



Department of Energy

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

JUN 06 1996

L. Dale Foust
Technical Project Officer
for Yucca Mountain
Site Characterization Project
TRW Environmental Safety Systems, Inc.
Bank of America Center, Suite P-110
101 Convention Center Drive
Las Vegas, NV 89109

EVALUATION OF AMENDED RESPONSE TO DEFICIENCY REPORT (DR)
YMQAD-96-D045 RESULTING FROM YUCCA MOUNTAIN QUALITY ASSURANCE
DIVISION'S (YMQAD) AUDIT YM-ARP-96-07 OF THE CIVILIAN RADIOACTIVE
WASTE MANAGEMENT SYSTEM MANAGEMENT AND OPERATING CONTRACTOR
(SCPB: N/A)

The YMQAD staff has evaluated the amended response to DR
YMQAD-96-D045. The amended response has been determined to be
satisfactory. Verification of completion of the corrective action
will be performed after the effective date provided. Any extension to
this date must be requested in writing, with appropriate
justification, prior to that date. Please send a copy of extension
requests to Deborah Sult, YMQAD/QATSS, P.O. Box 98608; Mail Stop 455,
Las Vegas, Nevada 89193-8608.

If you have any questions, please contact either Robert B. Constable
at (702) 794-5580 or Daniel A. Klimas at (702) 794-1495.

Robert B Constable

Richard E. Spence, Director
Yucca Mountain Quality Assurance Division

YMQAD:RBC-1900

Enclosure:
DR YMQAD-96-D045

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PDR WASTE
WM-11 PDR

YMP-5

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102.7/11
WM-11*

L. Dale Foust

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JUN 06 1996

cc w/encl:

T. A. Wood, HQ (RW-14) FORS
J. G. Spraul, NRC, Washington, DC
S. W. Zimmerman, NWPO, Carson City, NV
R. L. Strickler, M&O, Vienna, VA
R. B. Justice, M&O, Las Vegas, NV
R. P. Ruth, M&O, Las Vegas, NV
Records Processing Center

cc w/o encl:

W. L. Belke, NRC, Las Vegas, NV
D. A. Klimas, YMQAD/QATSS, Las Vegas, NV
D. G. Sult, YMQAD/QATSS, Las Vegas, NV

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 Performance Report
 Deficiency Report
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OFFICE OF CIVILIAN
 RADIOACTIVE WASTE MANAGEMENT
 U.S. DEPARTMENT OF ENERGY
 WASHINGTON, D.C.

PERFORMANCE/DEFICIENCY REPORT

1 Controlling Document: QARD, Rev. 4
 2 Related Report No. YM-ARP-96-07

3 Responsible Organization: CRWMS M&O
 4 Discussed With: Richard Quittmeyer

5 Requirement/Measurement Criteria:
 QARD, Rev. 4, Paragraph 2.2.4, "Planning Work" states: "Planning shall be performed to ensure work is accomplished under suitably controlled conditions," Planning elements shall include as appropriate:
 A. Definition of work scope, objectives, and a listing of the primary tasks involved.
 B. Identification of scientific approach or technical methods used to collect, analyze, or study results of applicable work. (see page 3)

6 Description of Condition:
 Contrary to the above stated requirements, the Study Plan for Study 8.3.1.4.2.3, " Geological Framework and Integrated 3-D Site Model," has not been approved. Numerical model warehousing, described in the draft study plan, is presently being implemented.

7 Initiator: Daniel A. Klimas Date 3/7/96
 9 QA Review: Daniel A. Klimas Date 3/7/96

10 Response Due Date: 20 Working Days From Issuance
 11 QA Issuance Approval: [Signature] Date 3-12-96

12 Remedial Actions:
 See attached

13 Remedial Action Response By: N/A Date
 14 Remedial Action Due Date: N/A Date

15 Remedial Action Response Acceptance: N/A Date
 16 PR Verification/Closure: N/A Date

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DEFICIENCY REPORT

17 Recommended Actions:

- 1) Obtain approval of the Study Plan.
- 2) Investigate to determine impact on quality of deliverable.

18 Investigative Actions:

See attached

19 Root Cause Determination:

N/A

20 Action to Preclude Recurrence:

N/A

21 Response by:

T. Robert W. Cannon Date *04/09/96*

22 Corrective Action Completion Due Date:

23 Response Accepted

QAR *Dan Khinias* Date *5/31/96*

24 Response Accepted

AOQAM *Robert Lee* Date *6.5.96*

25 Amended Response Accepted

QAR _____ Date _____

26 Amended Response Accepted

AOQAM _____ Date _____

27 Corrective Actions Verified

QAR _____ Date _____

28 Closure Approved by:

AOQAM _____ Date _____

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RADIOACTIVE WASTE MANAGEMENT
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PR/DR CONTINUATION PAGE

Block 5 - Requirements/Measurement Criteria: (continued)

- C. Identification of applicable standards and criteria.
- D. Identification and selective application, or development, of appropriate implementing documents.
- E. Identification of field and laboratory testing equipment, or other equipment.
- F. Identification of, or provisions for the identification of, required records and the recording of objective evidence of the results of the work performed.
- G. Identification of quality assurance program verifications to overview the work performed or the product produced.
- H. Identification of prerequisites, special controls, environmental conditions, processes, or skills.
- I. Identification of computer software.

RESPONSE TO DEFICIENCY REPORT YMQAD-96-D045

12 Remedial Actions:

A. Complete the Study Plan 8.3.1.4.2.3 "Geologic Framework and Integrated 3-D Site Model" by revising the draft version to address review comments, reaching agreement with the reviewers that the comments are resolved, and then submitting the study plan for approval. [Due date: August 30, 1996; Responsible Individual: Robert Clayton]

18 Investigative Actions:

The Preliminary 3-D Integrated Site Model is being developed under the auspices of Study Plan 8.3.1.4.3.2 "Rock Characteristics Modeling". This study plan addresses the tasks involved in the geologic framework modeling, as well as the development of rock properties models.

The deliverable "Preliminary 3-D Integrated Site Model" is being developed in accordance with the quality assurance program of the Sandia National Laboratories. Within the program, work is planned in accordance with the QARD through development of work agreements. Work agreements may draw from relevant study plans, but the Study Plan itself does not form the basis for compliance with the QARD. A work agreement is in place for the activity resulting in the deliverable. Hence, there has been no impact on the quality of the deliverable.

The Numerical Model Warehouse is a computer-based integration tool that was developed and implemented to facilitate preparation of the Integrated 3-D Site Model. Essentially, it is a library in which model components, preliminary results, and supporting material are stored to facilitate access by scientists working on related activities. It complements the Technical Database which contains the final data on which the models are based.

Study Plan 8.3.1.4.2.3 "Geologic Framework and Integrated 3-D Site Model" was submitted for review in accordance with YAP-2.2Q. Review comments were made and compiled, but the comments have not yet been resolved. EG&G prepared the draft study plan, but is no longer a participant on the program. The CRWMS M&O is now responsible for the 3-D Integrated Site Model and completion of the associated study plan.

19 Root Cause Determination:

NA

20 Action to Preclude Recurrence:

NA

RESPONSE TO DEFICIENCY REPORT YMQAD-96-D045 [Rev 01]

12 Remedial Actions:

- A. Complete the Study Plan 8.3.1.4.2.3 "Geologic Framework and Integrated 3-D Site Model" by revising the draft version to address review comments, reaching agreement with the reviewers that the comments are resolved, and then submitting the study plan for approval. [Due date: August 30, 1996; Responsible Individual: Robert Clayton]
- B. Review the 3-D Integrated Site Model (Version 1.0) using M&O Quality Administrative Procedure 3-1. [Due date: May 31, 1996; Responsible Individual: Robert Clayton]

18 Investigative Actions:

The Preliminary 3-D Integrated Site Model is being developed under the auspices of Study Plan 8.3.1.4.3.2 "Rock Characteristics Modeling". This study plan addresses the tasks involved in the geologic framework modeling, as well as the development of rock properties models.

The deliverable "Preliminary 3-D Integrated Site Model" is being developed in accordance with the quality assurance program of the Sandia National Laboratories. Within the program, work is planned in accordance with the QARD through development of work agreements. Work agreements may draw from relevant study plans, but the Study Plan itself does not form the basis for compliance with the QARD. A work agreement is in place for the activity resulting in the deliverable. Hence, there has been no impact on the quality of the deliverable.

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19 Root Cause Determination:

NA

20 Action to Preclude Recurrence:

NA

5/29/96 LV.SPO.CTS. 5/96-662