



Department of Energy

Washington, DC 20585
October 21, 1997

**Mr. Michael J. Bell, Chief
Performance Assessment and High-Level
Waste Integration Branch
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards
U.S. Nuclear Regulatory Commission
2 White Flint North, Rockville, MD 20852**

Dear Mr. Bell:

The sixteenth *Site Characterization Report: Yucca Mountain, Nevada* has been completed and sent to the Office of Government Printing for publication. The report will be formally transmitted to the Nuclear Regulatory Commission and the Governor of the State of Nevada as soon as it is available pursuant to the Nuclear Waste Policy Act, Section 113(b)(3). A copy of the report is enclosed with this letter for information purposes only. Please contact Chris Einberg at (202) 586-8869 if you have any questions.

Sincerely,


Samuel Rousso, Director
Office of Program Management and
Administrative
Office of Civilian Radioactive
Waste Management

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Note to Readers

During this reporting period, we continued the implementation of objectives outlined in the 1996 draft Program Plan. The program is currently focused on completing the work required for the 1998 viability assessment. While not a substitute for the site recommendation, the viability assessment will serve as an invaluable management tool by focusing the site investigation and facility design on key tasks and unresolved issues. The viability assessment will also serve as a major informational input to the policy process and provide all parties with a common frame of reference for evaluating our work.

We have completed excavation of the main tunnel of the Exploratory Studies Facility as well as alcoves for thermal testing and investigation of the Ghost Dance Fault. Detailed planning for an additional tunnel across the repository block is ongoing. Excavation of the starter tunnel should begin in early FY 1998, and excavation across the repository block should begin mid FY 1998. Although Congressional FY 1998 budget reductions have unfortunately reduced our original 1998 planned science experiments in the tunnel and alcoves, I do expect valuable information to support the design and performance assessment activities to still be obtained.

Total system performance assessment has continued to play an important role in focusing the site characterization activities on those issues most significant to repository performance. During this reporting period, we adopted several measures to ensure the Total System Performance Assessment for the viability assessment would provide a clear record of the evaluation and would be readily understandable to readers and reviewers. For example, we conducted seven abstraction-testing workshops and two formal expert elicitations to develop and document the input to the evaluation. These activities were observed by representatives of the Nuclear Regulatory Commission, the Nuclear Waste Technical Review Board, and other interested parties. In addition, an independent peer review of the Total System Performance Assessment is underway. Members of this peer review panel observed our abstraction-testing workshops and have delivered the first of three interim reports. This report is being evaluated by the program and the peer review will continue to review the entire performance assessment process. The second interim report is expected in the first quarter of FY 1998; the third interim report, in the third quarter of FY 1998. A final report is expected mid FY 1999.

Design activities continued to focus on resolving key design issues and on designing systems, structures, and components of the repository system that have little or no regulatory precedent and will have a major impact on performance assessment, schedule, construction, and cost. Continued field study and modeling of the Yucca Mountain site resulted in increased understanding of the systems and processes at work.



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The viability assessment will assemble the results of these recent activities with the other scientific and technical information collected in over 15 years of site investigations into a workable repository design and an analysis of its cost and performance. The viability assessment will also define a path forward to a site recommendation and license application. Its completion will continue progress towards a national decision on geologic disposal at Yucca Mountain.

Sincerely,

A handwritten signature in cursive script, appearing to read "Lake H. Barrett". The signature is written in dark ink and is positioned above the typed name.

Lake H. Barrett, Acting Director
Office of Civilian Radioactive
Waste Management