



**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-011, 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-011, 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* for

YMQAD:RBC-2550

Richard E. Spence, Director  
 Yucca Mountain Quality Assurance Division

Enclosure:  
 DR YM-96-D-011, 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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recip: NMSS/HLUR

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

8  Performance Report  
 Deficiency Report  
NO. YMQAD-96-D0114R1  
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QA: L

PERFORMANCE/DEFICIENCY REPORT

1 Controlling Document: YMP-USGS-QMP-5.05, Rev. 4, Section 5, Scientific Notebook  
2 Related Report No. YM-ARP-96-01

3 Responsible Organization: M&O/LNRS  
4 Discussed With: J. Brune, D. Von Seggen, B. Parks, T. Chaney

5 Requirement/Measurement Criteria:  
Page 2) 5.2 Notebook Identification - Scientific Notebook shall be uniquely identified.  
5.4 Notebook Format - shall be prebound. Each side of a page containing entries shall be numbered. Entries shall be made in a manner that will enable legible photocopies. Relevant loose materials should be securely fastened or referenced on the scientific notebook, as appropriate.  
5.6 In-Progress Entries shall contain the following information: ...Names of individuals performing the work, and dated initials or signatures for individuals making the entry.

6 Description of Condition:  
1) The scientific notebook in use for the digital seismic network contains information on loose pages that are not numbered or signed. Some loose sheets appear to contain incomplete information to indicate that they are to be part of the scientific notebook.

7 Initiator: James D. Agnew  
9 QA Review: Donald J. Harris  
Date 1/11/96 Date 1/11/96

10 Response Due Date: 20 working days from issuance  
11 QA Issuance Approval: [Signature]  
Date 1.6.96

12 Remedial Actions:  
Loose pages and computer files intended to be part of Scientific Notebook SN-0090 will either be physically incorporated into the notebook or bound separately, clearly marked as to which scientific notebook it is attached to and referenced in the notebook as an attachment. A cover statement indicating that the enclosed pages accurately describe their work will be signed by individuals performing the work. Incomplete pages will be corrected. Unsigned and undated pages will be reviewed by investigators and signed and dated in dark ink. Responsible Individual: David von Seggen. Due Date: March 15, 1996.

13 Remedial Action Response By: RICHARD GUITTMEYER  
Date 2/14/96  
14 Remedial Action Due Date: MARCH 15, 1996  
Date

15 Remedial Action Response Acceptance: [Signature]  
Date 3/13/96  
16 PR Verification/Closure: N/A  
Date

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WASHINGTON, D.C.

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DEFICIENCY REPORT

17 Recommended Actions:

Loose pages shall be bound on a regular basis (e.g. monthly), signed and dated by a supervisor, and reference made to it in the scientific notebook. Each page shall be numbered. Individuals performing the work shall sign a cover statement that the enclosed pages accurately describe their work and their notations of same: Signatures shall be made in dark ink (preferably black ink), and the computer print-outs should be bound separately and clearly marked as to which scientific notebook it is to be attached to.

18 Investigative Actions:

To investigate the extent of the problem documented in this Deficiency Report (DR) two additional scientific notebooks were reviewed by Dr. David von Seggren of the University of Nevada-Reno. The review of these notebooks uncovered no problems similar to the ones associated with SN-0090. Thus, the problem with SN-0090 appears to be an isolated occurrence at this time and root cause determination is unnecessary.

19 Root Cause Determination:

N/A

20 Action to Preclude Recurrence:

N/A

21 Response by: R.C. Smith  
RICHARD C. SMITH Date 3/14/96

22 Corrective Action Completion Due Date:

23 Response Accepted  
QAR al Harris Date 3/13/96

24 Response Accepted  
AOQAM Montano Date 3-20-96

25 Amended Response Accepted  
QAR N/A Date

26 Amended Response Accepted  
AOQAM N/A Date

27 Corrective Actions Verified  
QAR Robert Lowenthal Date 8.29.96

28 Closure Approved by  
AOQAM Robert Lowenthal Date 10.3.96

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 Deficiency Report  
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QA: L

**PERFORMANCE/DEFICIENCY REPORT**

1 Controlling Document: YMP-USGS-QMP-5.05, Revision 4, Section 5, Scientific Notebook  
2 Related Report No. YM-ARP-96-01

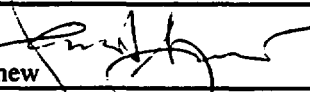
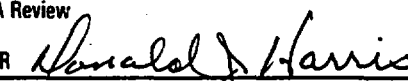
3 Responsible Organization: USGS/UNRSL  
4 Discussed With: J. Brune, D. Von Seggen, B. Parks, T. Chaney

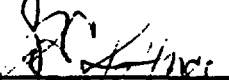
5 Requirement/Measurement Criteria:  
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5.6 In-Progress Entries - in progress entries shall contain the following information:....Names of individuals performing the work, and dated initials or signatures for individuals making the entry.

6 Description of Condition:  
1) The scientific notebook in use for the digital seismic network contains information of loose pages that are not numbered or signed. Some loose sheets appear to contain incomplete information to indicate that they are to be part of the scientific notebook.

7 Initiator: James D. Agnew  Date 10/26/95  
9 QA Review: QAR  Date 11/1/95

10 Response Due Date: 20 working days from issuance  
11 QA Issuance Approval: QAR (PR)/AQQAM (DR)  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  
DR NO. YMQAD-96-D011  
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QA: L

**DEFICIENCY REPORT**

**17 Recommended Actions:**

Loose pages shall be bound on a regular basis (e.g., monthly), signed and dated by a supervisor, and reference made to it in the scientific notebook. Each page shall be numbered. Individuals performing the work shall sign a cover statement that the enclosed pages accurately describe their work and their notations of same. Signatures shall be made in dark ink (preferably black ink), and the computer print-outs should be bound separately and clearly marked as to which scientific notebook it is to be attached to.

**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**

QAR

*N/A*  
*W. Harris* Date *1/11/96*

**28 Closure Approved By:**

AQQAMM

*Blountable* for Date *1-16-96*

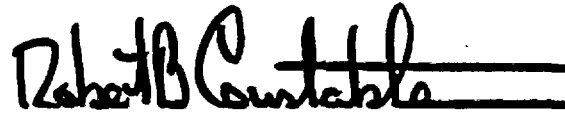
VERIFICATION OF CORRECTIVE ACTION TO DEFICIENCY REPORT YM-96-011,R1.

- a) Loose pages were bound, signed and dated by the supervisor and reference made to it in the Scientific Notebook. (SN0090)
- b) Each page was individually numbered and ran consecutively.
- c) A cover page was signed by the individual performing the work attesting to the accuracy of the results contained therein.
- d) All signatures were made so as to be reproducible.
- e) Computer printouts were included in the bound notebook.

This reviewer agrees with the statement that this is an isolated case as determined by investigative action.

As a result of my review of this Scientific Notebook it is concluded that the corrective action is adequate. This deficiency report is considered closed.

Signed.



Robert B. Constable.

8.29.96