



Department of Energy
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OCT 11 1996

OVERNIGHT MAIL

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**TRANSMITTAL OF APPROVED YUCCA MOUNTAIN STUDY PLAN 8.3.4.2.4.2,
"STUDY OF THE HYDROLOGIC PROPERTIES OF THE NEAR-FIELD ENVIRONMENT,"
REVISION 1**

Reference: Ltr, Brocoum to Federline, dtd 7/19/96

Enclosed is a managed copy of Study Plan 8.3.4.2.4.2, Revision 1, prepared by the U.S. Department of Energy (DOE) for the Yucca Mountain, Nevada, site (enclosure 1). The study plan numbers correspond to the same numbers used in the Site Characterization Plan (SCP) for the Yucca Mountain, Nevada, site. Note that the title of this study plan has changed from that of Revision 0, which was entitled "Study of the Hydrological Properties of the Waste Package Environment."

Study plans are prepared, reviewed, and approved under Yucca Mountain Site Characterization Office quality assurance procedures. It should be noted that there may be some inconsistencies in the milestone report titles and schedules given in this study plan and those in the SCP. Study plans, in general, represent a further evolution of the study in the areas related to schedules and milestones relative to the SCP and, as such, represent DOE's current plans.

DOE has reviewed the study plan for consistency with the content requirements for study plans, as given in Attachment 1 to the 1993 DOE/U.S. Nuclear Regulatory Commission (NRC). There is one Site Characterization Analysis (SCA) open item (Comment 11) associated with the issuance of this study plan. Comment 11 indicated that this study plan and two other study plans; 8.3.4.2.4.4, Engineered Barrier System Field Tests, and 8.3.1.15.1.6, In Situ Thermomechanical Properties, needed to be submitted. Study Plan 8.3.4.2.4.4 was previously transmitted to the NRC on October 30, 1995, and Study Plan 8.3.1.15.1.6 was transmitted to the NRC on May 17, 1996. With this transmittal, all study plans associated with SCA Comment 11 have been sent to the NRC.

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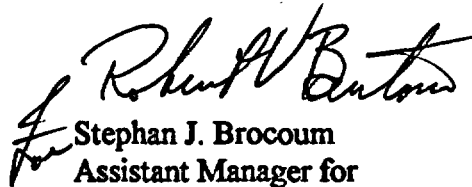
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In the NRC's July 31, 1991, Evaluation of the DOE's response to SCA Comment 11, it is clear that the basis for resolving this SCA open item has ventured beyond what DOE's plans are to address thermo-hydrologic impacts of emplaced waste. It appears that the expectation is that demonstration of compliance for a License Application is required before the comment may be considered for resolution. Therefore, DOE defers resolution until that time. In addition, highlights from our Waste Containment and Isolation Strategy for the Yucca Mountain, Nevada, site were provided to you on July 19, 1996 (enclosure 3). This document briefly explains the hypotheses DOE will be testing for our safety case. Among them are those that relate to the containment aspects of our strategy, particularly hypotheses 6, 7, and 8.

The Exploratory Studies Facility Single Heater Test began on August 26, 1996, and will continue, including cooldown, for approximately two years. The Large Block Test has been rescheduled and is planned to begin in fiscal year (FY) 1997. The Drift Scale Test will be installed in FY 1997, begin heatup in early FY 1998, and continue, including cooldown, for at least four years. In addition, DOE sent a report to the NRC on September 4, 1996, entitled "U. S. Department of Energy Determination of the Use of the Results of the Peer Review Report on the Thermohydrologic Modeling and Testing Program" (enclosure 2).

If you have any questions, please contact Juliana M. Herrington at (702) 794-1312.


Stephan J. Brocoum
Assistant Manager for
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AMSP:JMH-2695

Enclosures: (NOT RECORD MATERIAL)

1. Study Plan 8.3.4.2.4.2, Revision 1
- ✓ 2. U.S. Department of Energy Determination
of the Use of the Results of the Peer Review
Report on the Thermohydrologic Modeling
and Testing Program
- ✓ 3. Ltr, 7/19/96, Brocoum to Federline, w/o encl

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