



Department of Energy

Washington, DC 20585

SEP 17 1993

Mr. Joseph J. Holonich, Director
Repository Licensing & Quality Assurance
Project Directorate
Division of High-Level Waste Management
Office of Nuclear Material Safety
and Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Reference: Site Characterization Progress Report 7

Dear Mr. Holonich:

Enclosed are the U.S. Department of Energy's (DOE) responses to two comments from the U.S. Nuclear Regulatory Commission's (NRC) Phase I review letter dated October 4, 1991 (enclosure 1) of study plan 8.3.1.17.4.10, "Geodetic Leveling." DOE did not respond to these comments at that time because work conducted under this study did not extend much beyond preparation of the study plan. With new survey work underway (reference), DOE wished to respond to these comments (enclosure 2).

If you have any questions, please contact Ms. Sheila Long at 202-586-1447.

Sincerely,

Dwight E. Shelor
Associate Director for
Systems and Compliance
Office of Civilian Radioactive
Waste Management

Enclosures:

1. Ltr, 10/4/91, Linehan to Shelor
2. Responses to NRC Comments

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PDR WASTE
WM-11 PDR

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cc:

C. Gertz, YMPO w/o enclosures
T. J. Hickey, Nevada Legislative Committee
R. Loux, State of Nevada
D. Bechtel, Las Vegas, NV
Eureka County, NV
Lander County, Battle Mountain, NV
P. Niedzielski-Eichner, Nye County, NV
W. Offutt, Nye County, NV
L. Bradshaw, Nye County, NV
C. Schank, Churchill County, NV
F. Mariani, White Pine County, NV
V. Poe, Mineral County, NV
J. Pitts, Lincoln County, NV
J. Hayes, Esmeralda County, NV
B. Mettam, Inyo County, CA
C. Abrams, NRC



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

OCT 04 1991

Mr. Dwight E. Shelor, Associate Director
for Systems and Compliance
Office of Civilian Radioactive Waste Management
U. S. Department of Energy, RW 30
Washington, D.C. 20585

Dear Mr. Shelor:

SUBJECT: PHASE I REVIEW OF U.S. DEPARTMENT OF ENERGY (DOE) STUDY PLAN FOR
GEODETIC LEVELING

On February 14, 1991, DOE transmitted the study plan entitled "Geodetic Leveling" (Study Plan for Study 8.3.1.17.4.10) to the U.S. Nuclear Regulatory Commission (NRC) for review and comment. The NRC has completed its Phase I Review of this document using the Review Plan for NRC Staff Review of DOE Study Plans, Revision 1 (December 6, 1990).

The material submitted in the study plan was determined to be for the most part substantively consistent with the agreement on content resulting from the NRC-DOE agreements made at the May 7-8, 1986 meeting on Level of Detail for Site Characterization Plans and Study Plans. However, the study plan did not specify the tolerance, accuracy, and precision of the tests in the different activities, nor were performance goals or confidence levels designated for the different activities. These items are of particular importance because the ability to detect vertical and lateral changes of small magnitude is essential for the purposes of this study. In addition, the study plan contains the statement that compilation and interpretation of existing data is 50 percent completed, but no reference was cited for that compilation and interpretation. The missing information should be provided to NRC as soon as possible either in a revised study plan or in a letter.

A major purpose of the Phase I 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 Site Characterization Plan for the Yucca Mountain site). The Phase I Review of this study plan identified no objections with any of the activities proposed.

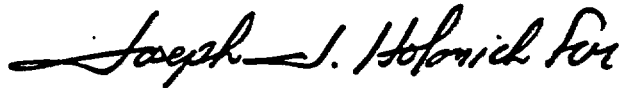
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ENCLOSURE 1

After completion of the Phase I Review, selected study plans are to receive a second level of review, called a Detailed Technical Review, based on the relationship of a given study plan to key site-specific issues or NRC open items, or its reliance on unique, state-of-the-art test or analysis methods. We have decided not to proceed with a Detailed Technical Review of this study plan.

If you have any questions concerning this letter, please contact King Stablein (FTS/[301]-492-0446) of my staff.

Sincerely,



John J. Linehan, Acting 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
C. Gertz, DOE/NV
S. Bradhurst, Nye County, NV
M. Baughman, Lincoln County, NV
D. Bechtel, Clark County, NV
D. Weigel, GAO
P. Niedzielski-Eichner, Nye County, NV
C. Thistlethwaite, Inyo County, CA
V. Poe, Mineral County, NV
F. Sperry, White Pine County, NV

COMMENT 1

"... the study plan did not specify the tolerance, accuracy, and precision of the tests in the different activities, nor were performance goals or confidence levels designated for the different activities."

Response

A similar comment was made in a Phase I review letter in Study Plan 8.3.1.5.1.4 (letter dated December 16, 1993, from Roberts to Holonich). Tolerance, accuracy, and precision for the methods to be employed in this study are discussed in the U.S. Geological Survey Technical Procedure GP-06 "Geodetic, Leveling, and Trilateration Surveys" (enclosed). There is no specification for these variables because surveys run under this study will be performed according to national standards (Federal Geodetic Control Committee) as indicated on Table 3-1, and as cited on page R-1.

There are no performance goals or confidence levels in the Site Characterization Plan identified for this study plan.

COMMENT 2

"... the study plan contains the statement that compilation and interpretation of existing data is 50 percent completed, but no reference was cited for that compilation and interpretation. The missing information should be provided to NRC as soon as possible either in a revised study plan or in a letter."

Response

A more appropriate place to report the status for ongoing work is the Site Characterization Progress Report, rather than a study plan. The reference to work in progress pertains to a compilation of historical USGS leveling surveys from the early 1900s and National Geodetic Survey digital data from a later releveing during the mid-1980s. This work will be contained in a USGS open file report, that is now in draft form. The NRC will receive the open file report as a routine transmittal, after it has been approved by USGS and the DOE.

Reference

Gilmore, T.D., 1992, Geodetic Leveling Data Used to Define Historical Height Changes Between Tonopah Junction and Las Vegas, Nevada. U.S. Geological Survey, Open-File Report 92-450.