



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

SEP 05 1996

L. D. 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

**VERIFICATION OF CORRECTIVE ACTION AND CLOSURE OF DEFICIENCY REPORT  
(DR) YM-96-D-012, REVISION 1, RESULTING FROM YUCCA MOUNTAIN QUALITY  
ASSURANCE DIVISION'S (YMQAD) AUDIT YM-ARP-96-01 OF THE UNIVERSITY OF  
NEVADA AT RENO/SEISMOLOGICAL LABORATORY**

The YMQAD staff has verified the corrective action to DR YM-96-D-012, Revision 1, and determined the results to be satisfactory. As a result, the DR is considered closed.

If you have any questions, please contact either Robert B. Constable at (702) 794-5580 or Donald J. Harris at (702) 794-1467.

*Robert B. Constable*

YMQAD:RBC-2548

Richard E. Spence, Director  
Yucca Mountain Quality Assurance Division

Enclosure:  
DR YM-96-D-012, Revision 1

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. 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  
D. G. Sult, YMQAD/QATSS, Las Vegas, NV  
D. J. Harris, YMQAD/QATSS, Las Vegas, NV  
D. G. Horton, DOE/OQA, Las Vegas, NV

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PDR WASTE  
WM-11 PDR

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NH331/  
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wm-11

recip: NMSS/HLUR

OFFICE OF CIVILIAN  
RADIOACTIVE WASTE MANAGEMENT  
U.S. DEPARTMENT OF ENERGY  
WASHINGTON, D.C.8 ☐ Performance Report  
☒ Deficiency Report  
NO. YM-QAD-96-D012. R1  
PAGE 1 OF 3  
QA: L

## PERFORMANCE/DEFICIENCY REPORT

1 Controlling Document:  
YMP-USGS-QMP-17.1, Rev. 7, Records Management for Record Sources2 Related Report No.  
YM-ARP-96-013 Responsible Organization:  
M&O/UNRSL4 Discussed With:  
J. Brune, D. Von Seggen, B. Parks, T. Chaney

## 5 Requirement/Measurement Criteria:

Page 7) 5.3.4, Creation - Records should be created with dark markings against a light background

Page 6) 5.3.1.1 Lineouts may be used to identify corrected information by scribing a single line through the incorrect information using an indelible medium, preferably black ink, and then entering the correct information in close proximity to the lineout. The incorrect information should remain legible.

Page 6) 5.3.1 Accuracy - All corrections to records to ensure records are accurate require a correction acknowledgment. This may be accomplished by the date and initials or signature of the person authorized to make corrections in close proximity to the correction on the document.  
(continued)

## 6 Description of Condition:

- 1) Records of Earthquake locations for the 1993 Catalog, retained as QA Records by UNRSL were not generated in dark ink. Some entries were made in pencil. Some records appear to have been erased and re-written in as a correction.
- 2) The above records do not indicate any initials or signature that they were checked for accuracy by a supervising manager.
- 3) The above records are not being submitted in a timely manner to the Records Center, specifically, the supporting records for 1993 Catalog of Seismicity for the Southern Great Basin of Nevada and California, have not been submitted; i.e., the "pink sheets."

## 7 Initiator

James D. Agnew

Date 11/11/96

## 9 QA Review

QAR Donald J. Harris

Date 11/11/96

## 10 Response Due Date

20 working days after issuance

## 11 QA Assurance Approval

QAR (PRI/AQAM (ORI)

Date 1.16.96

## 12 Remedial Actions:

Review the approximately 3000 "pink sheets" that document the routine processing of each recorded earthquake. Photocopy any sheets that were filled out in pencil to produce a record that cannot be erased. Review, sign, and date each sheet. Submit the records to the Record Processing Center in accordance with appropriate M&O procedures. Provide training in record source responsibilities, including proper record preparation and submittal (M&O QAP-17-1; M&O NLP-17-6), as part of the transition from the USGS to M&O quality assurance program.

Responsible Individual: David von Seggren. Due Date: July 30, 1996.

## 13 Remedial Action Response By:

RICHARD C. GUITTMEYER

Date 2/14/96

## 14 Remedial Action Due Date

JULY 30, 1996

Date

## 15 Remedial Action Response Acceptance

QAR D. Harris

Date 3/13/96

## 16 PR Verification/Closure

QAR

N/A

Date

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WASHINGTON, D.C.

8  
OR NO. YMQAD-96-D012.R1  
PAGE 2 OF 3  
QA: L

DEFICIENCY REPORT

17 Recommended Actions:

- 1) Make all entries on summary forms in dark ink (preferably black ink). Corrections shall be made by lining out the error, initialing and dating the new entry.
- 2) The supervising manager shall check all entries and indicate agreement by initialing and dating the record.
- 3) Records shall be submitted to the M&O LRC as soon as possible after submission of the annual seismicity catalog to DOE, preferably no later than 45 days after report submission and approval by DOE.

18 Investigative Actions:

The deficiency identified for 1993 records of earthquake locations exists for such records produced from 10/01/92 through 9/30/95. The accuracy of sheets was documented by qualified personnel using a checkmark rather than by dating and initialing. Entries were made in pencil due to inadequate training in records responsibilities.

Records documenting analysis of earthquakes since 10/01/95 are initialed and dated by a qualified individual as they are produced. Records are prepared in dark ink.

19 Root Cause Determination:

N/A

20 Action to Preclude Recurrence:

N/A

21 Response by: <u>R.C. Quittnever</u> EDWARD C. QUITTNEVER Date <u>2/14/96</u>	22 Corrective Action Completion Due Date:
23 Response Accepted QAR <u>[Signature]</u> Date <u>3/13/96</u>	24 Response Accepted AOQAM <u>[Signature]</u> Date <u>3-20-96</u>
25 Amended Response Accepted QAR <u>N/A</u> Date	26 Amended Response Accepted AOQAM <u>N/A</u> Date
27 Corrective Actions Verified QAR <u>[Signature]</u> Date <u>8/24/96</u>	28 Closure Approved by AOQAM <u>[Signature]</u> Date <u>9-3-96</u>

OFFICE OF CIVILIAN  
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8 ☐ Performance Report  
☒ Deficiency Report

NO. YMQAD-96-D012,

PAGE 3 OF 3

QA: L

PR/DR CONTINUATION PAGE

Block 5 - Requirement/Measurement Criteria (continued)

Page 3) 4.3 - The Record Source is responsible for...the timely submittal of QA records and records packages to the LRC.

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8 ☐ Performance Report  
☒ Deficiency Report  
NO. YM-QAD-96-D012  
PAGE 1 OF 3  
QA: L

**PERFORMANCE/DEFICIENCY REPORT**

1 Controlling Document:  
YMP-USGS-QMP-17.1, Revision 7, Records Management for Record Sources

2 Related Report No.  
YM-ARP-96-01

3 Responsible Organization:  
USGS/UNRSL

4 Discussed With:  
J. Brune, D. Von Seggen, B. Parks, T. Chaney

5 Requirement/Measurement Criteria:

Page 7) 5.3.4 , Creation - Records should be created with dark markings against a light background.

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3) The above records are not being submitted in a timely manner to the USGS LRC, specifically, the supporting records for 1993 Catalog of Seismicity for the Southern Great Basin of Nevada and California, have not yet been submitted; i.e., the "pink sheets."

7 Initiator

James D. Agnew

Date 10/26/95

9 QA Review

QAR

*Donald J. Harris*

Date 11/1/95

10 Response Due Date

20 working days from issuance

11 QA Issuance Approval

QAR (PRI)/AQQAM (DR)

*[Signature]*

Date 11/7/95

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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8  
OR NO. YMQAD-96-D012  
PAGE 2 OF 3  
QA: L

DEFICIENCY REPORT

17 Recommended Actions:

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- 2) The supervising manager shall check all entries and indicate agreement by initializing and dating the record.
- 3) Records shall be submitted to the USGS LRC (or M&O LRC as appropriate) as soon as possible after submission of the annual seismicity catalog to DOE, preferably no later than 45 days after report submission and approval by DOE.

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

AQQAMM

Date

25 Amended Response Accepted

QAR

Date

26 Amended Response Accepted

AQQAMM

Date

27 Corrective Actions Verified

N/A

QAR

Date

1/11/96

28 Closure Approved by:

AQQAMM

Date

1-16-96

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RADIOACTIVE WASTE MANAGEMENT  
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8 ☐ Performance Report  
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NO. YMQAD-96-D012

PAGE 3 OF 3

QA: L

**PR/DR CONTINUATION PAGE**

Block 5 continued

Page 3) 4.3 - The Record Source is responsible for...the timely submittal of QA records and records packages to the LRC.

**VERIFICATION OF DEFICIENCY REPORT No. YM-96-D-012**

**Reviewed Training Records for:**

K.Smith.  
G.Shields.  
B.Wilhelm.  
G.Biasi.  
D.von Seggren.  
J.Torrise.  
J.Brune.  
W.Nicks.  
N.Stennes.  
A.Alburto.

**The above were trained in one or more of the following procedures.**

QAP-SI-0 Rev.0  
QAP-SI-1 Rev.0  
QAP-SI-2 Rev.0  
QAP-SI-3 Rev.0  
QAP-17.1 Rev.4  
NLP-17.6 Rev.0  
YAP-30.1 Rev.0  
YAP-30.2 Rev.0  
YAP-30.10 Rev.2  
YAP-30.16 Rev.0  
YMP/93-04

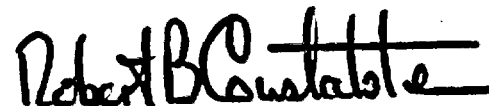
**Volumes I thru XIII of Seismic Event Summary Sheets compiled and submitted to RPC.**

**Records Package Table of Contents authenticated 8/5/96**

**Transmittal/Receipt Acknowledgements signed by the RPC on 8-8-96**

**Review of the above documents was performed on 8-28-96., based on this review this deficiency is considered closed.**

Signed.

  
Robert B. Constable.

8.29.96