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Backgrounder

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FEDERAL AGENCIES INVOLVED IN THE IMPLEMENTATION OF THE NUCLEAR WASTE POLICY ACT OF 1982

INTRODUCTION

The U.S. Department of Energy (DOE) has the primary responsibility for siting, constructing, and operating the elements of the radioactive waste management system mandated by the Nuclear Waste Policy Act of 1982 (NWPA). The U.S. Nuclear Regulatory Commission (NRC) has the primary regulatory responsibility for review of the nuclear safety aspects of certain DOE actions and for licensing the elements of the radioactive waste management system.

The Environmental Protection Agency (EPA) is responsible for developing generally applicable environmental standards for the management and disposal of spent nuclear fuel and high-level waste. EPA is also responsible for environmental review of various DOE actions pertaining to the siting of geologic repositories. The Council on Environmental Quality (CEQ) and the Department of the Interior (DOI) also have review responsibilities specified under the NWPA.

Four other Federal agencies—whose roles are not directly specified in the NWPA—have responsibilities by law with respect to certain actions required to site, construct, license, and operate the NWPA-mandated radioactive waste management system. They are the Department of Agriculture (USDA), Department of Defense (DOD), Department of Justice (DOJ), and Department of Transportation (DOT).

Of these other Federal agencies, the Department of Transportation (DOT) has a major role in that it has general responsibility for regulating safety in the transport of hazardous materials, including radioactive waste.

This backgrounder describes the regulatory responsibilities of the NRC and the EPA in siting and developing the Nation's first repository. It also outlines the responsibilities of DOT and the NRC in establishing a system for

transporting spent nuclear fuel and high-level radioactive waste. In addition, it identifies the NRC's role in licensing a monitored retrievable storage (MRS) facility, if the facility is approved by Congress. Finally, it provides an overview of DOI and CEQ review responsibilities under the NWPA.

REPOSITORY SITING AND DEVELOPMENT ACTIVITIES

Nuclear Regulatory Commission

The NRC is centrally involved as the primary regulatory agency in the repository siting, construction, operation, and decommissioning phases. At the beginning of the siting process, the NWPA required NRC concurrence on DOE's siting guidelines¹ before adoption. The NRC is also required by the NWPA to adopt DOE's environmental impact statement (EIS) "to the extent practicable" in connection with issuance by the NRC of a construction authorization and a repository license.

The NWPA also requires that the NRC promulgate technical requirements and criteria to be used in licensing a repository (10 CFR 60). These regulations consist of procedural rules for the licensing of geologic repositories and technical criteria used in the evaluation of license applications submitted under the procedural rules. The procedural portion of 10 CFR 60 sets forth the basic steps of the licensing process for the repository, and also provides specific requirements for a site characterization program and the associated site characterization plan. The technical criteria of 10 CFR 60 stipulate a number of performance objectives. The NRC has issued (June 1986) a proposed rule to amend 10 CFR 60 to conform existing NRC regulations to the standards promulgated by the EPA in 40 CFR 191.

¹10 CFR 960, "Nuclear Waste Policy Act of 1982; General Guidelines for the Recommendation of Sites for the Nuclear Waste Repositories; Final Siting Guidelines," U.S. Department of Energy, December 6, 1984.

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To provide current background information on program facts, issues, and initiatives. For further information write to: Information Services Division, Office of Civilian Radioactive Waste Management, U.S. Department of Energy, Mail Stop RW-40, Washington, DC 20585, Telephone (202) 586-5722.

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The most intensive level of NRC involvement occurs during the site characterization and license application phases of the repository program, where the NRC has considerable oversight authority. The NRC's activities during each phase are discussed in the following sections.

Site Characterization. Prior to the selection of a site for the first repository, the three candidate sites—Yucca Mountain, Nevada; Deaf Smith County, Texas; and Hanford, Washington—will undergo site characterization pursuant to the requirements of the NWPA. Before sinking exploratory shafts at the three sites, DOE must prepare a site characterization plan (SCP) that summarizes information collected to date about the geologic conditions at the site, describes conceptual designs for the repository and the waste package, and presents plans for obtaining the data necessary to demonstrate the suitability of the sites for a repository.

Specifications for the content of the SCP are presented in Section 113(b)(1) of the NWPA and in Section 60.17 of 10 CFR 60. To facilitate compliance with these requirements, the NRC has developed regulatory guidance on the format and content of the SCP for geologic repositories (Regulatory Guide 4.17, Standard Format and Content of Site Characterization Plans for High-Level-Waste Geologic Repositories, Proposed Revision 1). The NRC also has the authority pursuant to the NWPA to require additional information in the SCP. When the SCP is released for public review, the NRC will review it and provide comments in the form of a Site Characterization Analysis, as required by 10 CFR 60.

Before proceeding with site characterization, DOE has agreed to have a quality assurance (QA) program in place. Audited by the NRC, the QA program will provide demonstrable evidence that both the public's health and safety are adequately protected. Structures, systems, and components important to public safety; barriers important to waste isolation; and engineering and technological data will be subjected to QA methods and procedures.

Pursuant to the NWPA, the NRC will also review and comment on the National Environmental Policy Act (NEPA) and the EIS (draft) for the site selected for the first repository. The NRC will also review and comment on the adequacy of site characterization studies for inclusion in the license application for the first repository [Sections 114(a)(1)(b) and (E) of the NWPA].

Licensing. After the President recommends a site for the first repository to Congress and the site designation becomes effective, the Secretary of Energy is required by the NWPA to submit a license application to the NRC.

If the NRC approves the application as required by 10 CFR 60.31, it will then issue DOE a construction authorization.

Between the time a license application is submitted and the construction authorization is granted (approximately 27 months are planned for NRC review and the required adjudicatory proceedings), the NRC is required by the NWPA to submit annual reports to Congress that describe the progress made in processing the license application [Section 114(c) of the NWPA]. Once the NRC grants authorization, construction can begin.

Environmental Protection Agency

The NWPA charges the EPA with responsibility for promulgating generally applicable standards for geologic repositories to protect the health and safety of the public from potential hazards due to the disposal of spent nuclear fuel and high-level radioactive waste. On August 15, 1985, the EPA promulgated standards (40 CFR 191) for protecting the public from the offsite release of radioactive materials pursuant to Section 121(a) of the NWPA. The key provisions of these standards are: (1) limits on the radiation dose equivalent to any member of the public as result of preclosure operations; (2) a limit on the amount of radioactivity that may enter the environment for 10,000 years after disposal; (3) limits on the radiation dose that can be delivered to any member of the public for 1,000 years after disposal; and (4) requirements for the protection of certain sources of ground water for 1,000 years after disposal. Compliance with EPA standards will be enforced, as noted above, by the NRC.

Pursuant to the NWPA, the EPA has reviewed and commented on DOE's siting guidelines (10 CFR 960), as well as environmental assessments (EAs), for the first repository. The EPA must also review and comment on DOE's EIS. In this regard, DOE has requested that the EPA serve as a "cooperating agency" during development of the EIS. When the draft EIS is complete, the EPA will review and comment on the document, pursuant to Section 309 of the Clean Air Act.

NWPA TRANSPORTATION ACTIVITIES

DOT and the NRC are responsible, by law, for regulating safety in the development and operation of a radioactive waste management transportation system serving the repository and an MRS facility, should one become part of the waste management system.

In June 1979, the NRC and DOT signed a Memorandum of Understanding that delineates the respective

responsibilities of each agency under law for regulation of safety in the transportation of radioactive materials. Generally, DOT is responsible for regulating safety in receipt, use, and transfer of radioactive materials as specified in 10 CFR 171. The NRC is responsible for review and approval of package designs for the transportation of radioactive waste.

Department of Transportation

DOT signed a Memorandum of Understanding with DOE in August 1985. The document outlined the agencies' responsibilities under the NWPA pertaining specifically to the transportation of spent nuclear fuel and high-level radioactive waste. The memorandum stipulates that "management of the transportation of spent fuel and high-level radioactive wastes under the NWPA resides with DOE's Office of Civilian Radioactive Waste Management." However, this task will be performed in full compliance with all applicable DOT regulations. The memorandum also states that DOE and DOT will exchange information, consult with each other, and provide appropriate support within the areas of their responsibilities. Both DOT and DOE will interact as well with public and intergovernmental agencies to identify transportation-related impacts and acceptable transportation routes.

Nuclear Regulatory Commission

In November 1983, DOE signed a procedural agreement with the NRC concerning the planning assumptions and procedures that each agency will observe for development of transportation packaging under provisions of the NWPA. DOE has agreed to use packaging that has been approved by the NRC in accordance with 10 CFR 71. Under this agreement, the NRC will be responsible for reviewing safety analyses (called the "Safety Analyses Report Packages") on transportation casks for spent nuclear fuel and high-level radioactive waste. The NRC will also be responsible for inspecting and certifying casks before use by the Office of Civilian Radioactive Waste Management for transporting radioactive waste.

MONITORED RETRIEVABLE STORAGE FACILITY

The NWPA, in addition to authorizing DOE to develop and operate a geologic repository, directs DOE to complete a study of the need for and feasibility of an MRS facility, and to submit a proposal for the construction of the MRS facility to Congress. If Congress authorizes construction of the MRS facility, then the NWPA requires the facility be subject to licensing by the NRC. In May

1986, the NRC published a proposed rule to amend its existing regulations under 10 CFR 72 that covers licensing of an MRS.

OTHER AGENCIES HAVING RESPONSIBILITIES UNDER THE NWPA

The DOI and CEQ also have responsibilities specified under the requirements of the NWPA. Both agencies were consulted during development of DOE's siting guidelines (10 CFR 960), and both are charged with review of DOE's EIS for a geologic repository.

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