



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

AUG 13 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

**APPROVAL OF RESPONSE EXTENSION REQUEST FOR DEFICIENCY REPORT (DR)
YM-96-D-055 RESULTING FROM YUCCA MOUNTAIN QUALITY ASSURANCE
DIVISION'S (YMQAD) AUDIT YM-ARC-96-11 OF LAWRENCE LIVERMORE NATIONAL
LABORATORY**

Reference: Ltr, Clarke to Sult, dtd 7/24/96

The referenced letter requested that the response due date for DR YM-96-D-055 be extended to August 7, 1996. Please be advised that this date is acceptable to YMQAD. As the first request for extension on this DR, the new due date is accepted in accordance with Administrative Procedure AP-16.1Q, Revision 1.

Please be advised additional requests will be escalated through the Office of Civilian Radioactive Waste Management.

If you have any questions, please contact either Robert B. Constable at (702) 794-5580 or John E. Therien at (702) 794-5408.

Richard E. Spence, Director
Yucca Mountain Quality Assurance Division

YMQAD:RBC-2372

cc:
T. A. Wood, DOE/HQ (RW-14) FORS
J. G. Spraul, NRC, Washington, DC
W. L. Belke, NRC, Las Vegas, NV
S. W. Zimmerman, NWPO, Carson City, NV
R. L. Strickler, M&O, Vienna, VA
B. R. Justice, M&O, Las Vegas, NV
R. P. Ruth, M&O, Las Vegas, NV
J. A. Blink, M&O/LLNL, Las Vegas, NV
R. E. Monks, M&O/LLNL, Livermore, CA
J. E. Therien, YMQAD/QATSS, Las Vegas, NV
D. G. Sult, YMQAD/QATSS, Las Vegas, NV
D. G. Horton, OQA, NV
Records Processing Center

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**EVALUATION OF RESPONSE TO DEFICIENCY REPORT (DR) YM-96-D-074
RESULTING FROM YUCCA MOUNTAIN QUALITY ASSURANCE DIVISION
(YMQAD) SURVEILLANCE YMP-SR-96-019 OF SANDIA NATIONAL
LABORATORIES**

The YMQAD staff has evaluated the response to DR YM-96-D-074. The 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 G. 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 Patrick H. Cotter at (702) 794-1332.

YMQAD:RBC-2397

Richard E. Spence, Director
Yucca Mountain Quality Assurance Division

Enclosure:
DR YM-96-D-074

cc w/encl:
T. A. Wood, DOE/HQ (RW-14) FORS
J. G. Spraul, NRC, Washington, DC
S. W. Zimmerman, NWPO, Carson City, NV
R. R. Richards, M&O/SNL, Albuquerque, NM, M/S 1333
R. L. Strickler, M&O, Vienna, VA
B. R. 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
P. H. Cotter, YMQAD/QATSS, Las Vegas, NV
D. G. Sult, YMQAD/QATSS, Las Vegas, NV
D. G. Horton, OQA, NV

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

8 ☐ Performance Report
☒ Deficiency Report
NO. YM-96-D-074
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QA: L

PERFORMANCE/DEFICIENCY REPORT

1 Controlling Document:
Quality Assurance Requirements and Description document (QARD), Revision 5

2 Related Report No.
YMP-SR-96-019

3 Responsible Organization:
CRWMS M&O/SNL

4 Discussed With:
M. Brady

5 Requirement/Measurement Criteria:

1. QARD, Section 2.0, Paragraph, 2.2.1 "Quality Assurance Program Documents," states in part:
- "B. Affected Organizations shall establish implementing documents applicable to their scope of work that translate Quality Assurance Requirements and Description (QARD) requirements into work processes."
- QARD, Section 5.0, Paragraph 5.2, "Requirements," states, "Work shall be performed in accordance with controlled implementing documents."

6 Description of Condition:

1. Contrary to requirement #1 above, the generic procedures identified in Work Agreement (WA)-0065, Revision 4, effective 2/26/96, "Exploratory Studies Facility Design Verification Activities," lacked the specificity of an implementing document; i.e.. technical procedure or scientific notebook, required for the scope of their blast monitoring program. It is recognized that SNL did develop a monitoring plan; however, this plan falls outside of the SNL Quality Program.
2. Contrary to requirement #2 above, Vibra-tech, of Louisville, Kentucky was not qualified by the SNL Quality Assurance organization or listed on the Office of Civilian Radioactive Waste Management Qualified Suppliers List prior to the performance of calibration services for seismograph, Serial Number 3861, used for collection of "Far Field" blast data by SNL.

7 Initiator
Patout H. Cotter *P.H. Cotter* Date 7/17/96

9 Is condition an isolated occurrence?
☒ Yes ☐ No ☐ Unknown; Must be Yes if PR

10 Recommended Actions: (Not required for PR)

Evaluate the deficiency, perform remedial action, investigate the extent of deficiency, and perform root cause analysis to determine how the condition came about.

11 QA Review
QAR *P.H. Cotter* Date 7/17/96

12 Response Due Date
20 working days from issuance

13 Affected Organization QA Manager Issuance Approval: (QAR for PR)

Printed Name Richard E. Spence Signature *R.E. Spence* Date 7/17/96

22 Corrective Actions Verified
QAR Date

23 Closure Approved by: (N/A for PR)
AOQAM Date

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WASHINGTON, D.C.

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Block 5, Requirements: (continued)

2. QARD, Section 7.0, Paragraph 7.2.2A, states, "Supplier selection shall be based on an evaluation, performed before the contract is awarded, of the supplier's capability to provide items or services in accordance with procurement document requirements."

Administrative Procedure (AP) 7.4Q, Revision 1, Interim Change Number (ICN) 1, "Maintenance of the Office of Civilian Radioactive Waste Management Qualified Suppliers List," Paragraph 5.1.2, states, "The Affected Organization QA Department: ensures that the supplier is either recently qualified by their organization or listed on the QSL for the procurement document identified scope of work prior to procurement award . . ."

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WASHINGTON, D.C.

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QA: *L*

PERFORMANCE/DEFICIENCY REPORT RESPONSE

14 Remedial Actions:

Remedial actions for the first and second condition are shown on the first and second continuation page, respectively.

15 Extent of Condition: (Not required for PR)

The extent of condition is described and evaluated for the first and second conditions on the first and second continuation page, respectively.

16 Root Cause Determination: (Not required for PR)

Required ☐ Yes ☒ No

Justification for not requiring a root cause analysis is provided in the discussion of the Extent of Condition for each of the two conditions.

17 Action to Preclude Recurrence: (Not required for PR)

Required ☐ Yes ☒ No

Justification for not requiring additional action to preclude recurrence is provided in the discussion of the Extent of Condition for the two conditions.

18 Corrective Action Completion Due Date:

8/21/96

19 Response by:

☒ Initial
☐ Amended

F J Schellky
Date *8/8/96*

Phone *505 848 0643*

20 Response Accepted

QAR

[Signature]

Date

8/9/96

21 Response Accepted (N/A for PR):

AOQAM

[Signature]

Date

8-12-96

OFFICE OF CIVILIAN
RADIOACTIVE WASTE MANAGEMENT
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PR/DR CONTINUATION PAGE

Condition 1. (Continuation of Response)

14. Remedial Action:

Existing memoranda, which have been identified as providing descriptive planning information for the blast monitoring activity, will be corrected by 8/15/96 to identify these records as QA records, and the corrected records submitted to the Central Records Facility. Work Agreement WA-0065 will be revised by 8/21/96 to incorporate the following changes as a minimum: (a) to identify a specific Technical Procedure for vibration monitoring and damage assessment; (b) to provide for the use of one or more scientific notebooks for unique elements of the work, controlled in accordance with SNL QAIP 20-2, "Scientific Notebooks," and to specify a review frequency of the notebook content; (c) to identify specific planning documentation, such as memoranda that are transmitted to the TCO as quality records, as an acceptable part of the planning process; and (d) to impose a management requirement to subject descriptive planning documentation for this activity to SNL technical, quality, and management review, and to identify the file location for this documentation.

15. Extent of Condition:

First, contrary to the Description of Condition above, a minimum of 16 controlled procedures are identified in the controlled Work Agreement as potentially applicable to the blast monitoring work, including 9 of SNL's Quality Assurance Implementing Procedures, through which SNL has acceptably implemented the QARD, and two SNL technical procedures that are directly used in fielding the blast monitoring task. Secondly, no evidence has been cited that indicates that these implementing documents were not used in the performance of this work. Therefore, it does not appear that the cited requirements have been violated.

However, the perception that more detailed planning documentation (QARD Section 2.2.5) and implementation controls (QARD Section 5.2.2) should be used for this highly visible activity appears justified. The monitoring plan cited in the Description of Condition, for example, should more properly be identified as a QA record, which would allow it to be used as evidence of satisfaction of the QARD Section 2.2.5 planning requirements. QARD Supplement III, "Scientific Investigations," permits the use of implementing documents (content governed by QARD Section 5.22), scientific notebooks (content governed by QARD Supplement III), or a combination of both for the performance of scientific investigations. To counter the perception that the implementing documents used for this work were not specific enough, therefore, a Technical Procedure based on the content of the monitoring plan will be developed and issued for the blast monitoring and damage assessment work; scientific notebooks (developed per QAIP 20-2) are anticipated for use in the more unique supporting tasks of Spectral Analysis of Surface Waves (SASW) and crosshole wave velocity measurements. Work Agreement WA-0065 will be revised accordingly. Similar actions will also be implemented to ensure adequate control of Task 5 of WA-0065.

Because the concern expressed is clear and limited to the specificity of implementing controls for the blast monitoring component of the construction monitoring activity of WBS 1.2.3.2.7.3.4, a root cause analysis and corrective action to preclude recurrence are not considered necessary.

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PR/DR CONTINUATION PAGE

Condition 2. (Continuation of Response)

14. Remedial Action:

First, a QA record will be generated by 8/20/96 to describe the selection of Vibra-tech for the purchase of this instrumentation. Second, since it is preferable that Vibra-tech provide post-experiment calibration services, a request to add Vibra-tech to the Qualified Suppliers list for the purpose of providing calibration services for their seismographs will be made by 8/20/96 in accordance with AP-7.4Q. Third, the Technical Procedure being written as an implementing document for blast monitoring will include conducting basic instrument operational performance checks before use. And fourth, as a performance check for the cited instrument, if blast monitoring is conducted in the near future, the performance of the instrument will be compared with data acquired with similar instrumentation, which has been recently purchased and calibrated before use by SNL's Primary Standards Lab, which is on the QSL for such services. This performance check is schedule dependent, and final results will be provided in the blast monitoring report, which will be produced within 60 days of completion of the blasting activity.

15. Extent of Condition:

The P.I. had suggested Vibra-tech as a source of this equipment based on the Supplier's past history as a supplier of similar instrumentation. The P.I. understood that Vibra-tech had been qualified under an approved YMP QA Program in FY95. Documentation of this supplier qualification is available, as is documentation that the new instrument had been calibrated traceable to NIST standards; unfortunately, documentation of the P.I.s justification of the supplier does not appear to exist.

Because this condition is quite limited in scope and does not appear to meet the definition of a deficiency, a root cause analysis and action to preclude recurrence are not needed.