



Department of Energy
Office of Civilian Radioactive Waste Management
Yucca Mountain Site Characterization Office
P.O. Box 98608
Las Vegas, NV 89193-8608

JUL 31 1996

OVERNIGHT MAIL

Michael J. Bell, Chief
Engineering and Geosciences Branch
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555

**TRANSMITTAL OF APPROVED YUCCA MOUNTAIN STUDY PLAN 8.3.3.2.2.3,
"IN-SITU TESTING OF SEAL COMPONENTS," REVISION 0 (SCPB: 8.3.3.2.2.3)**

Enclosed is a controlled copy of Study Plan 8.3.3.2.2.3, Revision 0, prepared by the U.S. Department of Energy (DOE) for the Yucca Mountain, Nevada, site. The study plan numbers correspond to the same numbers used in the Site Characterization Plan (SCP) for the Yucca Mountain, Nevada, site.

The DOE Assistant Manager for Scientific Programs staff accepted this study plan as a deliverable from the Civilian Radioactive Waste Management System Management and Operating Contractor recognizing that the following stipulations were noted on the acceptance criteria sheet:

1. Stratigraphic nomenclature referenced in Figure 1-2 (page 3) is inconsistent with the project's Reference Information Base (RIB), Chapter 1, Section 1.12, Item a, Revision 4 (Site Characteristics Chapter, Site Geology Section, Item Stratigraphy). The stratigraphy section of the RIB was last revised on October 10, 1995. This revision was based on work presented in the U.S. Geological Survey Open File Report 94-469 entitled "Proposed Stratigraphic Nomenclature and Macroscopic Identification of Lithostratigraphic Units of the Paintbrush Group Exposed at Yucca Mountain, Nevada."
2. Historical and ongoing seal test experiments being conducted in conjunction with various foreign countries' nuclear waste disposal programs have been omitted.

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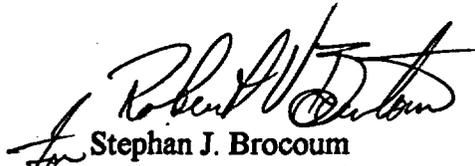
JUL 31 1996

- 3. Historical data compilation and evaluation of performance from drift, shaft, and borehole grouting and sealing activities conducted on the Nevada Test Site in conjunction with the nuclear weapons development programs has been omitted.
- 4. A sealing systems engineering study is presently scheduled to be completed by the project in fiscal year 1997. The study will attempt to identify all statutory, regulatory, state, performance assessment, and design requirement parameters for seals. Once the system's engineering study is complete, Study Plan 8.3.3.2.2.3 (In-Situ Testing of Seal Components), will be evaluated and amended as necessary to meet the identified requirements. Evaluation and appropriate revision of the study plan will be completed prior to initiation of additional seal tests including those items identified in 1 through 3 above.

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) Level of Detail agreement and review process for study plans. The NRC SCA open item comments associated with this study are 74 and 119. These comments will be addressed upon the completion of the systems engineering study.

The Document Transmittal/Acknowledgment Record for your controlled copy of the study plan should be signed, dated, and returned to the Document Control Center in Las Vegas, Nevada. If you have any questions, please contact Juliana M. Herrington at (702) 794-1312.


 Stephan J. Brocoum
 Assistant Manager for
 Suitability and Licensing

AMSP:JMH-2024

Enclosure: (NOT RECORDS MATERIAL)

Study Plan 8.3.3.2.2.3, Revision 0

on the shelf

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TITLE	DOCUMENT IDENTIFIER	EFFECTIVE DATE	NO. OF SHEETS
8.3.3.2.2.3 Rev. 0 ICN 0 IN SITU TESTING OF SEAL COMPONENTS.		07/19/96	

Instructions/Remarks

Please incorporate changes required per the instructions of this CDI on the effective date noted.

ISSUANCE OF : 8.3.3.2.2.3, REV 0
IN SITU TESTING OF SEAL COMPONENTS.

**** NEW ISSUE - OBSOLETE MATERIAL ****

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SCP with title dtg 2/31/86

YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT

Study Plan for In Situ Testing of Seal Components SCP Study 8.3.3.2.2.3

**Principal Investigator: Ray Finley
Geotechnical Investigations Department 6852
Sandia National Laboratories
Albuquerque, NM**

**Revision 0
March 1996**

ABSTRACT

Section 8.3.3.2.2.3 of the Site Characterization Plan (U.S. Department of Energy [DOE], 1988) discusses the need to evaluate, through in situ tests, the behavior and characteristics of seals and backfill components for the proposed high-level radioactive waste repository at Yucca Mountain, Nevada. This study plan summarizes the in situ experiments intended to demonstrate that the proposed sealing and backfilling strategies are adequate to seal boreholes, ramps, shafts, and the underground openings for the Yucca Mountain repository. These experiments will provide input for repository design and for performance assessments of the repository system.