

**PRESENTATION TO THE
NUCLEAR WASTE TECHNICAL REVIEW BOARD**

**STATUS OF THE CIVILIAN RADIOACTIVE WASTE
MANAGEMENT PROGRAM**

BY

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Chairman Cohon and Members of the Board:

Thank you for this opportunity to address the Board. I am completing my second month as Program Director and have been reviewing the scientific and technical issues that the Board addressed in its recent reports and letters. I value the important independent oversight role that the Board plays in the Civilian Radioactive Waste Management Program. I will briefly discuss some of the Board's issues today. I am looking forward to learning more about your concerns as this meeting progresses.

This morning I will provide my perspective on progress in the Civilian Radioactive Waste Management Program and the broader issues that affect the program. Russ Dyer, Project Manager, will follow with more details on the Yucca Mountain Project. Later today and tomorrow, our Federal and contractor team will discuss the latest update of the repository safety strategy and recent progress in the scientific program. Our team will also contribute to the discussion on the treatment of uncertainty in repository performance, a topic that I too will briefly address, in light of its importance to a determination of site suitability.

Program Budget

The first topic I will discuss is program funding. The Administration requested a total funding level of \$409 million for Fiscal Year 2000. Congress enacted a total funding level of \$351.2 million, about \$58 million less than our request. To accommodate these reductions, we have been reevaluating the need for and timing of our science and engineering activities, taking into account the improved system performance from our recent changes in the reference repository and waste package designs. We are prioritizing the activities most important to developing the information needed to support a Secretarial decision on whether or not to recommend the site to the President. Based on the repository safety strategy, we are emphasizing those activities that most effectively address uncertainties in the repository performance.

The Department has developed its budget request for Fiscal Year 2001, which the President will release on February 7. Our objective, building on the momentum achieved over the past four years, remains to develop the documentation needed to determine if the Yucca Mountain site is suitable and to support a Secretarial decision on site recommendation and, if the

site is recommended, to submit a license application to the Nuclear Regulatory Commission (NRC). In the budget process, we have requested to make up for some of the funding shortfalls of the past few years. The timely completion of our planned scientific and engineering work is central to maintaining the confidence of the public in our efforts. Public confidence, and that of the Board, in our scientific and engineering work is paramount to a credible determination of site suitability and the successful completion of site characterization. I plan to communicate this theme to Congress during the upcoming budget hearings.

Legislation

The next topic I will discuss is legislation. As you know, both houses of Congress considered legislation on the management of spent fuel and high-level wastes last session, H.R. 45 and S. 1287. The Administration opposes H.R. 45 because it would place an interim storage facility in Nevada prior to completion of the scientific and technical work necessary to determine where a repository will be located and would weaken environmental protection. The President has stated that he would veto S. 1287, in its current form, because it would preclude the Environmental Protection Agency (EPA) from establishing standards for Yucca Mountain. Last year, Congress did not approve any legislation. There has not yet been any floor action on these bills in the current session of Congress.

Despite this opposition to the pending legislation, the Administration remains committed to resolving the complex and important issue of nuclear waste management in a timely and sensible manner, consistent with sound science and the protection of public health and safety and the environment. To address some of the utilities' concerns with waste acceptance, the Secretary has put forth the concept of taking title to spent nuclear fuel at reactor sites, and he has encouraged utilities and other stakeholders to participate in discussions on how best to implement such an idea. Both H.R. 45 and S. 1287 adopted this concept and would authorize the Department to take title to spent nuclear fuel at reactor sites.

International Meetings

Another broad area of activity affecting our program is other countries' approaches to waste management. Internationally, our program is being closely watched to see how the United States proceeds with geologic disposal. Two recent international meetings have reaffirmed the need for geologic repositories. The Department sponsored an international conference on geological repositories in Denver on October 31 - November 2, 1999. In a joint statement, the delegates recognized the need for continuation of work on the safe and secure geologic disposal of radioactive waste and supported cooperative work to achieve public understanding of technical and safety issues related to the safe geologic disposal of radioactive waste.

The National Academy of Sciences (Academy) held a workshop on disposition of high-level radioactive waste through geologic isolation on November 4 - 5, 1999, in Irvine, California. The themes developed at the workshop include recognition of the eventual need for geologic disposal, the importance of public participation, the role of science in policy issues, and an acceptable regulatory framework. The Academy expects to issue a report on the workshop later

this year. The timing of the report should allow decision-makers to consider the Academy's findings as a determination is made on site recommendation.

Board Letters

I would now like to address some of the issues that have been raised by the Board. In November, we sent the response to the Board's August letter on the scientific investigations program. Earlier this month, we responded to the Board's November letter on the repository safety strategy, model validation, treatment of uncertainty, and technical investigations.

The Board has raised two important concerns that the Department will address – the need to clearly present the uncertainties associated with our projection of repository performance and the need to ensure the adequacy of the models we use to assess the overall performance of the repository system. We agree that both issues are important to develop a credible basis for site recommendation and look forward to further interaction with the Board as we determine the best ways to address these issues.

Repository Design

At your last meeting, Acting Director Lake Barrett briefed you on our selection of a repository design concept for the site recommendation and license application. The design selection process responded to the Board's recommendation that lower temperatures would reduce the uncertainties in long-term repository performance and increase confidence in a site suitability determination. We balanced all significant factors, including long-term public safety, inter- and intra-generational equity, worker safety, and cost. The details of the design continue to evolve as more details of the waste characteristics and engineered barrier properties are incorporated.

The Board has asked what time of closure the Department would assume as a basis for site recommendation. We adopted a thermal goal that the drift walls would remain below boiling if the repository were kept open for 125 years, although it could be closed after 50 years from the start of emplacement. We are examining the sensitivity of repository performance to thermal-related uncertainties at each end of this range. Such an examination is consistent with the recommendation of the NRC's Advisory Committee on Nuclear Waste that further analyses must be done before a determination can be made on a choice between a "totally below boiling" temperature repository and one in which some boiling takes place. For the determination of site suitability, the Department will use a range for the time of closure, with the appropriate range and thermal goals based on our analyses and the design evolution. Use of a range preserves the flexibility for future generations to determine when to close the repository.

Regulatory Framework

Let me now return to one of the themes at the Academy's November workshop — an acceptable regulatory framework. The Energy Policy Act of 1992 signaled a broad shift from a generic to a site-specific regulatory framework for evaluation and decision-making for a

repository at Yucca Mountain. Finalizing this regulatory framework is central to determining the suitability of the Yucca Mountain site for development as a repository that would protect public health and safety and the environment.

Both NRC and EPA proposed site-specific regulations last year. The public comment periods for the regulations have now ended, and we understand that NRC and EPA are now working to complete the final regulations. The Department submitted public comments on both the NRC and EPA proposed regulations. The Department strongly endorses NRC's proposed use of risk-informed, performance-based licensing criteria to implement the radiological protection standards. Our comments on the EPA proposal emphasized that the technical aspects of the rule should not only protect public health and safety and the environment, but also be a fair test of the safety of a repository that is demonstrable in a rigorous licensing proceeding.

The Department issued a revised proposal to amend its site suitability guidelines for Yucca Mountain on November 30, 1999, as the third leg of a site-specific regulatory framework. We modified our 1996 proposal to amend the guidelines in response to public comments, including those of the Board, and in light of Yucca Mountain site-specific regulations proposed by NRC and EPA. The proposed guidelines use the latest analytical methods and the best science available in order to support a site suitability determination. If suitable, this determination will accompany the other information required by the Nuclear Waste Policy Act to be considered by the Secretary as a basis for a site recommendation.

Originally, we planned to hold two public hearings in Nevada on the proposed suitability guidelines last week and end the comment period on February 14, 2000. However, in response to requests from the State of Nevada and others concerned about the overlapping hearings and comment periods for the draft environmental impact statement (EIS), I decided to delay the hearings on the proposed suitability guidelines until February 2 in Pahrump and February 3 in Las Vegas. I also decided to extend the public comment period until February 28.

Environmental Impact Statement

I now want to address how the program will complete the work necessary to support a determination on site recommendation. In July 1999, we released the draft EIS for a geologic repository at Yucca Mountain. This represents a significant milestone for the Department. We have held 18 of 20 scheduled public hearings on the draft EIS to provide the public with opportunities to receive information and comment on the draft. The final two hearings will be held next week and the 180-day comment period ends on February 9, 2000. A final EIS will be released before the Secretary's decision on whether to recommend the site.

Site Recommendation Consideration Report

The program is working towards completing the technical documentation necessary to evaluate site suitability and support a Secretarial decision on site recommendation. Our selection of the next generation design concept was a significant step in this process. We have updated the

repository safety strategy and refocused our site characterization efforts to reflect the impact of the selected design on reducing uncertainties in estimating long-term repository performance.

We continue to gather and analyze relevant site characterization data, some of which you will hear about later today. Based on detailed process models that describe system performance, we are generating another major iteration of the total system performance assessment. The design, site, and performance information will be the basis of the site recommendation consideration report. Although not specifically required by the Nuclear Waste Policy Act, we are issuing the report in November 2000 to provide a basis for public comments. We plan to hold public hearings in Nevada on the site recommendation consideration report after it is issued. Along with the final EIS, the Secretary will then have updated information for a site recommendation report to the President, which will include technical supporting data and comments from the public, States, Native American tribes, and the NRC.

Conclusion

As Program Director, I plan to continue guiding the program on a sound course, building on the accomplishments of my predecessors. The program's work is now focused on the activities most important for developing the information needed to determine if the Yucca Mountain site is suitable for development as a repository and, if suitable, to support a Secretarial decision on whether to recommend the site to the President. I am confident that the scientists, engineers, and others contributing to the Yucca Mountain project have been developing the necessary understanding of the processes affecting repository performance.

We are now developing the documentation to communicate the information we have learned. Comments from the Board on the site recommendation consideration report and throughout the site recommendation process will be essential. My goal is to ensure that this information is portrayed in such a way that answers the questions of our stakeholders, including the Board, gains the confidence of the public, and provides a sound scientific basis for decision-making.

Before I close, I would like to make an important announcement about our M&O contract. We are approaching the end of the 10-year contract with TRW, which expires in February 2001. Although there is never a good time to recompete a complex project such as this one, we have decided, consistent with Departmental policy and Congressional appropriation intent, to recompete the M&O contract. We anticipate that the draft solicitation will be available about January 31 and public comments on the draft solicitation will be due on February 28.

Thank you for the opportunity to share my views with you today and I will be happy to address any questions.