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Mr. Dwight E. Shelor, Associate Director
for Systems and Compliance
Office of Civilian Radioactive Waste Management
U. S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585

Dear Mr. Shelor:

SUBJECT: REVIEW OF U.S. DEPARTMENT OF ENERGY (DOE) STUDY PLAN "SITE UNSATURATED-ZONE MODELING AND SYNTHESIS"

On July 14, 1993, DOE transmitted the study plan, "Site Unsaturated-Zone Modeling and Synthesis" (Study Plan 8.3.1.2.2.9) to the U.S. Nuclear Regulatory Commission for review and comment. NRC has completed its review of this document using the Review Plan for NRC Staff Review of DOE Study Plans, Revision 2 (March 10, 1993). The material submitted in the study plan was considered to be consistent, to the extent possible at this time, with the revised NRC-DOE "Level of Detail Agreement and Review Process for Study Plans" (Shelor to Holonich, March 22, 1993).

A major purpose of the review is to identify concerns with studies, tests, or analyses that, if started, could cause significant and irreparable adverse effects on the site, the site characterization program, or the eventual usability of the data for licensing. Such concerns would constitute objections, as that term has been used in earlier NRC staff reviews of DOE's documents related to site characterization (Consultation Draft Site Characterization Plan and the Site Characterization Plan for the Yucca Mountain site). It does not appear that the conduct of the activities described in this study plan will have adverse impacts on repository performance and the review of this study plan identified no objections with any of the activities proposed.

The NRC staff plans to provide DOE with detailed technical comments related to the subject study plan. Activities in this study plan are closely related to activities discussed in Study Plan 8.3.1.2.2.8, "Fluid Flow in Unsaturated Fractured Rock." In its review of Study Plan 8.3.1.2.2.8 (letter from Holonich to Shelor, January 28, 1993) the NRC staff identified no objection-level concerns; however, the staff deferred the decision to provide detailed comments until Study Plan 8.3.1.2.2.9 had been received. Based on its initial review of the subject study plan and its relationship to 8.3.1.2.2.8, the NRC staff has decided to review and provide detailed comments on both study plans at the same time. Those comments will be transmitted to the DOE at a later date.

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Mr. Dwight E. Shelor

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If you have any questions concerning this letter, please contact Charlotte Abrams (301) 504-3403 of my staff.

Sincerely,

JS

Joseph J. Holonich, Director
Repository Licensing and Quality Assurance
Project Directorate
Division of High-Level Waste Management
Office of Nuclear Material Safety
and Safeguards

- cc: R. Loux, State of Nevada
- T. J. Hickey, Nevada Legislative Committee
- J. Meder, Nevada Legislative Counsel Bureau
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