



**Department of Energy**

Nevada Operations Office  
P. O. Box 98518  
Las Vegas, NV 89193-8518

WBS 1.2.9.3  
QA

DEC 21 1989

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

ACCEPTANCE OF RESPONSE TO STANDARD DEFICIENCY REPORT (SDR) 415, REVISION 0,  
RESULTING FROM YUCCA MOUNTAIN PROJECT OFFICE (PROJECT OFFICE) QUALITY  
ASSURANCE (QA) AUDIT 89-04 OF U.S. GEOLOGICAL SURVEY (USGS)

The Project Office QA staff has evaluated and accepted your response to SDR 415, Revision 0, generated as a result of Project Office QA Audit 89-04 of USGS. The SDR will be closed after verification of satisfactory completion of the specified corrective actions. A copy of the SDR is enclosed for your information.

In addition, we have received a letter requesting that the corrective action completion date be extended to March 1, 1990. Please be advised that this date is acceptable to the Project Office. Verification will be performed when the corrective actions are complete.

Verification of completion of your corrective action will be performed after the effective dates provided. Any extension to these due dates must be requested in writing with appropriate justification prior to the due date. Please send copies of the extension request to Nita J. Brogan, Science Applications International Corporation, 101 Convention Center Drive, Las Vegas, Nevada 89109, and Ralph W. Gray, U.S. Department of Energy, P.O. Box 98518, Las Vegas, Nevada 89193.

If you have any questions, please contact James Blaylock of my staff at (702) 794-7913, or Neil D. Cox, of Science Applications International Corporation at (702) 794-7236.

*James Blaylock, Jr.*  
Donald G. Horton, Director  
Quality Assurance Division  
Yucca Mountain Project Office

YMP:JB-1278

Enclosure:  
SDR 415, Revision 0

8912290059 891221  
PDR WASTE  
WM-11 PDC

FULL TEXT ASCII SCAN  
ADD: J Kennedy

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102.7  
NHO

**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.				
Completed by Organization in Block 5	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.				
	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>PA Adwell 28 Aug 89</i>		12 Division Manager/Date <i>Walt Hedges 6-28-89</i>		13 Project Quality Mgr./Date <i>James Blaylock 8/28/89</i>
Completed by Org. QA Org.	14 Remedial/Investigative Action(s) See attached response.				15 Effective Date Complete
	16 Cause of the Condition & Corrective Action to Prevent Recurrence See attached response.				17 Effective Date 12-1-89
Comp. by Org. QA Org.	18 Signature/Date <i>Robert B. Ray, Jr. 10/10/89</i> Geologic Division Coordinator USGS, Yucca Mtn. Project Branch				
	19 Response Accepted	QAE/Lead Auditor/Date <i>N. D. Cox 12/13/89</i>	Division Manager/Date <i>J. Dan 12/13/89</i>	Project Quality Mgr./Date <i>Carl Smith 12-11-89</i>	
	20 Corrective Action Verif. Satisfactory	QAE/Lead Auditor/Date	Division Manager/Date	Project Quality Mgr./Date	
	21 Remarks #19 Acceptance letter: #20 Request for extension by letter dated Nov. 29, 1989, GRANTED BY LETTER.				
22 QA CLOSURE		QAE/Lead Auditor/Date	Division Manager/Date	PQM/Date	

ENCLOSURE

YMPO STANDARD DEFICIENCY REPORT  
CONTINUATION SHEET

N-QA-038  
12/88

SDR No. 415

Rev. 0

Page 2 of 2

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

RESPONSE FOR YMPO STANDARD DEFICIENCY REPORT NO. 415

**BLOCK 14 REMEDIAL/INVESTIGATIVE ACTION(S):**

Seven (7) pieces of equipment were identified in the SDR. One of these items, the time base, B099237, was incorrectly identified in the calibration database as R099237. The QA Office was notified of the error by a memorandum dated 8-17-89. The correct time base was within the required calibration cycle and QA corrected the database. No additional actions are required for this item.

Two oscilloscopes, 0309545 and 0309759, and the digital multimeter, 3735827, were backup instruments and were not used to collect any Level I/II data. The investigator pulled and segregated the equipment prior to the calibration due date. A Nonconformance Report would not be required for this situation, but QMP-12.01 does require a notification of "deactivation" to be forwarded to the QA Office. The equipment was subsequently recalibrated and put back in service. The calibration database was updated to show the present status.

The two balances, 342457 and 675991, and the mercury thermometer, TB-1, missed their calibration due dates because the co-investigator believed that the DOE/YMP 1988 Stop Work Order would preclude all activity including calibrations. The evaluation of impact on data and the actions to recalibrate were taken in response to USGS NCR-89-22 (balances) and 89-26 (thermometer). Both balances were recalibrated by an approved vendor. A calibration check, using certified weights, also was performed by the Principal Investigator prior to and after the vendor calibration with no appreciable difference that would impact data. The mercury thermometer was recalibrated using an ASTM reference thermometer and the calibration data was compared to previous data after the calibration with no appreciable difference that would impact data.

**BLOCK 15 EFFECTIVE DATE:** Complete

**BLOCK 16 CAUSE OF THE CONDITION & CORRECTIVE ACTION TO PREVENT RECURRENCE:**

The condition involving the typo has been corrected. The periodic distribution of the calibration register to the technical staff provides sufficient measures to correct errors on an ongoing basis. No additional actions are warranted.

The condition involving a lack of notification to "deactivate" equipment was caused by personnel not being familiar with the steps involved in QMP-12.01 to notify the QA Office to update the calibration register. The condition involving the lack of initiation of Nonconformance Reports in a timely manner was caused by personnel being confused between the stipulations of the 1988 Stop Work Order and the requirements of QMP-12.01. Preventive actions include personnel instruction regarding deactivation of equipment and documenting nonconforming conditions as required by QMP-12.01 and related procedures. This instruction will be provided to technical personnel prior to December 1, 1989.

**BLOCK 17 EFFECTIVE DATE:** 12-1-89

Larry R. Hayes

2

DEC 21 1989

cc w/encl:

Ralph Stein, HQ (RW-30) FORS  
D. E. Shelor, HQ (RW-3) FORS  
J. R. Willmon, USGS, Denver, CO  
J. J. Brogan, SAIC, Las Vegas, NV, 517/T-22  
N. D. Cox, SAIC, Las Vegas, NV, 517/T-06  
S. R. Dana, SAIC, Las Vegas, NV, 517/T-06  
J. H. Nelson, SAIC, Las Vegas, NV, 517/T-04  
Cynthia Robertson, SAIC, Las Vegas, NV, 517/T-22  
S. W. Zimmerman, NWFO, Carson City, NV  
J. E. Kennedy, NRC, Washington, DC

cc w/o encl:

K. G. Sommer, HQ (RW-3) FORS  
D. O. Porter, SAIC, Golden, CO  
Alan Flint, USGS, NTS  
J. W. Gilray, NRC, Las Vegas, NV