



Department of Energy
Office of Civilian Radioactive Waste Management
Yucca Mountain Site Characterization Office
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WBS: 1.2.5.2

MAY 22 1996

OVERNIGHT MAIL

John H. Austin
Performance Assessment and
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Nuclear Materials Safety and Safeguards
U.S. Nuclear Regulatory Commission
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REPORTABLE GEOLOGIC CONDITION: U.S. DEPARTMENT OF ENERGY
(DOE) STUDY PLAN 8.3.1.4.2.2 (CHARACTERIZATION OF STRUCTURAL
FEATURES WITHIN THE SITE AREA) (SCPB: 8.3.1.4.2.2)

The Yucca Mountain Site Characterization Office (YMSCO) has invoked the Yucca Mountain Site Characterization Project Administrative Procedure YAP 30.27, "Reportable Geologic Conditions" and has documented the evaluation required in the enclosed records package (enclosure 1). This procedure is a reporting mechanism that the YMSCO uses to advise the staff of the U.S. Nuclear Regulatory Commission that our site characterization work has encountered some condition that was unexpected, an evaluation of the technical significance of the condition, and follow-up actions that are anticipated.

Recent geologic mapping in the Exploratory Studies Facility (ESF) has revealed intense, steeply dipping fracture sets trending N70W to N45W beginning at about station 42+10 m in the middle nonlithophysal zone of the Topopah Spring Member. The intensity of fracturing varies to station 50+00 m, the extent of tunnel boring machine progress current to this report.

The YMSCO decided to invoke the procedure because surface geologic mapping did not show indications that a fractured zone of this magnitude would be encountered underground, and in this sense it was unexpected. The fracture zone may be technically significant as an input to our site models for tectonism and unsaturated zone groundwater movement. Additional assessment under the subject study plan will be undertaken to address questions such as; the age of formation for the fractured zone(s), origin of the fractures (e.g., tectonic, cooling), variation in orientation and trend of fractures, and relationship of the fractured areas to the Ghost Dance Fault. Further evaluation is needed to document any impacts on site models.

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If you have any questions, please contact either
Dennis R. Williams of the Assistant Manager for Scientific
Programs office at (702) 794-1417, or April V. Gil of my
staff at (702) 794-5578.



Stephan J. Brocoun
Assistant Manager for
Suitability and Licensing

AMSL:TWB-1764

Enclosure:
Records Package for
YAP-30.27

MAY 22 1996

cc w/encl:

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