

JUL 19 1993

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, D. C. 20585

Dear Mr. Shelor:

SUBJECT: REVIEW OF U.S. DEPARTMENT OF ENERGY (DOE) STUDY PLAN "SYSTEMATIC ACQUISITION OF SITE-SPECIFIC SUBSURFACE INFORMATION," REVISION 1

On June 17, 1993, DOE transmitted Revision 1 of the study plan, "Systematic Acquisition of Site-Specific Subsurface Information" (Study Plan 8.3.1.4.3.1) to the U.S. Nuclear Regulatory Commission for an expedited 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).

No objections to the activities described in this study plan were identified. Due to the nature of the planned program for acquisition of subsurface data, there is the potential for adverse effects on repository performance and impacts on characterization activities. Because the staff believes that no other practicable method exists by which DOE could obtain the necessary information which this study is designed to obtain and, because the revised study plan recognizes the need for integration throughout the site characterization program in order to mitigate possible effects to the extent practical, the staff has no objections to the work proceeding.

The staff has identified potential areas of concern with the ability of DOE to gather the necessary information for which this study is intended. These technical concerns deal primarily with the statistical basis of the study plan, the criteria for evaluating the sufficiency of the data collected, and the linkage of this study to an overall program of performance assessment. In addition, work proposed in this study plan (Page 53) as input to exploratory studies facility design may not be conducted until many design decisions are already made. Evaluation of these concerns will require a detailed review by the staff. The results of that review will be transmitted to DOE at a later date.

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Finally, there is the potential that the borehole drilling program outlined within this study plan could be expanded from the 12 original boreholes described. In view of the potential for these activities to impact waste isolation, the staff recommends that any additional work, beyond the original 12 borings, should not proceed prior to review and evaluation by the NRC of the proposed additions and changes to the scope of the study plan.

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

Sincerely,

/s/

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
- C. Gertz, DOE/NV
- M. Murphy, Nye County, NV
- M. Baughman, Lincoln County, NV
- D. Bechtel, Clark County, NV
- D. Weigel, GAO
- P. Niedzielski-Eichner, Nye County, NV
- B. Mettam, Inyo County, CA
- V. Poe, Mineral County, NV
- F. Sperry, White Pine County, NV
- R. Williams, Lander County, NV
- L. Fiorenzi, Eureka County, NV
- L. Vaughan II, Esmeralda County, NV
- C. Schank, Churchill County, NV
- L. Bradshaw, Nye County, NV

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