



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

APR 12 1996

Robert W. Craig
Acting Technical Project Officer
for Yucca Mountain Site
Characterization Project
U.S. Geological Survey
Bank of America Center, Suite 860
101 Convention Center Drive
Las Vegas, NV 89109

ISSUANCE OF DEFICIENCY REPORTS (DR) YMQAD-96-D048 THROUGH YMQAD-96-D051 AND PERFORMANCE REPORTS (PR) YMQAD-96-P024 AND YMQAD-96-P025 RESULTING FROM YUCCA MOUNTAIN QUALITY ASSURANCE DIVISION'S (YMQAD) AUDIT YM-ARC-96-10 OF U.S. GEOLOGICAL SURVEY (SCPB: N/A)

Enclosed are DRs YMQAD-96-D048 through YMQAD-96-D051 and PRs YMQAD-96-P024 and YMQAD-96-P025 generated as a result of YMQAD Audit YM-ARC-96-10. The related Corrective Action Requests have been issued under separate cover.

Please identify the corrective actions to be taken and implemented to correct the deficiencies. 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. Responses to the DRs and PRs are due 20 working days from the date of issuance. Extensions 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 (702) 794-7945 or Richard L. Maudlin at (702) 794-7290.

Robert B. Constable

YMQAD:RBC-1558

Richard E. Spence, Director
Yucca Mountain Quality Assurance Division

Enclosures:

1. DRs YMQAD-96-D048 through YMQAD-96-D051
PRs YMQAD-96-P024 and YMQAD-96-P025
2. PR/DR Continuation Pages

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Robert W. Craig

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cc w/encls:

J. G. Spraul, NRC, Washington, DC
S. W. Zimmerman, NWPO, Carson City, NV
T. H. Chaney, USGS, Denver, CO
Records Processing Center

cc w/o encls:

W. L. Belke, NRC, Las Vegas, NV
R. L. Maudlin, 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-D048
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PERFORMANCE/DEFICIENCY REPORT

| | |
|--|---|
| 1 Controlling Document: YMP-USGS-QMP-12.01, Revision 6, Modification 2 | 2 Related Report No. YM-ARC-96-10 |
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| 3 Responsible Organization: U.S. Geological Survey (USGS) | 4 Discussed With: W. Rodman / A. Whiteside / Z. Peterman |
|---|--|

5 Requirement/Measurement Criteria:
 USGS-QMP-12.01, Section 5.5.1, states: "Upon detection of a deficient condition, a Nonconformance Report (NCR) shall be prepared in accordance with YAP 15.1Q... Some of the items that constitute a deficient or nonconforming condition are as follows:

- Equipment found to be or suspected to be out-of-calibration (that is, beyond accepted tolerance established in technical procedures or in Scientific Notebooks) being used to collect data.
- No closing calibration per Paragraph 5.4.2."

6 Description of Condition:
 Contrary to the above:
Issue 1: Documentation for calibrations performed for analytical balances K59633 and 37060137 on 5/16/95 indicate failure for both preliminary findings and final report. No NCR has been issued to document evaluations of the data obtained using this equipment, or justification for continued use of equipment.
Issue 2: No closing calibration has been documented for Fission-Track System id numbers GCP-08-FT-A and GCP-08-FT-Z and no NCR has been initiated.

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| 7 Initiator <i>Mary G. McDaniel</i> Mary G. McDaniel Date 3/29/96 | 9 QA Review <i>Mary G. McDaniel</i> QAR <i>Mary G. McDaniel</i> Date 3/29/96 |
| 10 Response Due Date 20 Working Days From Issuance | 11 QA Issuance Approval <i>D.B. Cantelmo</i> QAR (PRI)/AOCAM (DR) Date 4/10/96 |

12 Remedial Actions:

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|---|---|
| 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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17 Recommended Actions:

- Issue 1:** Issue NCR(s) to document out of tolerance conditions and evaluation of acceptability of data obtained using equipment. Justify continued use of equipment; modify technical procedures as necessary.
- Issue 2:** Perform closing calibrations or issue NCR to document situation and evaluation of acceptability of data obtained using equipment.

18 Investigative Actions:

19 Root Cause Determination:

20 Action to Preclude Recurrence:

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|---|---|
| 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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 Deficiency Report
 NO. YMQAD-96-D049
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PERFORMANCE/DEFICIENCY REPORT

1 Controlling Document:
YAP-15.1Q, Revision 2, ICN 1

2 Related Report No.
YM-ARC-96-10

3 Responsible Organization:
U.S. Geological Survey

4 Discussed With:
W. Rodman

5 Requirement/Measurement Criteria:
YAP-15.1Q, Section 2.0, states: "The procedure also applies to the evaluation and disposition of the validity of results for items and samples as well as work products when Measuring and Test Equipment is found to be out of calibration."

6 Description of Condition:
Contrary to the above, YMP-USGS-QMP-12.01, Revision 6, Modification 2, does not require a Nonconformance Report to be prepared for each instance where Measuring and Test Equipment (M&TE) is found to be out of calibration, but allows for an alternative method to be used when specified within a technical procedure or Scientific Notebook.

7 Initiator *Mary G. McDaniel*
Mary G. McDaniel
Date 3/29/96

9 QA Review
QAR *Mary G. McDaniel*
Date 3/29/96

10 Response Due Date
20 Working Days From Issuance

11 QA Issuance Approval
R.B. Constance
QAR (PR)/AQQAM (DR)
Date 4/10/96

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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DEFICIENCY REPORT

17 Recommended Actions:

Revise QMP-12.01 to comply with YAP-15.1Q.
Revise any technical procedures or Scientific Notebooks that provide for an alternative method of documenting and evaluating M&TE that is found to be out of calibration.

Review all documentation where an alternative method was used and if unresolved, initiate an NCR to document the conditions.

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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NO. YMQAD-96-D050
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PERFORMANCE/DEFICIENCY REPORT

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|---|--------------------------------------|
| 1 Controlling Document: YAP-17.1Q, Revision 0, ICN 4 | 2 Related Report No. YM-ARC-96-10 |
|---|--------------------------------------|

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|--|--------------------------------|
| 3 Responsible Organization: U.S. Geological Survey (USGS) | 4 Discussed With: T. Chaney |
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5 Requirement/Measurement Criteria:
YAP-17.1Q, Section 5.3.3c) states that Affected Organizations/Record Sources "submit by correspondence a list of cited references for each study plan or published administrative, technical, or scientific report to the YMSCO Research and Study Center."

6 Description of Condition:
Contrary to the above, USGS has not submitted to the Yucca Mountain Site Characterization Office (YMSCO) Research and Study Center any lists of cited references included in study plans or published administrative, technical, or scientific reports since the implementation of the YAP-17.1Q requirement on 5/17/95.

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|--|---|
| 7 Initiator <i>Mary G. McDaniel</i> Mary G. McDaniel Date 3/29/96 | 9 QA Review QAR <i>Mary G. McDaniel</i> Date 3/29/96 |
| 10 Response Due Date 20 Working Days From Issuance | 11 QA Issuance Approval <i>RB Condit</i> QAR (PRI)/AOQAM (DR) Date 4/10/96 |

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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17 Recommended Actions:

Determine the extent of the condition and provide a list of cited references to the YMSCO Research and Study Center for each USGS study plan or published administrative, technical, or scientific report published since 5/17/95.

Ensure appropriate USGS procedural controls are established and implemented to ensure the lists of cited references are provided to the YMSCO Research and Study Center as required by YAP-17.1Q.

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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NO. YM/QAD-96-D051

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PERFORMANCE/DEFICIENCY REPORT

1 Controlling Document:
QARD, DOE/RW-0333P, Revision 5

2 Related Report No.
YM-ARC-96-10

3 Responsible Organization:
U.S. Geological Survey (USGS)

4 Discussed With:
T. Chaney/ R. Craig

5 Requirement/Measurement Criteria:
QARD, 17.2.2.C, states in part: "Individuals handling QA records shall protect them from damage or loss until the records are submitted to the records management system."

6 Description of Condition:
Contrary to the above; USGS has lost and/or misplaced the following records:

- Supplier Evaluation, 95-044, of Intertyme Metrology
- Supplier Verification, 95-045, of Lengheim/Mathis
- Supplier Evaluation, 95-046, of DRI/Dr. Haas
- Supplier Verification, 95-039, of CBS

7 Initiator
John S. Martin for
Date 03/29/96

9 QA Review
QAR *[Signature]*
Date 4/8/96

10 Response Due Date
20 Working Days From Issuance

11 QA Issuance Approval
[Signature]
QAR (PR)/AQQAM (DR)
Date 4/10/96

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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DEFICIENCY REPORT

17 Recommended Actions:

Describe those actions necessary to correct those deficiencies identified within the DR.

Investigate to determine the extent of like deficiencies and those actions necessary to correct those identified.

Determine root cause of the deficient condition.

Determine those actions necessary to preclude recurrence

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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 NO. YMQAD-96-P024
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PERFORMANCE/DEFICIENCY REPORT

1 Controlling Document:
QARD, DOE/RW-0333P, Revision 5

2 Related Report No.
YM-ARC-96-10

3 Responsible Organization:
U.S. Geological Survey (USGS)

4 Discussed With:
T. Chaney / J. Golos

5 Requirement/Measurement Criteria:
QARD, Section 17.2-4A, states: "Corrections to QA records including documents which will become records shall include the initials or signature of the person authorized to make the corrections and the date the correction was made."

6 Description of Condition:
Contrary to the above, USGS-QMP-17.01, Revision 8, Section 5.3, states:
"Record Sources shall ensure that QA records are completed appropriate to the work accomplished and that records (QA and Non-QA) are accurate, complete, and legible; or specifically accounted for. This may be accomplished on the Table of Contents by marking the entry (line item) affected with an asterisk and an associated, appropriate, and specific statement of explanation similar to the statements below:

a) "All corrections are determined intentional and this statement replaces dating and initialing each correction made."

This is not in compliance with the QARD.

7 Initiator
Mary G. McDaniel
Mary G. McDaniel
Date 3/29/96

9 QA Review
QAR *Mary G. McDaniel*
Date 3/29/96

10 Response Due Date
20 Working Days From Issuance

11 QA Issuance Approval
QAR (PR/AODAM (DR) *Mary G. McDaniel*
Date 3/29/96

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
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PERFORMANCE/DEFICIENCY REPORT

1 Controlling Document:
QMP-3.03, Revision 5, "Software"

2 Related Report No.
YM-ARC-96-10

3 Responsible Organization:
U.S. Geological Survey (USGS)

4 Discussed With:
C. Miller-Corbett

5 Requirement/Measurement Criteria:
QMP-3.03, Paragraph 5.3, Documentation, states in part: "...required documentation includes...requirements specification, design description..."

6 Description of Condition:
Contrary to the above requirement, there is no documented evidence that the documentation for DIFFGIBBS/1.0 contained the requirements specification or the design description. According to USGS personnel, these requirements are met in "Spear 1988," "Spear 1989," "Spear 1993," and "Spear and Florence 1992." These documents could not be produced at USGS and could not be located in the Las Vegas Records Center.

7 Initiator
Kenneth T. McFall
Kenneth T. McFall Date 03/29/96

9 QA Review
QAR *Kenneth T. McFall* Date 3/29/96

10 Response Due Date
20 Working Days From Issuance

11 QA Issuance Approval
QAR (PR)/AODAM (DR) *Kenneth T. McFall* Date 3/29/96

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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