

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

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

**BY**

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**U.S. DEPARTMENT OF ENERGY**

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Chairman Cohon and Members of the Board:

Thank you for the opportunity to appear here today to provide my perspective on the status of the Civilian Radioactive Waste Management Program. Yesterday, you saw first-hand many of the ongoing scientific activities at the site. Later today members of our federal and contractor team will address those topics you have selected for this meeting. Prior to these detailed discussions, I would like to update the Board on a number of recent developments related to the waste management program, and then share my thoughts on some of these important topics.

### **Recent Events**

#### Legislation

Last year the House and Senate passed bills that call for the development of an interim storage facility in Nevada with differing provisions. Due to the constrained legislative calendar, Congress chose to pursue a compromise bill in lieu of a conference committee to resolve the differences between the chambers. But in the Senate, a cloture motion to limit floor debate failed to achieve the required 60 votes. Just prior to the vote, Speaker Gingrich announced his intentions not to schedule a House vote on nuclear waste legislation this year. Consequently, this Congress is unlikely to present comprehensive nuclear waste legislation to the President this year. The basic drivers for the legislation still remain and proponents have indicated an interest to continue their legislative efforts in the next Congress. We will await future developments.

#### Waste Acceptance Litigation

On May 5, 1998, the United States Circuit Court of Appeals for the District of Columbia rejected petitions for rehearing the court's decision that the delays clause in the standard contract provides a potentially adequate remedy to contract holders for the Department's failure to begin

disposing of spent nuclear fuel by January 31, 1998. This decision also denied a request by the petitioners to escrow Nuclear Waste Fund fees. The Department continues to explore approaches to resolving this issue in a manner fair and equitable to all parties. On May 18, 1998, the Department proposed a settlement with utilities in which it would postpone collecting a portion of utility fees to offset utility costs due to the Department's delay. The proposed settlement was not considered adequate by the utilities. As of last week, eight utilities have since filed suit against the Department in the Court of Federal Claims, seeking more than \$2.7 billion in damages. The Department of Justice, on our behalf, has petitioned the Court of Federal Claims to dismiss the utility lawsuits until administrative remedies under the standard contract have been exhausted. Regardless of the legal maneuvers, I hope that a mutual accommodation can be created by a dialog among the parties, possibly as a follow-up to the Department's May 18 offer or some other mechanism.

### Program Budget

The President's Fiscal Year 1999 Budget seeks \$380 million for the program. This funding would enable the program to continue implementing the revised program plan as refined by the information gained in completing the Viability Assessment. The President's budget emphasizes site characterization of Yucca Mountain.

Committees in both the House and Senate have completed mark ups of the President's budget. The Senate Appropriations Committee proposed \$375 million for the program next year with \$15 million set aside for research in advanced accelerator technologies, approximately \$5 million each provided for oversight by the State of Nevada and affected counties. The House Appropriations Committee proposed \$350 million for next year, did not include funding for the State and Counties and directed the Department to reduce support service contractors by a minimum of 10% in FY 99. Action by both chambers, followed, if necessary, by a conference to resolve the bills is expected to be completed next month.

Stable funding is critical to the efficient and effective completion of site characterization. Over the last three years the program has successfully implemented a focused site characterization program that has resulted in substantial progress toward a national decision on geologic disposal at Yucca Mountain despite the FY 98 budget reductions. This progress has been achieved at a significantly lower cost than previous estimates. Reliable and predictable funding is central to the dynamic planning process that we use to manage an effective technical program.

### **Program Direction**

Over the past year I have appeared before this Board a number of times to discuss the status and plans for the radioactive waste management program. In those discussions I emphasized our focus on completing the viability assessment later this year. Assembling the enormous volume of data into a coherent and workable repository concept has been a significant challenge and accomplishment for the program. We are in the final stages of completing this

work and we expect to deliver the viability assessment for the Secretary's review this September on schedule. The completion of the viability assessment will effectively mark the midpoint of our five-year plan to complete site characterization under the revised program plan.

Our plan calls for a substantial effort after the VA to complete site characterization, to continue our design activities, and to develop and document the technical bases for a Secretarial recommendation of the Yucca Mountain site for a geologic repository. Supported by adequate funding, our plan should provide the sound basis for a national decision on geologic disposal by late 2001. The plan includes publishing a draft environmental impact statement in 1999. Wendy Dixon will discuss this important effort this afternoon. In general, the environmental impact statement will describe the environmental impacts of a Yucca Mountain repository under a bounding range of implementing alternatives. Following public hearings and consideration of comments as required by the National Environmental Policy Act, we will publish a final environmental impact statement in 2000. Should the technical information assembled by the Program indicate that geologic disposal at Yucca Mountain is an environmentally sound approach to the management of radioactive wastes, we will complete the evaluation of the site and prepare the technical documentation necessary for a site recommendation in 2001. Should the site be designated under law, we will submit a license application to construct a repository in 2002.

Yesterday, you visited a number of our ongoing testing activities. These scientific testing activities, coupled with our design and engineering work, and our performance assessment activities, form the core technical program that will support the site evaluation, the environmental impact statement, and the license application. The use of a single technical program to support all products ensures a consistent technical basis for all decisions.

A significant portion of the work to be completed after the viability assessment is associated with the repository and waste package design. Your recent correspondence notes that we should develop viable alternatives to the current reference repository and waste package design and that these alternatives should evolve over time as our understanding of the site and the interactions between the natural and engineered systems further evolves. We agree that the repository and waste package designs should not be prematurely fixed and other potential design options should not be foreclosed. These advanced design activities are an essential part of the technical work planned after the viability assessment and will be described in detail by Mike Voegele of our Management and Operating Contractor later this morning.

Our basic approach has been to focus first on developing site information required to design a site-specific repository system and assess its performance. The Board's recent report emphasizes the importance of both natural and engineered barriers to repository performance. We agree, and our analyses demonstrate that the performance of the engineered and natural barriers are highly interrelated and cannot be evaluated in isolation of one another. Our efforts also indicate that advanced design work, including the meaningful evaluation of alternatives, requires an increased understanding of the site and the development of detailed process models that were previously unavailable.

We recognize the performance benefits that may be achieved with design options and alternatives. We are careful, however, not to prejudge these design analyses. The systematic evaluation of design options and alternatives is inherently complex. These analyses often involve complex tradeoffs that must be carefully evaluated to understand the system performance impacts and costs. The analysis of our reference design and various design alternatives, also reflect our obligation to provide defense in depth as required by Nuclear Regulatory Commission regulations. No single "silver bullet" can be allowed to become the sole or principal basis for the safety of the repository because the Commission's approach to defense-in-depth and reasonable assurance will require us to analyze the consequences of the failure of the single "silver bullet."

We recognize that while enhancements may provide expectations of improved performance, they cannot provide absolute assurance of complete containment of radionuclides for tens of thousands of years. Such assurance is beyond what science and engineering can likely provide and defend in a licensing proceeding. It is important that knowledgeable parties, such as this Board, strive to ensure that policy makers understand the limitations of scientific predictions. Otherwise, the repository may be saddled with expectations for performance that cannot be demonstrated at this or any site. Such expectations could result in the rejection of an otherwise suitable site and the *de facto* rejection of geologic disposal. Such rejection will not avoid the consequences of long-term radioactive waste management. It will simply require society to resort to a different and currently undefined approach.

## **Conclusion**

The Program is approaching the midpoint of its five-year drive toward completing site characterization. Later this year we will complete and submit the viability assessment to Congress and the nation. The viability assessment will provide all parties with a better appreciation of geologic disposal and will provide a sound basis for planning and implementing the remaining technical work necessary to evaluate the site, prepare an environmental impact statement, support a site recommendation, and prepare a license application. With adequate funding, the program is poised to complete this work and support national decisions on geologic disposal at Yucca Mountain.

Thank you for the opportunity to brief the Board today and I will be happy to answer any questions you may have.