



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

MAR 12 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

ISSUANCE OF DEFICIENCY REPORT (DR) YMQAD-96-D044,  
YMQAD-96-D045 AND PERFORMANCE REPORT (PR) YMQAD-96-P023  
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 AT  
SANDIA NATIONAL LABORATORIES (SCPb: N/A)

Enclosed is DR YMQAD-96-D044, YMQAD-96-D045 and PR  
YMQAD-96-P023 generated as a result of YMQAD Audit  
YM-ARP-96-07.

Please identify the corrective actions to be taken and  
implemented to correct the deficiency. PR/DR Continuation  
Pages have been provided. Send the originals of your  
responses to Deborah Sult, YMQAD/QATSS, 101 Convention Center  
Drive, Suite 640, Las Vegas, Nevada 89109. Response to the  
DRs and PR are due 20 working days from the date of this  
letter. Any extension to due dates must be requested in  
writing, with appropriate justification, prior to the due  
dates.

If you have any questions, please contact either Robert B.  
Constable at 794-7945 or Daniel A. Klimas at 794-7696.

*Robert B Constable*

Richard E. Spence, Director  
YMQAD:RBC-1320 Yucca Mountain Quality Assurance Division

Enclosures:

1. DRs YMQAD-96-D044 and  
YMQAD-96-D045
2. PR YMQAD-96-P023
3. PR/DR Continuation Pages

180191

YMP-5

9603190008 960312  
PDR WASTE  
WM-11 PDR

102.7  
WM-11  
NA03

L. Dale Foust

-2-

MAR 12 1996

cc w/encls:

T. A. Wood, HQ (RW-14) FORS  
J. G. Spraul, NRC, Washington, DC  
S. W. Zimmerman, NWPO, Carson City, NV  
R. R. Richards, SNL, Albuquerque, NM, M/S 1333  
R. L. Strickler, M&O, Vienna, VA  
R. P. Ruth, M&O, Las Vegas, NV

cc w/o encls:

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

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8 ☐ Performance Report  
☒ Deficiency Report  
NO. YMQAD-96-D044  
PAGE 1 OF 2  
QA: L

**PERFORMANCE/DEFICIENCY REPORT**

1 Controlling Document: Quality Assurance Requirements and Description, revision 4		2 Related Report No. YM-ARP-96-07	
3 Responsible Organization: Sandia National Laboratory		4 Discussed With: Michael Brady	
5 Requirement/Measurement Criteria: QARD section 5.2.2D. states in part, "Implementing documents shall include the following information as appropriate to the work to be performed: Quantitative or qualitative acceptance criteria sufficient for determining that activities were satisfactorily accomplished." QARD section III.2.6A. and III.2.6B. are the specific requirements to be implemented for Model Validation.			
6 Description of Condition: The Sandia National Laboratory procedure QAIP 2-4, revision 2, references QAIP 1-5, which is in revision 9, for development of a Work Agreement. The Work Agreement, however, does not contain quantitative or qualitative acceptance criteria for implementation of the above QARD requirements. The principal investigator described a process during the audit that appeared to be satisfactory for meeting the needs of model validation for the Geologic Framework Model. The appropriate implementing document needs to reflect the process intended to be used as well as meet the QARD requirements.			
7 Initiator Stephen D. Harris Date 03/01/96		9 QA Review QAR Stephen D. Harris Date 3/5/96	
10 Response Due Date 20 working days from issuance		11 QA Issuance Approval QAR (PR)/AOQAM [Signature] Date 3.12.96	
12 Remedial Actions:			
13 Remedial Action Response By: Date		14 Remedial Action Due Date Date	
15 Remedial Action Response Acceptance QAR Date		16 PR Verification/Closure QAR Date	

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<sup>8</sup>  
DR NOYMQAD-96-D044  
PAGE 2 OF 2  
QA: L

DEFICIENCY REPORT

17 Recommended Actions:

Add quantitative or qualitative acceptance criteria to the Work Agreement to reflect the QARD requirements and the process for Model Validation.

18 Investigative Actions:

19 Root Cause Determination:

20 Action to Preclude Recurrence:

21 Response by:

Date

22 Corrective Action Completion Due Date:

23 Response Accepted

QAR

Date

24 Response Accepted

AOQAM

Date

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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8 ☐ Performance Report  
☒ Deficiency Report  
NO. YMQAD-96-D045  
PAGE 1 OF 3  
QA: L

**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 <i>Daniel A. Klimas</i> Daniel A. Klimas		9 QA Review <i>Daniel A. Klimas</i> QAR <i>Daniel A. Klimas</i>	
Date <i>3/7/96</i>		Date <i>3/7/96</i>	
10 Response Due Date 20 Working Days From Issuance		11 QA Issuance Approval <i>[Signature]</i> QAR (PR)/AOQAM (DR) <i>[Signature]</i>	
		Date <i>3.12.96</i>	
12 Remedial Actions:			
13 Remedial Action Response By:  Date		14 Remedial Action Due Date  Date	
15 Remedial Action Response Acceptance  QAR Date		16 PR Verification/Closure  QAR Date	

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<sup>8</sup>  
DR NO. YMQAD-96-D045  
PAGE 2 OF 3  
QA: L

**DEFICIENCY REPORT**

**17 Recommended Actions:**

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

**18 Investigative Actions:**

**19 Root Cause Determination:**

**20 Action to Preclude Recurrence:**

**21 Response by:**

Date

**22 Corrective Action Completion Due Date:**

**23 Response Accepted**

QAR

Date

**24 Response Accepted**

AOQAM

Date

**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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U.S. DEPARTMENT OF ENERGY  
WASHINGTON, D.C.

8 ☐ Performance Report  
☒ Deficiency Report  
NO. YMQAD-96-D045  
PAGE 3 OF 3  
QA: L

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.

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8 ☒ Performance Report  
☐ Deficiency Report  
NO. YMQAD-96-P023  
PAGE 1 OF 1  
QA: L

**PERFORMANCE/DEFICIENCY REPORT**

1 Controlling Document: AP 16.1Q, Rev. 0		2 Related Report No. YM-ARP-96-07	
3 Responsible Organization: Sandia National Laboratories		4 Discussed With: Bob Richards	
5 Requirement/Measurement Criteria:  AP 16.1Q, Rev. 0, Paragraph 5.2.1, states in part: "The responsible individual: (c) returns the PR by the response due date to the QAR to obtain concurrence with the remedial action."  Paragraph 5.3 states, in part: "The responsible individual: transmits a response, by the response due date."			
6 Description of Condition:  Contrary to the above stated requirements, one Deficiency Report and two Performance Reports initiated during a surveillance by SNL #95-19, were not responded to by the response due date.			
7 Initiator Daniel A. Khimas Date 3/7/96		9 QA Review QAR Daniel A. Khimas Date 3/7/96	
10 Response Due Date 20 Working Days From Issuance		11 QA Issuance Approval QAR (PRI)/AOQAM (DR) Daniel A. Khimas Date 3/7/96	
12 Remedial Actions:			
13 Remedial Action Response By: Date		14 Remedial Action Due Date Date	
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8 ☐ Performance Report  
☐ Deficiency Report

NO.  
PAGE - OF  
QA: L

PR/DR CONTINUATION PAGE

OFFICE OF CIVILIAN  
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U.S. DEPARTMENT OF ENERGY  
WASHINGTON, D.C.

8 ☐ Performance Report  
☐ Deficiency Report  
NO.  
PAGE - OF  
QA: L

PR/DR CONTINUATION PAGE

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

8 ☐ Performance Report  
☐ Deficiency Report

NO.  
PAGE - OF  
QA: L

PR/DR CONTINUATION PAGE