project Office, Office of Nuclear Material Safety and Safeguards.

[FR Doc. 99–6905 Filed 3–19–99; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

[Docket No. 72–20]

Department of Energy, Idaho Operations Office; Issuance of Environmental Assessment and Finding of No Significant Impact Regarding the Proposed Exemption From Certain Regulatory Requirements of 10 CFR Part 72

The U.S. Nuclear Regulatory Commission (NRC or Commission) is considering issuance of an exemption, pursuant to 10 CFR 72.7, from the requirements of 10 CFR 72.102(f)(1) to the U.S. Department of Energy, Idaho Operations Office (DOE–ID or applicant). Exemption from 10 CFR 72.102(f)(1) would relieve DOE-ID from the requirements to use a design earthquake (DE) ground motion equivalent to that of a safe shutdown earthquake (SSE) for a nuclear power plant, as evaluated by the methods of Appendix A of Part 100 for its proposed Independent Spent Fuel Storage Installation (ISFSI). The proposed ISFSI is to be located at the Idaho National Engineering and Environmental Laboratory (INEEL), within the Idaho Nuclear Technology and Engineering Center (INTEC) site in Scoville, Idaho. The proposed ISFSI would store the spent nuclear fuel debris created as a result of the Three Mile Island Unit 2 (TMI–2) accident.

Environmental Assessment (EA)

Identification of Proposed Action

The applicant is seeking Commission approval to construct and operate an ISFSI at INTEC. INTEC is an existing facility initially constructed to both store and reprocess spent fuel and high-level waste possessed by DOE. Pursuant to 10 CFR part 72, DOE–ID submitted an application, including a Safety Analysis Report (SAR), for the ISFSI, by letter dated October 31, 1996, as supplemented. NRC staff is currently performing a review of that application. On September 15, 1997, DOE–ID requested an exemption from the requirement of 10 CFR 72.102(f)(1) which states: ''For sites that have been evaluated under the criteria of appendix A of 10 CFR part 100, the design earthquake (DE) must be equivalent to the safe shutdown earthquake (SSE) for a nuclear power plant.'' In this context, ''DE'' and ''SSE'' refer to the design peak ground acceleration (PGA), with an appropriate response spectrum, caused by the largest credible earthquake. The most recent deterministic seismic hazard analysis for the ISFSI site, completed in accordance with appendix A of part 100, yields a DE of 0.56 g PGA. However, DOE–ID proposes a DE with a 0.36 g PGA as an adequately conservative seismic design for the ISFSI.

The staff is considering granting the requested exemption from 10 CFR 72.102(f)(1).

Need for the Proposed Action

The applicant is preparing to build and operate the TMI–2 ISFSI as described in its application and SAR, subject to approval of the pending licensing application. Specifically, DOE is concerned with designing low risk facilities, such as an ISFSI, to the requirements of 10 CFR part 100, appendix A, as it would set precedent that appears to be unnecessary, technically inappropriate, and potentially unattainable throughout the DOE complex. The DOE–ID seismic hazard analysis meeting the requirement of 10 CFR 72.102(f)(1) yields a DE of 0.56 g PGA, with an appropriate response spectrum, for the ISFSI site. DOE–ID proposes a DE of 0.36 g PGA, with an appropriate response spectrum. DOE–ID justifies this value with a site-specific radiological risk analysis.

In response to DOE's September 15, 1997, letter requesting this exemption, the staff prepared a safety evaluation report which was forwarded to the Commission as an attachment to SECY–98–071 (April 8, 1998). In that paper, the staff recognized that although 10 CFR part 72 does not currently allow PSHA e.g., ''risk-based,'' as an acceptable methodology for deriving a DE for an ISFSI, the PSHA results are being accepted by NRC in other licensing actions. The PSHA method is acceptable for nuclear power plants under the January 1997 revisions to 10 CFR parts 50 and 100. Furthermore, NRC has accepted the PSHA method for the design and performance assessment for the proposed high-level waste repository at Yucca Mountain. On May 20, 1998, the Commission informed the staff that it did not object to the proposed exemption.

A complete safety evaluation is available as part of SECY–98–071. In summary, it found that when 10 CFR part 72 was first promulgated in 1980, ISFSIs were largely envisioned to be either spent fuel pools or single, massive dry storage structures. Given the potential accident scenarios, a DE equivalent to a nuclear power plant SSE seemed appropriate for these facilities. Furthermore, for ISFSIs to be located at a nuclear power plant, the DE value was readily available without additional site characterization work, save the geotechnical investigation at the specific ISFSI location. However, an ISFSI storing spent fuel in dry casks or canisters is inherently less hazardous and less vulnerable to earthquake-initiated accidents than an operating nuclear power plant. NRC recognized this in the initial part 72, ''Statements of Consideration,'' and stated that the DE for cask and canister technology need not be as high as a nuclear power plant SSE: ''For ISFSIs which do not involve massive structures, such as dry storage casks and canisters, the required design earthquake will be determined on a case-by-case basis until more experience is gained with licensing these types of units.'' The staff believes that this experience has been gained over the past 13 years of ISFSI operations.

Environmental Impacts of the Proposed Action

The ''Final Environmental Impact Statement (FEIS) for the Construction and Operation of the TMI–2 Independent Spent Fuel Storage Installation,'' NUREG–1626 (March 1998), considered the potential environmental impacts of licensing this facility, including potential accidents during storage. A description of the potential accidents during storage is provided in Section 4.1.2.7.3 of NUREG–1626.

An ISFSI is designed to mitigate the effects of design basis accidents that could occur during storage. Design basis accidents account for human-caused events and the most severe natural phenomena reported for the site and surrounding area. Postulated accidents analyzed for an ISFSI include tornado winds and tornado generated missiles, design basis earthquakes, design basis floods, accidental cask drops, lightning effects, fires, explosions, and other incidents.

Special ISFSI design features include using nonflammable materials, providing a horizontal storage module with walls and a roof of structural steel and reinforced concrete (approximately 2.5 feet (0.76 meter) thick) to house a dry-shielded steel canister, and a passive ventilation system. Considering the specific design requirements for each accident condition, the design of the ISFSI would prevent loss of

containment, shielding, or criticality control.

The bounding consequences of a major seismic event at an ISFSI using the NUHOMS system technology are limited by a canister drop onto the concrete pad, although this would occur only at a ground motion well above the proposed 0.36 g PGA design value, as detailed in Section 8.2.3.2 of the TMI–2 ISFSI SAR. The casks and canisters are designed to withstand such events with no release of radioactive material. The effects of a NUHOMS canister drop are analyzed in Section 8.2.5.2 of the SAR. In addition, analysis of beyond-design basis accidents leading to cask or canister rupture estimate off-site doses well below the 0.05 Sv (5 rem) whole body dose limit of 10 CFR 72.106(b). In a letter dated July 19, 1996, DOE–ID presented a conservative analysis of off-site doses resulting from a beyond-design basis accident. In this hypothetical accident, for which neither DOE–ID nor the staff has identified a credible mechanism, both a NUHOMS dry shielded canister and one of the 12 inner core debris canisters are assumed to fail, allowing unmitigated dispersal of the contents. The calculated off-site dose from such an accident is 0.75 mSv (75 mrem), well below the 0.05 Sv (5 rem) siting evaluation factor of 10 CFR 72.106(b).

DOE–ID has completed both a Deterministic Seismic Hazard Analysis (DSHA) (Appendix A of Part 100) and PSHA (10 CFR 100.23) for the ISFSI site. The staff has evaluated these analyses and finds the resultant values acceptable: 0.56 g PGA for an SSE by the deterministic method and 0.30 g PGA mean ground motion with a 2000-year return period by the probabilistic method. The staff finds acceptable the risk-graded approach to seismic hazard characterization and design in DOE Standard 1020, which is similar to the risk-graded approach of using the 2000-year return period mean ground motion as the DE is adequately conservative. Moreover, the expected life span of the ISFSI, 20 years with the possibility of renewal, per 10 CFR 72.42, justifies use of this ground motion as the DE. The DE proposed by DOE–ID for the ISFSI, 0.36 g PGA with an appropriate response spectrum exceeds the 0.30 g PGA value for the 2000-year return period mean ground motion. Therefore, the staff concludes that granting the requested exemption from 10 CFR 72.102(f)(1) will maintain an adequate design margin for seismic events and will not be inimical to public health and safety.

Alternatives to the Proposed Action

Since there are no significant environmental impacts associated with the proposed action, any alternatives with equal or greater environmental impact are not evaluated. The alternative to the proposed action would be to deny approval of the 10 CFR 72.102(f)(1) exemption and require that DOE design the facility to withstand the effects of a higher PGA. This alternative would have no significant environmental impact as well.

Agencies and Persons Consulted

On March 1, 1999, Mr. Alan Merritt from the State of Idaho, INEEL Oversight Program, was contacted about the EA for the proposed action and had no concerns.

Finding of no Significant Impact

The environmental impacts of the proposed action have been reviewed in accordance with the requirements set forth in 10 CFR part 51. Based upon the foregoing EA, the Commission finds that the proposed action of granting an exemption from 10 CFR 72.102(f)(1), given the absence of radiological consequences from any credible seismic event, will not significantly impact the quality of the human environment. Accordingly, the Commission has determined not to prepare an environmental impact statement for the proposed exemption.

The staff finds acceptable the risk-graded approach to seismic hazard characterization and design in DOE Standard 1020, which is similar to the risk-graded approach to design basis events in 10 CFR part 60. Given the absence of radiological consequences from any credible seismic event, the staff finds that the DOE Standard 1020 risk-graded approach of using the 2000-year return period mean ground motion as the DE is adequately conservative. Moreover, the expected life span of the ISFSI, 20 years with the possibility of renewal, per 10 CFR 72.42, justifies use of this ground motion as the DE. The DE proposed by DOE–ID for the ISFSI, 0.36 g PGA with an appropriate response spectrum, exceeds the 0.30 g PGA value for the 2000-year return period mean ground motion. Therefore, the staff concludes that granting the requested exemption from 10 CFR 72.102(f)(1) will maintain an adequate design margin for seismic events and will not be inimical to public health and safety.

This application was docketed under 10 CFR part 72, Docket 72–20. For further details with respect to this action, see the application for an ISFSI license dated October 31, 1996, and the request for exemption dated September 15, 1997, which is available for public inspection at the Commission's Public Document Room, 2120 L Street, NW, Washington, DC 20555 and the Local Public Document Room at the INEEL Technical Library, 1776 Science Center Drive, Idaho Falls, ID 83402.

Dated at Rockville, Maryland, this 13th day of March 1999.

For the Nuclear Regulatory Commission.

E. William Brach,

Director, Spent Fuel Project Office, Office of Nuclear Material Safety and Safeguards.

[FR Doc. 99–6909 Filed 3–19–99; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

[Docket No. 72–20]

Department of Energy, Idaho Operations Office; Issuance of Environmental Assessment and Finding of No Significant Impact Regarding the Proposed Exemptions From Certain Regulatory Requirements of 10 CFR Part 10

The U.S. Nuclear Regulatory Commission (NRC or Commission) is considering issuance of an exemption, pursuant to 10 CFR 20.2301, from the requirements of 10 CFR 20.1501(c) to the U.S. Department of Energy, Idaho Operations Office (DOE–ID or applicant). Exemption from 10 CFR 20.1501(c) would allow DOE–ID to use a DOE Laboratory Accreditation Program process for personnel dosimetry at its proposed Independent Spent Fuel Storage Installation (ISFSI). The proposed ISFSI is to be located at the Idaho National Engineering and Environmental Laboratory (INEEL), within the Idaho Nuclear Technology Engineering Center (INTEC) site in Scoville, Idaho. The proposed ISFSI would store the spent nuclear fuel debris created as a result of the Three Mile Island Unit 2 (TMI–2) accident.

Environmental Assessment (EA)

Identification of Proposed Action: The applicant is seeking Commission approval to construct and operate an ISFSI at INTEC. INTEC is an existing facility initially constructed to both store and reprocess spent fuel and high-level waste processed by DOE. Pursuant to 10 CFR Part 72, DOE–ID submitted an application, including a Safety Analysis Report (SAR), for the ISFSI by letter dated October 31, 1996, as supplemented. NRC staff is currently performing a review of that application. On December 18, 1998, DOE–ID