



**Department of Energy**

Nevada Operations Office

P. O. Box 98518

Las Vegas, NV 89193-8518

**SEP 11 1989**

WBS #1.2.9.3

"QA"

Larry R. Hayes  
Technical Project Officer for Yucca Mountain Project  
U.S. Geological Survey  
101 Convention Center Drive  
Suite 860  
Las Vegas, NV 89109

ISSUANCE OF STANDARD DEFICIENCY REPORTS (SDRs) 415 THROUGH 418, REVISION 0, RESULTING FROM YUCCA MOUNTAIN PROJECT OFFICE (PROJECT OFFICE) QUALITY ASSURANCE (QA) AUDIT 89-04 OF U.S. GEOLOGICAL SURVEY (USGS) (NN1-1989-3455)

Enclosed are SDRs 415 through 418, generated as a result of Project Office QA Audit 89-04 of USGS.

Please identify the corrective actions to be taken and implemented to correct the deficiencies by completing blocks 14 through 18, as appropriate, on each SDR.

Responses to the SDRs are due within 20 working days of the date of this letter. Any extension to these due dates must be requested in writing with appropriate justification prior to the due date. Please send the original of your responses to Juanita J. Brogan, Science Applications International Corporation (SAIC), 101 Convention Center Drive, Las Vegas, Nevada 89109, and a copy to Ralph W. Gray, U.S. Department of Energy, P. O. Box 98518, Las Vegas, Nevada 89193.

Your cooperation and timely response is appreciated. If you have any questions, please contact James Blaylock of my staff at (702) 794-7913 or FTS 544-7913, or Henry H. Caldwell of SAIC at (702) 794-7740 or FTS 544-7740.

*Catherine Hunter for*  
Edwin L. Wilmot, Acting Director  
Quality Assurance Division  
Yucca Mountain Project Office

YMP:JB-5676

Enclosure:  
SDR 415 through 418

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PDR WASTE  
WM-11 PDC

FULL TEXT ASCII SCAN

ADD: J. Kennedy

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**YMPO STANDARD DEFICIENCY REPORT**

N-QA-038  
4/89

Completed by Originating QA Organization	1 Date August 15, 1989		2 Severity Level <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3		Page 1 -of 2
	3 Discovered During Audit 89-4		3a Identified By N. D. Cox and M. R. Diaz		4 SDR No. 415 Rev. 0
	5 Organization USGS		6 Person(s) Contacted Ben Ziegler		7 Response Due Date is 20 Working Days from Date of Transmittal
	8 Requirement (Audit Checklist Reference, If Applicable) YMP-USGS-QAPP-01, Revision 5, measuring and test equipment shall be calibrated, adjusted, and maintained at prescribed intervals.				
	9 Deficiency Inspection of the quarterly calibration record of June 30, 1989 and associated NCRs, 7 different instruments were found to have missed the calibration dates and NCRs were not written in a timely manner.				
Completed by Organization in Block 5	10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective				
	1. Retrain PI's and field personnel on their responsibilities for calibrating				
	11 QAE/Lead Auditor/Date <i>J.A. Adwell 8/28/89</i>		12 Division Manager/Date <i>Walt Helge 8-28-89</i>		13 Project Quality Mgr./Date <i>James Blaylock 8/28/89</i>
	14 Remedial/Investigative Action(s)				15 Effective Date _____
	16 Cause of the Condition & Corrective Action to Prevent Recurrence				17 Effective Date _____
Comp. by Org. QA Org.	18 Signature/Date				
	19 Response Accepted	QAE/Lead Auditor/Date	Division Manager/Date	Project Quality Mgr./Date	
	20 Corrective Action Verif. Satisfactory	QAE/Lead Auditor/Date	Division Manager/Date	Project Quality Mgr./Date	
	21 Remarks				
22 QA CLOSURE	QAE/Lead Auditor/Date	Division Manager/Date	PQM/Date		

**ENCLOSURE**

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8 Requirement ( continued )

YMP-USGS-QMP-12.01, Revision 3, all equipment found to be not in compliance is removed from service and documented on a nonconformance report.

10 Recommended Actions ( continued )

equipment on time per YMP-USGS-QAPP-01, Revision 5.

2.

Retrain PI's and field personnel on their responsibilities to immediately file an NCR and remove from service equipment overdue for calibration.

INSTRUMENT NAME	ID NUMBER	CALIBRATION DUE DATE
Balance	342457, G-290713	3-1-89
Balance	675991, G-366026	3-1-89
Mercury Therm. on Const. Temp.	TB-1	6-13-89
Oscilloscope	0309545	4-20-89
Oscilloscope	0309759	4-22-89
Digital Multimeter	3735827	5-27-89
Time Base	R099237	4-16-89

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Completed by Originating QA Organization	1 Date August 17, 1989		2 Severity Level <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3		Page 1 of 2
	3 Discovered During Audit 89-4		3a Identified By J. E. Clark		4 SDR No. 416 Rev. 0
	5 Organization USGS		6 Person(s) Contacted Peggy Warner, Mildred Murray		7 Response Due Date is 20 Working Days from Date of Transmittal
	8 Requirement (Audit Checklist Reference, if Applicable) AI #17-5, USGS-QMP-17.04, Revision 3, Sec. 5.3.4, states in part "Quality Verification: The LRC shall check the records, using the Quality Verification Checklist (Attachment 4), to ascertain acceptability of records prior to				
Completed by Organization In Block 5	9 Deficiency Contrary to the requirement, there was no objective evidence that calibration QA Record Forms" had been checked before being processed and retained as a QA record. The filed forms had numerous deficiencies when compared to the				
	10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Investigative <input type="checkbox"/> Corrective 1. Revise procedure to establish a method for identifying those records which				
	11 QAE/Lead Auditor/Date <i>R. A. O'Neill 08 Aug 89</i>		12 Division Manager/Date <i>Ralph Hedges F-28 89</i>		13 Project Quality Mgr./Date <i>James Blaylock 8/25/89</i>
Comp. by Orig. QA Org.	14 Remedial/Investigative Action(s)				
	15 Effective Date _____				
	16 Cause of the Condition & Corrective Action to Prevent Recurrence				
17 Effective Date _____					
18 Signature/Date					
19 Response Accepted		QAE/Lead Auditor/Date	Division Manager/Date	Project Quality Mgr./Date	
20 Corrective Action Verf. Satisfactory		QAE/Lead Auditor/Date	Division Manager/Date	Project Quality Mgr./Date	
21 Remarks					
22 QA CLOSURE		QAE/Lead Auditor/Date	Division Manager/Date	PQM/Date	

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8 Requirement ( continued )

submittal to the CRF.

9 Deficiency ( continued )

Quality Verification Checklist; e.g., no transmittal forms and authentication signatures, and no WBS numbers.

10 Recommended Actions ( continued )

have been subjected to checklist review.

2.

Train records personnel to revised procedure.

3.

Check filed calibration records against Quality Verification Checklist.

4.

Determine the extent of noncompliance among the other QA records.

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Completed by Originating QA Organization

1 Date August 16, 1989	2 Severity Level <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input checked="" type="checkbox"/> 3	Page 1 of 2
3 Discovered During Audit 89-4	3a Identified By S. L. Crawford	4 SDR No. 417 Rev. 0
5 Organization USGS	6 Person(s) Contacted W. Langer	7 Response Due Date is 20 Working Days from Date of Transmittal
8 Requirement (Audit Checklist Reference, if Applicable) NNWSI/88-9, Section III, Para. 1.3.1, requires "The responsible Participating Organization shall conduct a technical review of the scientific investigation planning document.... The results of this technical review, and the		
9 Deficiency 1. Technical reviews conducted by Study Plans SP 8.3.1.2.1.2, 8.3.1.2.2.6, 8.3.1.2.3.1, and 8.3.1.16.1.1, although stated by the USGS submittal letters		
10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input type="checkbox"/> Investigative <input type="checkbox"/> Corrective Perform all new technical review per the current QMP-3.07. Document the results of the evaluations, reviews, and reviewer's comment resolution. Assure that future Study Plans submitted to YMP are supported by properly		

Apv.

11 QAE/Lead Auditor/Date <i>A. A. Caldwell 28 Aug 89</i>	12 Division Manager/Date <i>Nalidgeda 28-89</i>	13 Project Quality Mgr./Date <i>James Blylock 8/28/89</i>
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Completed by Organization in Block 5

14 Remedial/Investigative Action(s)	15 Effective Date _____
16 Cause of the Condition & Corrective Action to Prevent Recurrence	17 Effective Date _____
18 Signature/Date	

Comp. by Orig. QA Org.

19 Response Accepted	QAE/Lead Auditor/Date	Division Manager/Date	Project Quality Mgr./Date
20 Corrective Action Verif. Satisfactory	QAE/Lead Auditor/Date	Division Manager/Date	Project Quality Mgr./Date
21 Remarks			
22 QA CLOSURE	QAE/Lead Auditor/Date	Division Manager/Date	PQM/Date

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8 Requirement ( continued )

resolution of any comments by the reviewer or reviewers shall be documented, and shall become a part of the QA records."

YMP Procedure AP-1.10Q, Para. 5.1.2, requires "Participating organizations perform technical reviews of Study Plans prepared or revised by them in accordance with their procedures." Paragraph 3.11 defines Technical Reviews, in part, as: "in-depth, critical analyses and evaluations of documents, material, and data." USGS technical reviews are to be performed in accordance with QMP-3.07.

9 Deficiency ( continued )

to meet the preparation and review requirements of AP-1.10Q, were performed on draft versions of the Study Plans that did not include sections required by AP-1.10Q. The later Study Plan versions that did comply with AP-1.10Q and were submitted to YMP were not subjected to new technical reviews. This contributed, in part, to the numerous discrepancies noted related to QALAs included in the Study Plans, identified in an Observation generated on this subject. The technical reviews were not performed in accordance with the revision of QMP-3.07 in effect at the time of submittal of the Study Plan.

2.

The documentation of technical reviews performed for the above listed Study Plans did not provide evidence of resolution of reviewer's comments or reviewer acknowledgement of comment resolution.

3.

Technical reviews for Study Plan SP 8.3.1.2.1.2 were conducted November 22, 1988 and December 13, 1988 following USGS procedure QMP-3.07, Revision 0; QMP-3.07, Revision 1, was issued effective November 4, 1988 and, if used, would have documented acceptance of reviewer's comments.

10 Recommended Action(s) ( continued )

documented technical reviews.

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	3 Discovered During Audit 89-4		3a Identified By Mario R. Diaz/ J. E. Clark		4 SDR No. 418 Rev. 0
	5 Organization USGS		6 Person(s) Contacted Peg Warner and Ben Zeigler		7 Response Due Date is 20 Working Days from Date of Transmittal
	8 Requirement (Audit Checklist Reference, if Applicable) USGS-QMP-12.01, Revision 3, Para. 5.1.15, a QA calibration form is completed by the PI or delegate for each equipment requiring calibration after each calibration. The form is sent to the YMP-USGS QA office prior to an				
Completed by Organization in Block 5	9 Deficiency Contrary to the above numerous QA calibration forms were found in the Local Records Center that did not comply with the following requirements:				
	10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective 1. Review all QA calibration forms located at LRC to ensure that they do comply				
	11 QAE/Lead Auditor/Date <i>QA A. DeBorja 8/28/89</i>		12 Division Manager/Date <i>Glenn Hedge 8-28-89</i>		13 Project Quality Mgr./Date <i>James Blaylock 8/28/89</i>
	14 Remedial/Investigative Action(s)				15 Effective Date _____
Completed by Org. QA Org.	16 Cause of the Condition & Corrective Action to Prevent Recurrence				17 Effective Date _____
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8 Requirement ( continued )

equipment's use. USGS-QMP-17.01, Revision 3, Para. 5.1.7.2.6, the record shall be recorded with an indelible medium preferably black ink, against a light background. Para. 5.1.8, the correction shall include the date and initials or signature of the record source making the correction.

9 Deficiency ( continued )

Records not completed such as:

RECORD ID

NONCOMPLIANCE

GS.89.Q.000541

Corrections made without required date and ID of person(s) doing it. Calibration performed 2/28/89, reported on 3/7/89 and received by QA on 3/14/89 which is after equipment's use.

GS.89.Q.000542

Corrections made without required date and ID of person(s) doing it. Calibration performed 2/28/89, reported on 3/7/89 and received by QA on 3/14/89. No indications or documented evidence that equipment was used after receiving QA calibration form.

GS.89.Q.006661

GS.89.Q.006662

Record was not completed by PI/designee, contains corrections made by QA. Calibration performed by 4/6/89, reported on 4/18/89. No indications of when the record was received by QA, therefore, it is not possible to determine if record was transmitted to QA prior to equipment's use.

GS.89.Q.000841

Does not contain calibration date revision of procedure used is not recorded. Required range and accuracy is missing. Calibration was reported on 6/12/89. However, indications of when the record was received by QA do not exist. Therefore, it is not possible to determine if record was transmitted to QA prior to equipment's use.

GS.89.Q.000831

Serial number, calibration date and expiration date are missing. Procedure revision number is missing. Signature is not complete. Documented evidence form was received does not exist. Not possible to determine if record was transmitted to QA prior to equipment's use.

All Remote Seismic  
Telemetry Station  
dated 4/25/89

Calibration dates since 1/18/89. However, record written on 4/25/89 and received by QA on 5/1/89 which is after equipment's use. All QA calibration form contain xerox copy of the signature of person completing form.

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9 Deficiency ( continued )

"A"

Additionally, QA records provided by USGS Las Vegas Office did not contain information required by the calibration procedure such as technical procedure and revision number used for calibration, name of person performing the calibration, required range and accuracy, etc.

10 Recommended Actions ( continued )

with all the requirements of the USGS QA program.

2.

Determine the impact are quality work done to date on YMP.

3.

Determine the cause of the condition noted in this SDR and what action will be taken to prevent recurrence.

4.

Revise procedures to clearly establish requirements for writing QA calibration forms; i.e., time limitation, data required, personnel authorized to authenticate those forms, indicate and clarify records originator, verification of equipment's use, transmittal to LRC, etc.

5.

Any NCR condition detected during item (1) above shall be identified, reported, and controlled by the appropriate NCR program.

6.

Retrain all affected personnel to the current requirements and any changes due to this SDR. Provide documented evidence of this action.

SEP 11 1989

Larry R. Hayes

-2-

cc w/encl:

Ralph Stein, HQ (RW-3) FORS  
Dwight Shelor, HQ (RW-3) FORS  
J. R. Willmon, USGS, Denver, CO  
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L. G. Scherr, SAIC, Las Vegas, NV, 517/T-06  
A. L. Temple, SAIC, Las Vegas, NV, 517/T-38  
H. H. Caldwell, SAIC, Las Vegas, NV, 517/T-06  
K. W. Moore, SAIC, Las Vegas, NV, 517/T-28  
J. H. Nelson, SAIC, Las Vegas, NV, 517/T-04  
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J. E. Kennedy, NRC, Washington, DC

cc w/o encl:

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