



Department of Energy
 Office of Civilian Radioactive Waste Management
 Yucca Mountain Site Characterization Office
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OCT 09 1996

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 Technical Project Officer
 for Yucca Mountain
 Site Characterization Project
 U.S. Geological Survey
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**VERIFICATION OF CORRECTIVE ACTIONS AND CLOSURE OF DR YM-96-D-050
 AND PR YM-96-P-024 RESULTING FROM YMQA AUDIT YM-ARC-96-10**

The Yucca Mountain Quality Assurance staff has verified the corrective actions to Deficiency Report YM-96-D-050 and Performance Report YM-96-P-024 and determined the results to be satisfactory. As a result, these deficiency documents are considered closed.

If you have any questions, please contact either Mario R. Diaz at (702) 794-1489 or Mary G. McDaniel at (702) 794-1468.

Richard E. Spence
 Yucca Mountain Quality Assurance

YMQA:MRD-0036

Enclosure:
 DR YM-96-D-050 and
 PR YM-96-P-024

cc w/encl:
 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 encl:
 W. L. Belke, NRC, Las Vegas, NV
 M. G. McDaniel, YMQA/QATSS, Las Vegas, NV
 D. G. Sult, YMQA/QATSS, Las Vegas, NV
 D. G. Horton, DOE/OQA, Las Vegas, NV

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Recip: NMSS/HLUR

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WASHINGTON, D.C.

8 Performance Report
 Deficiency Report
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PERFORMANCE/DEFICIENCY REPORT

1 Controlling Document:
YAP-17.1Q, Revision 0, ICN 4

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

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

4 Discussed With:
T. Chaney

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.

7 Initiator
Mary G. McDaniel
Mary G. McDaniel

Date *3/29/96*
Date

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

10 Response Due Date
20 Working Days From Issuance

11 QA Issuance Approval
PA Onofre
QAR (PR)/AQQAM (DR)

Date *4/10/96*

12 Remedial Actions:

13 Remedial Action Response By:
SEE ATTACHED RESPONSE
Date

14 Remedial Action Due Date
SEE ATTACHED RESPONSE
Date

15 Remedial Action Response Acceptance
QAR *Mary G. McDaniel*
Date *5/16/96*

16 PR Verification/Closure
QAR *N/A*
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:

SEE ATTACHED RESPONSE
Date

22 Corrective Action Completion Due Date:

SEE ATTACHED RESPONSE

23 Response Accepted

QAR *Maury A. McDaniel* Date 5/16/96

24 Response Accepted

AOQAM *[Signature]* Date 5/24/96

25 Amended Response Accepted

QAR N/A Date

26 Amended Response Accepted

AOQAM N/A Date

27 Corrective Actions Verified

QAR *Maury A. McDaniel* Date 10/2/96

28 Closure Approved by:

AOQAM *[Signature]* Date 10/2/96

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RESPONSE TO DEFICIENCY REPORT YMQAD-96-D050

BLOCK 12 REMEDIAL ACTIONS:

Copies of the lists of cited references from the 17 published reports will be forwarded to the YMSCO Technical Information Center (TIC). [NOTE: The YAP refers to the YMSCO Research and Study Center. We were advised that the center was renamed and to forward the documents to TIC.] The 17 published reports were identified as those submitted between 5/17/95 and 4/25/96.

BLOCK 13 REMEDIAL ACTION RESPONSE BY: *G. Louis Ducret*

for G.Louis Ducret, Chief, Planning and Support Program, YMPB

5/10/96
Date

BLOCK 14 REMEDIAL ACTION DUE DATE: 07/01/96

BLOCK 18 INVESTIGATIVE ACTIONS:

A query of the publications data base was performed and it was determined that only 17 published reports have been submitted since May 15, 1995. It was determined upon investigation that because there was a back-log of published reports, the submittal of cited reference lists to the YMSCO became an oversight. Submittal of this information is not a records issue. The deficiency is an administrative issue, not a quality-affecting issue. Study Plans are governed by YAP-2.2Q. The YMPB-USGS is not responsible for submittal of cited reference lists from Study Plans.

BLOCK 19 ROOT CAUSE DETERMINATION:

There was no direct activity occurring in published reports at the time the requirement was added to the YMP-USGS QMP-17.01. The effective date of the change was 05/17/95 to correspond with the YAP-17.1Q requirement. And, once the published reports were finally submitted, the then Records Coordinator was laid off, and the implementation of the QMP-17.01 requirement simply got lost in the shuffle.

BLOCK 20 ACTION TO PRECLUDE RECURRENCE:

YMP-USGS-QMP-3.04 will be revised making the YMPB Reports Specialist responsible for submitting the cited reference lists to YMSCO.

In the interim, the YMPB Reports Specialist currently is forwarding to the TIC copies of the cited reference lists for published reports since 04/25/96.

BLOCK 21 RESPONSE BY: *G. Louis Ducret*

for G.Louis Ducret, Chief, Planning and Support Program, YMPB

5/10/96
Date

BLOCK 22 CORRECTIVE ACTION COMPLETION DUE DATE: 07/01/96

Bibliography of Published Reports
Since May 17, 1995
Date of Printout: June 3, 1996

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By: Becci Clayton

<u>TITLE/AUTHOR(S)</u>	<u>Comments</u>
1995	
Ambos, S., Flint, A.L., and Hevesi, J.A., 1995, Precipitation data for water years 1992 and 1993 from a network of nonrecording gages at Yucca Mountain, Nevada, U.S. Geological Survey Open-File Report 95-146, 100p.	09/6/95 - Published & Distributed
Carr, W.J., Grow, J.A., and Keller, S.M., 1995, Lithologic and geophysical logs of drill holes Felderhoff Federal 5-1 and 25-1, Amargosa Desert, Nye County, Nevada, U.S. Geological Survey Open-File Report 95-155, 14p.	08/18/95 - Published & Distributed
Flint, L.E. and Flint, A.L., 1995, Shallow infiltration processes at Yucca Mountain, Nevada - Neutron logging data 1984-93, U.S. Geological Survey Water-Resources Investigations Report 95-4035, 46p.	09/06/95 - Published & Distributed
Hale, G.S. and Westenburg, C.L., 1995, Selected ground-water data for Yucca Mountain region, southern Nevada and eastern California, Calendar Year 1993, U.S. Geological Survey Open-File Report 95-158, 67p.	06/20/95 - Published & Distributed
LeCain, G.D., 1995, Pneumatic testing in 45-degree-inclined boreholes in ash-flow tuff near Superior, Arizona, U.S. Geological Survey Water-Resources Investigations Report 95-4073, 27p.	10/06/95 - Published & Distributed
Lichty, R.W. and McKinley, P.W., 1995, Estimates of ground-water recharge rates for two small basins in central Nevada, U.S. Geological Survey Water-Resources Investigations Report 94-4104, 31p.	07/10/95 - Published & Distributed
Moyer, T.C., Geslin, J.K., and Buesch, D.C., 1995, Summary of lithologic logging of new and existing boreholes at Yucca Mountain, Nevada, July 1994 to November 1994, U.S. Geological Survey Open-File Report 95-102, 22p.	07/17/95 - Published & Distributed

6/6/96 Craig & Barnes

Bibliography of Published Reports
Since May 17, 1995
Date of Printout: June 3, 1996

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<u>TITLE/AUTHOR(S)</u>	<u>Comments</u>
Rautman, C.A., Flint, L.E., Flint, A.L., Istok, J.D., 1995, Physical and hydrologic properties of outcrop samples from a nonwelded to welded tuff transition, Yucca Mountain, Nevada, U.S. Geological Survey Water-Resources Investigations Report 95-4061, 28p.	08/30/95 - Published & Distributed
1996	
Buesch, D.C., Spengler, R.W., Moyer, T.C., and Geslin, J.K., 1996, Proposed stratigraphic nomenclature and macroscopic identification of lithostratigraphic units of the Paintbrush group exposed at Yucca Mountain, Nevada, U.S. Geological Survey Open-File Report 94-469, 45p.	04/96 - Published & Distributed
Geldon, A.L., 1996, Results and interpretation of preliminary aquifer tests in boreholes UE-25c #1, UE-25c #2, and UE-25c #3, Yucca Mountain, Nye County, Nevada, U.S. Geological Survey Water-Resources Investigations Report 94-4177, 119p.	03/96 - Published & Distributed
LeCain, G.D., 1995, Pneumatic testing in 45-degree-inclined boreholes in ash-flow tuff near Superior, Arizona, U.S. Geological Survey Water-Resources Investigations Report 95-4073, 27p.	01/96 - Published & Distributed
Neymark, L.A., Marshall, B.D., Kwak, L.M., Futa, K., and Mahan, S.A., 1995, Geochemical and Pb, Sr, and O isotopic study of the Tiva Canyon Tuff and Topopah Spring Tuff, Yucca Mountain, Nye County, Nevada, U.S. Geological Survey Open-File Report 95-134, 17p.	01/96 - Published & Distributed
Peterman, Z.E., Spengler, R.W., Singer, F.R., and Dickerson, R.P., 1996, Geochemistry of outcrop samples from the Raven Canyon and Paintbrush Canyon reference sections, Yucca Mountain, Nevada, U.S. Geological Survey Open-File Report 94-550, 17p.	04/96 - Published & Distributed

Bibliography of Published Reports
Since May 17, 1995
Date of Printout: June 3, 1996

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By: Becci Clayton

<u>TITLE/AUTHOR(S)</u>	<u>Comments</u>
Rattray, G.W., Striegl, R.G., and Yang, I.C., 1995, Adsorption of sulfur hexafluoride onto crushed tuffs from the Yucca Mountain area, Nye County, Nevada, U.S. Geological Survey Water-Resources Investigations Report 95-4057, 29p.	01/96 - Published & Distributed
Tucci, P. and Burkhardt, D.J., 1995, Potentiometric-surface map, 1993, Yucca Mountain and vicinity, Nevada, U.S. Geological Survey Water-Resources Investigations Report 95-4149, 15p.	01/96 - Published & Distributed
Turner, A.K., D'Agnese, F.A., and Faunt, C.C., 1996, Digital elevation model (DEM) file of topographic elevations for the Death Valley region of southern Nevada and southeastern California processed from U.S. Geological Survey 1-Degree digital elevation model data files, U.S. Geological Survey Open-File Report 95-287, 9p.	04/96 - Published & Distributed
Turner, A.K., D'Agnese, F.A., and Faunt, C.C., 1996, Digital hydrographic, land use/land cover, and hydrologic unit boundary files for the Death Valley region of southern Nevada and southeastern California processed from U.S. Geological Survey 1:100,000-and 1:250,000-scale digital files, U.S. Geological Survey Open-File Report 95-362, 21p.	04/96 - Published & Distributed

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Verification of Corrective Actions for DR YM-96-D-050

Verified that cited references for the 17 publications attached to the Response to Deficiency Report YM-96-D-050, dated 5-10-96 were received by the Technical Information Center.

Verified that QMP-3.04, revision 7, modification 2, sections 4.7 and 5.3.3 requires the YMP-USGS Reports Specialist to submit list of cited references to the Technical Information Center.

Corrective actions have been completed and this DR is considered closed.

Verified by: Mary G. McDaniel

Mary G. McDaniel, QAR

Date: 10/2/96

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Performance Report
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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
Date 3/29/96

9 QA Review
QAR [Signature] Date 3/29/96

10 Response Due Date
20 Working Days From Issuance

11 QA Issuance Approval
QAR (PR/AODAM (DR)) [Signature] Date 3/29/96

12 Remedial Actions:

13 Remedial Action Response By:
SEE ATTACHED RESPONSE
Date

14 Remedial Action Due Date 8-1-96
SEE ATTACHED RESPONSE
Date

15 Remedial Action Response Acceptance
QAR [Signature] Date 5-16-96

16 PR Verification/Closure
QAR [Signature] Date 10/2/96

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RESPONSE TO PERFORMANCE REPORT YMQAD-96-P024

BLOCK 12 REMEDIAL ACTIONS:

Upon investigation it was discovered that this "corrections" issue was the subject of considerable, undocumented discussions between the YMP-USGS Records Coordinator (contractor no longer on the project) and the Records Management Organization (RMO) in Las Vegas. There appears to have been some agreement that led to YMP-USGS-QMP-17.01 Revision 8, which included the blanket statement regarding corrections. The rationale was that the intent of YAP-17.1Q was not violated when the blanket statement referencing the effected Table of Contents line item included initials and date of corrections made in the body of the package relative to that line item. This blanket statement was being used because of the large volume and size of records that the USGS submits. Some data packages may contain hundreds of pages when finally submitted to the RMO. It was determined that some portions of these packages required extensive crossing out, initialing and dating. A blanket statement was intended to reduce the effort required to make extensive corrections without compromising the records requirement to identify the person making the correction and the date it took place. The acceptance of the use of the blanket statement practice was evident in that no records were being rejected by the RMO for using this blanket statement.

The QARD and the YAP clearly do not identify the use of blanket statements other than those for "blanks being intentional". This will be corrected in the next revision of QMP-17.01, and training on the correct procedures for records submittal will be provided.

Effective as of the date of this response, and as an interim measure until the QMP is revised and training has been accomplished, YMP-USGS records using the blanket "correction" statement will not be processed on to the RMO. The USGS Records Coordinator will identify quality-assurance records being submitted that include the blanket "correction" statement and will return the records to the appropriate records source for action. Additionally, the YMPB will advise YMP-USGS records sources of this change in practice.

BLOCK 13 REMEDIAL ACTION RESPONSE BY: *G. Louis Ducret* 5/10/96
for G.Louis Ducret, Chief, Planning and Support Program, YMPB Date

BLOCK 14 REMEDIAL ACTION DUE DATE: 07/01/96

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VERIFICATION OF CORRECTIVE ACTION FOR PR YM-96-P-024

Verification of Remedial Action:

Verified that USGS QMP-17.01, revision 9, section 5.1.3 acceptably incorporates QARD requirement 17.2.4 A.

Verified that training has been initiated for QMP-17.01 baselined personnel per telecon with Mary Nelson, USGS Training Coordinator and review of QMP-2.07, Attachment 5, YMP-USGS Reading Assignment, dated September 11, 1996 which assigned required reading for QMP-17.01, revision 9.

Remedial action is complete and this PR is closed.

Verified by:


Mary G. McDaniel, QAR

Date

10/2/96