

IMPLEMENTATION OF NWSA - A STATUS REPORT

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ABSTRACT

The major goal upon which the nuclear waste management program is based is that spent nuclear fuel and high-level nuclear waste must be disposed of in a manner that adequately protects public health and safety and the environment for this and future generations. To do so, a comprehensive waste management system must be developed and instituted. DOE is fully committed to working with Federal, State, Indian tribe, and local units of government in meeting this goal within the mandated 1998 date.

Significant progress has been made in the past year in implementing and meeting the requirements of the Nuclear Waste Policy Act, including the provisions for consultation and cooperation with affected States, Indian tribes, and the public.

INTRODUCTION

The Nuclear Waste Policy Act of 1982 established the method of disposal, a schedule, technical and institutional processes, and a funding mechanism to ensure successful implementation of the Act.

Some observers look at DOE's efforts to date and conclude that DOE has slipped schedules to the extent that the 1998 commitment may not be met. On the other hand, others believe that DOE is driven only by milestones, and that DOE is not committed to full and open participation by affected and interested parties as called for in the Act.

The commitment to begin receiving spent fuel in 1998 is unequivocal. But DOE is also committed to achieving that goal with full and comprehensive participation by all affected parties.

Some of the milestones in the early stages of the program are, from DOE's perspective, far more important than later ones. As a result, DOE has felt that the investment of extra time and resources was absolutely necessary in order to ensure quality products throughout the course of the program. In this regard, DOE has felt it imperative that the interests of States, Indian tribes, and other affected and interested parties be considered fully.

So while DOE has taken more time to accomplish some of the early milestones called for in the Act, DOE believes that the results will warrant such an expenditure of time and resources. DOE now feels that a strong program foundation is in place -- a foundation upon which future milestones can be accomplished with confidence and clear purpose.

While the Act confirms DOE's earlier decision that deep, geologic repositories can safely and permanently isolate spent fuel and high-level waste from the public and the environment; it is clear that transportation, handling, packaging, storage, and disposal are all integral parts within a comprehensive waste management system. There is a need to optimize the total waste system to the extent practical in terms of safety, environmental protection, cost-effectiveness, and schedule.

The Act directed DOE to study the "need and feasibility" of the MRS and to submit to Congress on or before June 1 of this year a proposal for the construction of one or more MRS facilities. Briefly, that proposal was to provide a detailed plan for siting, developing, constructing and operating an MRS facility that would be licensed by the NRC and financed out of the Nuclear Waste Fund. In addition, DOE was to prepare a plan for integrating the MRS facility into the waste management system.

In the course of conducting the integration study, DOE has concluded that the MRS could play a very beneficial role in integrating the overall waste system by providing the capability to consolidate, package, and prepare the spent fuel for shipment to the repository as well as to provide backup storage should the repository experience delays.

Specifically, the MRS would receive spent fuel from the utilities, consolidate, package, and store the spent fuel for shipment to the repository. Temporary storage would be provided at the MRS as necessary to meet system waste acceptance requirements. Operations at the repository would concentrate on disposal of the packages received from the MRS. A more efficient transportation system could be provided using the private sector to the extent practical and using dedicated shipments to the repository from the MRS.

Recognizing that the majority of the nuclear power plants are located in the eastern section of the country, the MRS would also be located in the east as close as possible to the geographic center of the existing spent fuel inventories. Unlike a geologic repository, which requires unprecedented considerations related to the great depth of the repository and the long-term isolation, the technical aspects of siting an MRS facility would not be new. Although the construction of the MRS has not been authorized by Congress, DOE plans to request such authorization in the near future.

Several clear-cut benefits can be expected from an MRS facility as proposed. The schedule for accepting waste from the utilities could be accelerated and maintained with greater certainty. By providing a

processing and storage capacity between waste acceptance from utilities and emplacement in a repository, the MRS could help maintain better and more consistent control over the flow of waste from reactor to repository.

There should be increased efficiency and better control over quality control by having a facility that is uniquely designed to perform specific waste handling functions on a production basis. The logistics associated with scheduling, accepting, disassembling, consolidating, and packaging the spent fuel shipped from more than 80 reactors in a variety of transport casks would be managed best at an MRS facility dedicated to those functions.

Siting the MRS at a location central to the spent fuel inventory would also have a very beneficial effect on transportation. The shipments from the reactors would converge at the MRS after relatively short journeys. The consolidation that occurred at the MRS and the subsequent use of dedicated shipments with optimized cask payloads would reduce both the number and cost of shipments to repositories. The risk of accidents--both radiological and nonradiological in nature--is in direct proportion to the number of shipment miles and a reduction in number of shipments is an obvious benefit.

Finally, the MRS would retain the storage option benefit for which it was originally conceived and could significantly reduce the amount of handling and processing equipment required at the repository.

DOE wants to emphasize, however, that the MRS is in no way regarded as a substitute for the repository. DOE is fully committed to having an operational repository in 1998 as part of the integrated waste management system.

To emphasize this, DOE has made significant progress in implementing the repository program since Waste Management '84. On December 6, 1984, after extensive Federal, State, Indian tribal and public review and comment, and after concurrence by the Nuclear Regulatory Commission, DOE issued General Guidelines for the Recommendation of Sites for the Nuclear Waste Repositories (10 CFR Part 960).

On December 20, 1984, DOE issued for ninety days public review and comment draft Environmental Assessments (EA's) for each of the nine potentially acceptable sites. Five sites were proposed for nomination as suitable for site characterization for the first repository and three of these sites were proposed for recommendation to the President for site characterization. The five sites proposed for nomination for site characterization are, in alphabetical order by State: Richton Dome in Mississippi, Yucca Mountain in Nevada, Deaf Smith County in Texas, Davis Canyon in Utah, and Hanford in Washington. The three sites tentatively proposed for site characterization are: Yucca Mountain, Deaf Smith County, and Hanford.

These documents--the guidelines and the nine draft environmental assessments--are comprehensive and thorough documents. They fully describe the site information DOE assessed and the process DOE intends to use in formally nominating, comparing, and identifying sites for characterization. They have been made available for any and all who may care to comment. DOE will actively interact with all affected parties and will consider all pertinent comments in issuing the final EA's and implementing the process of formal nomination and recommendation.

Since issuance of the nine draft EA's, DOE has held some fifty briefings in the affected States to facilitate the review of the documents and have conducted nineteen public hearings to receive testimony on the documents. These events were attended by over 6000 people in six States and the District of Columbia, and 655 people provided oral testimony at the hearings.

After consideration of oral and written comments, and consultation with Federal agencies and affected States and Indian tribes, DOE will prepare final EA's. The Secretary of Energy will formally nominate at least five sites as suitable for site characterization and each nomination will be accompanied by a final EA. He will then recommend three of the nominated sites to the President for site characterization as candidate sites for the first repository. Site characterization will occur only at the sites recommended to and approved by the President. This recommendation is expected to occur in September 1985.

DOE has also been investigating crystalline rocks in 17 States in the eastern half of the United States as possible host geologic media for the second geologic repository. In these studies, DOE has identified approximately 250 crystalline rock bodies, ranging in size from tens to hundreds of square miles. DOE published a draft methodology for screening these rock bodies down to the 10-20 which will be studied in the next phase of this program, as well as draft Regional Geologic Characterization Reports and draft Regional Environmental Characterization Reports for each of the three regions (Northeastern, North-Central, and Southeastern). These reports provide the data base upon which the screening will be founded. The final region-to-area screening methodology will be issued next month, followed by the issuance of the final RCR's this summer and the recommendation of areas for further study later this year. In developing this selection process for crystalline rock locations, DOE has had about 50 sessions with affected parties and States with total attendance numbering in excess of 4000 people.

Recently DOE has completed and submitted to Congress the third annual fee adequacy report. As you know, DOE is committed to conducting the program with-in revenue generated by the Fund and to ensuring fiduciary responsibility in the execution and management of a technically sound, cost-effective program. At this time, DOE believes that projected receipts for the Fund are sufficient to carry out the requirements of the Act. The report indicates that no adjustment is needed at this time to the 1.0 mill (one-tenth of a cent) per kilowatt hour fee which is charged to utilities for nuclear-generated electricity.

In May 1984, DOE issued a draft Mission Plan for public review and comment. The purpose of the Mission Plan, as prescribed in the Act, is to provide an information base sufficient to permit informed decisions to be made in carrying out the repository and other programs mandated by the Act. An updated Mission Plan is currently in final preparation and DOE expects to submit it to Congress in May 1985.

In August 1984, DOE issued a draft evaluation of the use of disposal capacity at the civilian geologic repositories for disposal of high-level waste resulting from defense activities. Based on the draft evaluation, the only factor that results in a significant advantage for either option--disposing of commercial high-level waste and defense high-level waste in the same repositories or in separate repositories--

is cost efficiency. DOE has completed its final evaluation and has concluded that due to the clear cost advantage to be gained by disposing of defense high-level wastes in a combined commercial and defense repository, combined repositories are the appropriate option. This recommendation will be made to the President very shortly. The Act clearly states that costs resulting from permanent disposal of defense high-level waste shall be paid by the Federal Government into the Fund. If the President accepts the DOE's recommendation to dispose of a defense waste in a commercial repository, the Federal government would pay a comparable charge to that paid by utilities.

Recently DOE has reached agreement with the NRC staff on an annotated outline for the Site Characterization Plans. As you know DOE is required to issue such a plan for each of the sites recommended for characterization prior to initiating characterization at each site. These, too, will be comprehensive documents fully describing our intended characterization activities in full accordance with NRC agreements.

As discussed earlier, although DOE's actions may not have been as timely as some would like, nor as pervasive as others would have it, DOE is making substantial progress in laying the foundation for an implementation program for the Act that can be successful and represents an effective balance among scheduling, content, and involvement of affected and interested parties.

The publication of the siting guidelines and the issuance of the draft Environmental Assessments provide a sound basis on which to proceed with the very difficult task of site selection. DOE is taking the initial steps in defining a comprehensive waste management system and its integral parts, including an MRS facility.

This upcoming year will be very crucial to the implementation of the program as DOE proceeds through the formal steps of site nomination and recommendation; as DOE proceeds with out plans for site characterization; and as DOE tests the acceptance of proposals for an integrated system including an MRS.

DOE will continue an extensive program of consultation and cooperation with affected parties. DOE will continue an assistance program with affected States and Indian tribes, as well as conduct public meetings, public hearings, tours and briefings, and prepare public information publications.

DOE is confident that it is in a position to proceed effectively with implementation of the program. DOE fully recognizes this cannot be achieved without the cooperation and frank and open exchange of constructive criticism of all parties to the implementation of the Act. DOE is fully committed to work with all parties to make this happen, while still meeting the goal of having a safe and environmentally acceptable waste management system in place by the mandated 1998 date.