



**UNITED STATES  
NUCLEAR WASTE TECHNICAL REVIEW BOARD**

1100 Wilson Boulevard, Suite 910  
Arlington, VA 22209

May 17, 1994

Dr. Daniel Dreyfus  
Director  
Office of Civilian Radioactive Waste Management  
U.S. Department of Energy  
1000 Independence Avenue, S.W.  
Washington, DC 20585

Dear Dr. Dreyfus:

At the March 22, 1994, meeting of the Board's Panel on the Environment & Public Health and later at the April 11, 1994, Board meeting, members of your staff made presentations on the Administration Funding Proposal, otherwise called "Scenario A." As we understand it, Scenario A appears to have two fundamental goals: (1) to facilitate federal acceptance of spent fuel from the utilities beginning in 1998 and (2) to enable the DOE to apply for NRC authorization to construct a repository at Yucca Mountain in 2001.

Scenario A marks a departure from the past. We believe several of the following actions proposed in pursuit of Scenario A have potential implications for the technical and scientific program, including:

- obtaining increased funding for fiscal year 1995 and subsequent years,
- delivering multipurpose canisters (MPCs) to utilities beginning in 1998,
- focusing the site-characterization program so that the DOE can determine the suitability of the Yucca Mountain site in 1998,
- deferring some site-characterization and testing activities until after the start of repository construction or until repository operation begins,
- designing the repository to allow waste retrievability for up to 100 years,
- initiating the National Environmental Policy Act (NEPA) process as soon as possible, and
- involving stakeholders and the public prior to making key decisions.

Board members would like to understand more fully the logic and substance behind Scenario A. As a result, we are enclosing a list of questions that reflect many of the issues we have raised during the last four years.

The Board has an appreciation for the evolving nature of the proposed new program design and recognizes that answers may not yet be available to all of our questions. Still, even partial answers that are as specific as possible will help to begin a continuing dialogue between the DOE and the Board in which the implications of the proposed new program design can be understood and thoroughly ventilated.

Because we would like to include a more detailed discussion of Scenario A and the DOE's responses to the enclosed questions at our July 12-13 Board meeting in Denver, we would appreciate receiving written responses by July 1. The Board invites you, or your senior management designee, to participate in discussions of Scenario A at that meeting.

Finally, the Board was very pleased with the outcome of its April meeting in Reno. Those who shared with us their experiences in assessing sites for other critical facilities contributed greatly to the meeting's success. We believe that many of their comments are directly applicable to the Yucca Mountain program. On behalf of the NWTRB, I also would like to thank you and your staff for the DOE's contribution to the Board's April meeting.

I look forward to hearing from you.

Sincerely,

A handwritten signature in black ink that reads "John E. Cantlon". The signature is written in a cursive, flowing style.

John E. Cantlon  
Chairman

Enclosure

## Questions About the Administration Funding Proposal

1. (a) What are the specific technical bases for the decisions that led to the development of Scenario A? (b) Will the *Site Characterization Plan* be modified to reflect the new program design? (c) If so, what process will be used to modify it? (d) If not, what will be the status of the existing *Site Characterization Plan* in structuring the technical investigations at Yucca Mountain?

2. At the January 1994 Board meeting, you said that "institutionalizing stakeholder interaction" was one of the OCRWM program's important short-term goals.

(a) How does the DOE decide which decisions are "key decisions," requiring stakeholder input? (b) How and to what extent did the DOE obtain stakeholder and public input *prior* to formulating Scenario A? (c) Which stakeholders were involved? (d) What specific mechanisms is the DOE using to obtain stakeholder and public input?

3. Scenario A calls for increased budgets, a decreased scope of near-term site-characterization activities (e.g., potentially less tunneling), and a demanding schedule, (a) What specific studies previously planned under the SCP and in the study plans (i) will be completed before application for a license to begin repository construction, (ii) will be deferred until after repository construction, (iii) will be deferred until after repository operation begins, and (iv) will be deleted? (b) What criteria were used to assign particular studies to one of the four categories?

4. The OCRWM has asked for increased program funding because it believes that the scientific work has been underfunded, (a) If Congress provides the requested funding for Scenario A, specifically how much will allocations to underground excavation, waste package and materials research, and other site-suitability activities be increased? (b) How much will be allocated to overhead and infrastructure? (c) Will these allocation priorities change if funding to the program is not increased to the level requested?

5. Scenario A calls for the completion of a five-mile main loop with additional drifting *only if necessary*. (a) What is the technical basis that supports this change from the current program design? (b) What technical criteria will the DOE use to decide whether the five-mile loop is sufficient for a decision on site suitability? (c) If a five-mile loop is insufficient, how will the DOE decide how much additional underground excavation will be needed?

6. Thermal loading is a key parameter associated with various waste isolation strategies and repository/waste package designs, (a) Under Scenario A, when will a preliminary decision about thermal loading be made? (b) When will a final decision be made? (c) What specific information does the DOE believe will be required to make sound technical decisions on (i) repository design and (ii) a waste package design that is compatible with the MPC? (d) How will the timing of the DOE's application to the NRC for a construction license affect the DOE's thermal-loading decision?

7. Under Scenario A, the waste will "remain retrievable" for 100 years, (a) What contingency plans for retrieving the waste will be developed before deciding whether to adopt Scenario A? (b) When will retrieval plans be developed? (c) How will these plans affect the total system life cycle cost (TSLCC) and the adequacy of the 1-mil-per-kilowatt-hour fee?

8. Descriptions of Scenario A refer to a "site suitability evaluation/" "technical site suitability," and a "site recommendation report." (a) When and how will the DOE identify the specific tests and data necessary to support these site-suitability determinations? (b) Does the DOE believe the siting guidelines of 10 CFR Part 960 are adequate for determining site suitability under Scenario A? (c) If not, what amendments are envisioned and what process will be used to adopt them?

9. The NRC's regulations (10 CFR Part 60) require the DOE to demonstrate, prior to repository construction, that there is "reasonable assurance" that the facility will perform safely. The SCP outlines a testing plan that implies an agreement between the NRC and the DOE about how "reasonable assurance" will be demonstrated. Under Scenario A, some of the tests will be postponed until after repository operation begins, (a) How will the DOE demonstrate the level of assurance in the performance of the repository that would have been obtained under the SCP? (b) Will it be necessary to reinterpret or change the level of assurance? (c) If so, how will it change?

10. According to presentations made at the panel meeting on March 22, 1994, by representatives of the Council on Environmental Quality and the DOE's General Counsel Office, the Yucca Mountain Environmental Impact Statement should include a discussion of various repository and waste package design alternatives, (a) Under Scenario A, what alternatives will be sufficiently well understood to be evaluated? (b) Will separate impact statements be prepared for MPC procurement, repository development, and transportation? (c) How will the interdependencies among those activities be analyzed?