Chapter Three

Waste Acceptance, Storage, and Transportation Project

Background

It is the primary responsibility of the Waste Acceptance, Storage, and Transportation Project to provide for the legal and physical transfer of commercial spent nuclear fuel and Department of Energy (DOE)-owned nuclear material from their owners and generators to DOE. The materials that are destined for a potential repository are now stored at 131 sites in 39 States.

Due to budgetary shortfalls during the past four years, the activities of this project, especially transportation planning, were severely curtailed while the Program focused its resources on Yucca Mountain in preparation for the decision on whether to recommend the site for development as a repository. In particular, we deferred transportation logistical and institutional planning activities. Now that Yucca Mountain has been designated as the repository site, we must resume preparations necessary to implement a transportation system to support the movement of spent nuclear fuel and high-level radioactive waste.

Funding

The Office of Civilian Radioactive Waste Management (OCRWM) allocated $2.7 million from its Fiscal Year 2001 appropriation to the Waste Acceptance, Storage, and Transportation Project. In preparation for waste acceptance activities, OCRWM maintains the core capability to implement a private sector-based national transportation system for waste acceptance and transportation, to resolve institutional issues with stakeholders, and to prepare for implementation of funding and assistance to train emergency response personnel as required by Section 180(c) of the Nuclear Waste Policy Act (NWPA).

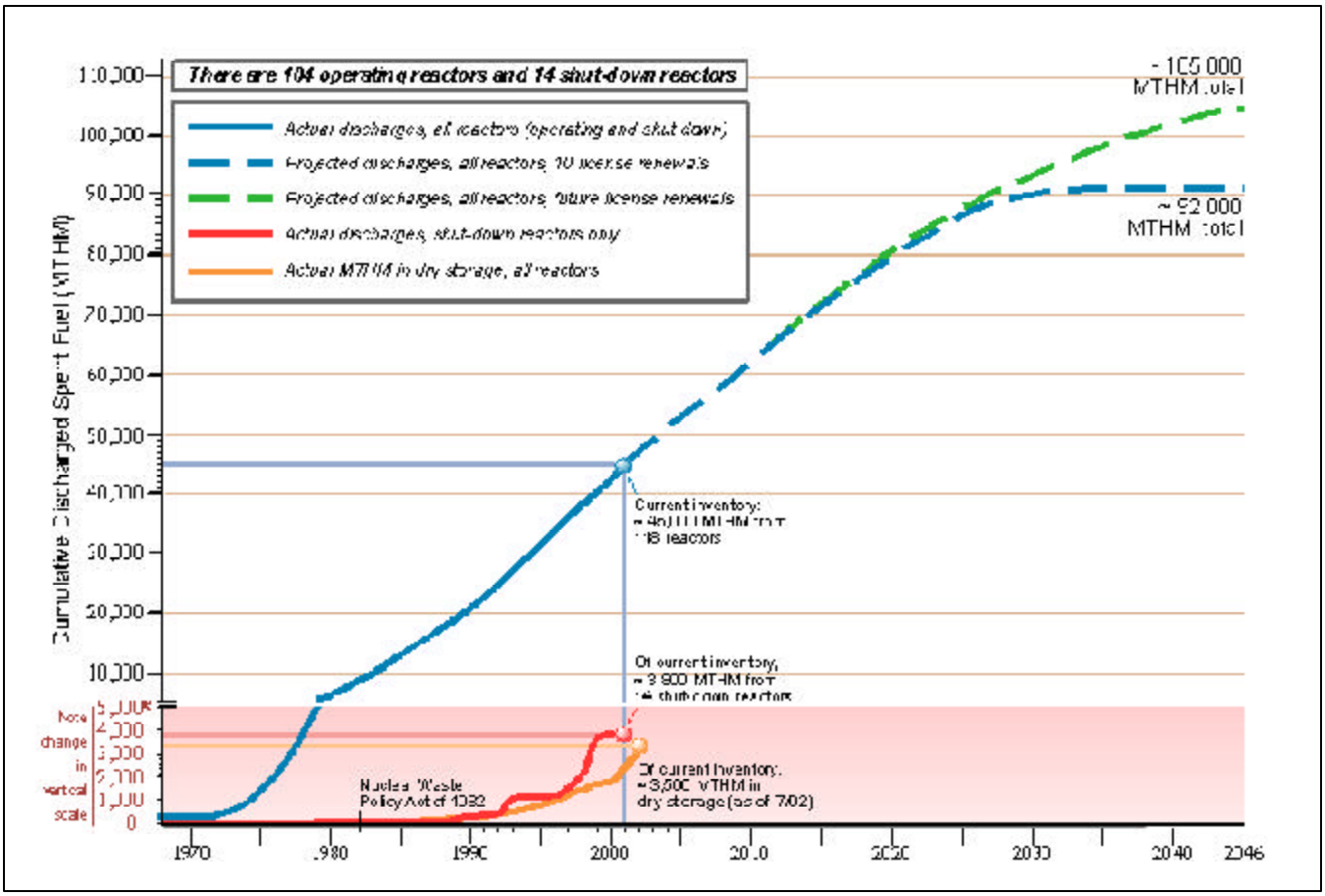
Major Fiscal Year 2001 Activities and Results

In Fiscal Year 2001, we used Energy Information Administration data to update our discharge projections for commercial spent nuclear fuel. In addition, we continued to integrate acceptance criteria and schedules for DOE-owned spent nuclear fuel, high-level radioactive waste, and surplus plutonium managed by the Office of Environmental Management, the Office of Fissile Materials Disposition, and the Naval Nuclear Propulsion Program. Following a request from the Assistant Secretary for Environmental Management that OCRWM assume responsibility for the supply of transportation equipment and services for DOE-owned spent nuclear fuel, we began integrating this activity with our other transportation planning.

Acceptance of Commercial Spent Nuclear Fuel

The NWPA authorized the Secretary to enter into contracts with the owners and generators of commercial spent nuclear fuel and high-level radioactive waste. Our interactions with them on matters concerning receipt, shipment, and disposal of their spent nuclear fuel are governed by the *Standard Contract for Disposal of Spent Nuclear Fuel and/or High-Level Radioactive Waste*, 10 CFR Part 961, promulgated as a Federal rule in 1983. Under terms of the standard contract, OCRWM was to start accepting spent nuclear fuel from utilities in 1998.

With no Federal facility yet available to receive the material, a number of utilities are pursuing litigation to seek relief from hardships they allege as a consequence of DOE's inability to accept waste. In addition, in



Historical and projected commercial spent nuclear fuel discharges

Fiscal Year 2001, a number of utilities initiated litigation challenging the Department's authority to use fee adjustments in funding settlements.

During Fiscal Year 2001, we used the latest projections from the Energy Information Administration to update our estimates of the amount of spent nuclear fuel to be disposed of in a potential repository. Changes reflected extended burnup of fuel, but did not reflect recently announced license extensions.

Dry transfer system for spent nuclear fuel

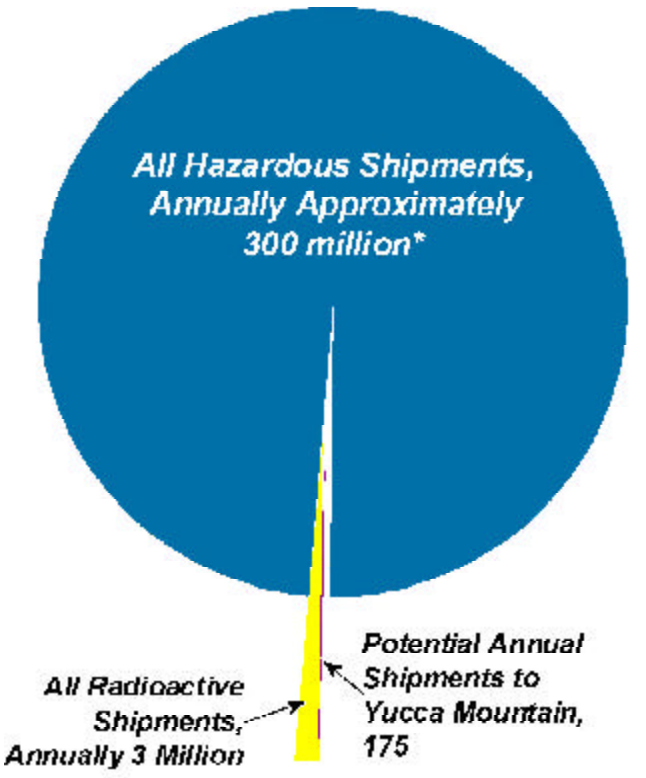
Development of the spent nuclear fuel dry transfer system continued in Fiscal Year 2001. The Nuclear Regulatory Commission (NRC) completed its review of the *Topical Safety Analysis Report* and issued a draft *Safety Assessment Evaluation Report*. We reviewed the *Safety Assessment Evaluation Report* and provided comments to NRC.

The dry transfer system has the potential to assist utilities and DOE in future spent fuel management activities by enabling the transfer of individual spent fuel assemblies between a conventional top-loading cask and a multi-purpose canister in a shielded overpack, or by accommodating spent fuel transfers between two conventional casks.

Acceptance of DOE-Managed Materials

Integrating DOE-managed nuclear materials into the Program

Three offices within DOE manage materials destined for geologic disposal. The Office of Environmental



*Based on U.S. Department of Transportation Office of Hazardous Materials Safety Estimate. "Hazardous" shipments include materials such as explosives, flammable gases, solids and liquids, and poison gas.

A comparison of annual shipments

Management maintains custody of high-level radioactive waste, DOE-owned spent nuclear fuel, and surplus nuclear materials and prepares for their transfer to OCRWM for disposal. The Office of Fissile Materials Disposition plans for the disposition of surplus weapons-usable plutonium. Naval spent nuclear fuel is managed by the Naval Nuclear Propulsion Program, which represents both DOE's Office of Nuclear Energy, Science, and Technology and the Department of the Navy.

OCRWM continued to integrate acceptance criteria and schedules for the various waste forms into OCRWM's memoranda of agreement with these offices. When these memoranda are finalized, the integrated waste acceptance criteria and schedule will fulfill important commitments and will provide an annual waste acceptance rate for use in repository planning and design.

In July 2001, the Assistant Secretary for Environmental Management requested that OCRWM assume responsibility for the supply of equipment and services for the transport of DOE-owned spent nuclear fuel and high-level radioactive waste, which had previously been the responsibility of the Office of Environmental Management. We have begun integrating this activity with our other transportation planning.

Fiscal Year 2001 in Context

During Fiscal Year 2001, the Waste Acceptance, Storage, and Transportation Project focused on maintaining the capability to implement a national transportation system for waste acceptance and transportation, to resolve institutional issues with stakeholders, and to implement the funding and assistance for emergency response training required by the NWPA.

Now that the Congress has designated Yucca Mountain as the repository site, the pace of transportation planning activities will need to increase to ensure that the transportation system is ready to move waste when the repository is ready to accept it.

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