



Department of Energy

Yucca Mountain Project Office

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Las Vegas, NV 89193-8608

WBS 1.2.9.3

QA

JUL 23 1990

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) 553 THROUGH 561, REVISIONS 0, AND OBSERVATIONS 90-03-01 THROUGH 90-03-10, RESULTING FROM YUCCA MOUNTAIN PROJECT OFFICE (PROJECT OFFICE) QUALITY ASSURANCE (QA) AUDIT 90-03 OF THE U.S. GEOLOGICAL SURVEY (USGS)

Enclosed are SDRs 553 through 561, Revisions 0, and Observations 90-03-01 through 90-03-10, generated as a result of Project Office QA Audit 90-03 of the USGS.

Please identify the corrective actions to be taken and implemented to correct the deficiencies by completing Blocks 14 through 18, as appropriate, of each SDR. In addition, please respond to the observations by completing the response section of each observation.

Responses are due within 20 working days of the date of this letter. Any extension to this due date must be requested in writing with appropriate justification prior to the due date. Please send the original of your responses to Nita J. Brogan, Science Applications International Corporation, 101 Convention Center Drive, Las Vegas, Nevada 89109.

Your cooperation and timely response is appreciated. If you have any questions, please contact either Catherine E. Hampton at 794-7973 or Richard L. Maudlin at 794-7290.

Donald G. Horton, Director
Quality Assurance
Yucca Mountain Project Office

YMP:CEH-4248

Enclosures:

1. SDRs 553 through 561, Revisions 0
2. Observations 90-03-01
Through 90-03-10

YMP-5

9008010162 900723
PDR WASTE
WM-11 FDC

FULL TEXT ASCII SCAN

102.7
WM-11
NH03

YMPO STANDARD DEFICIENCY REPORT

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Completed by Originating QA Organization	1 Date 7/2/90		2 Severity Level <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3		Page 1 of 2
	3 Discovered During Audit YMP-90-03		3a Identified By K. T. McFall		4 SDR No. 553 Rev. 0
	5 Organization USGS		6 Person(s) Contacted Larry Hayes John Stuckless		7 Response Due Date is 20 Working Days from Date of Transmittal
	8 Requirement (Audit Checklist Reference, if Applicable) 1. YMP-USGS-QMP-3.05, Rev. 2, Para. 5.3 states in part, "Review of Criteria Letters shall be performed by the USGS QA Manager and the Chief, Branch of YMP or their delegates, for technical completeness, accuracy, clarity of statement				
Completed by Organization in Block 5	9 Deficiency 1. Contrary to the above requirement, the Criteria Letter titled "Criteria Letter For Water Sampling At Well UE 25p#1", dated 4/17/90 was not submitted to the USGS QA Manager for review.				
	10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective Identify the remedial actions to be taken to correct the deficiencies noted in Block 9. In addition, review the criteria letters issued since the effective				
	11 QAE/Lead Auditor/Date <i>Kenneth McFall 7-16-90</i>	12 Division Manager/Date <i>UA</i>		13 Project Quality Mgr./Date <i>Catherine Hampton 7-17-90</i>	
	14 Remedial/Investigative Action(s)				
Completed by Org. QA Org.	15 Effective Date _____				
	16 Cause of the Condition & Corrective Action to Prevent Recurrence				
	17 Effective Date _____				
Comp. by Orig. 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)

and applicable QA requirements...."

2. Additional requirements of YMP-USGS-QMP-3.05, Rev. 2

- A. Para. 5.1 Section "e" requires the criteria letter to include the description of location.
- B. Para. 5.1 Section "f" requires definition of specific criteria, requirements, and applicable procedures for work to be performed by NTS Contractors.
- C. Para. 5.1 Section "g" requires that equipment to be provided by the USGS be specified.
- D. Para. 5.2 requires the assignment and inclusion of a unique control number and that the control number be located in the upper right-hand corner of each page along with the page numbering system.

9 Deficiency (continued)

2. Contrary to the above requirement in Block 8:

- A. There was no location description included in the criteria letter.
- B. There were no specific criteria, requirements, or applicable procedures for work to be performed by NTS Contractors.
- C. There was no listing of the equipment to be provided, if any, by the USGS.
- D. There was no assignment of a unique control number or its location in the upper right-hand corner of each page along with the page numbering system.

10 Recommended Actions (continued)

date of YMP-USGS-QMP-3.05, 6/5/89, for similar deficiencies and provide the measures required to correct them.

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	3 Discovered During YMP-90-03		3a Identified By R. Weeks and M. Meyer		4 SDR No. 554 Rev. 0
	5 Organization USGS		6 Person(s) Contacted Peggy Warner		7 Response Due Date is 20 Working Days from Date of Transmittal
	8 Requirement (Audit Checklist Reference, if Applicable) SCP Management Plan, Revision 2, Paragraph 6.3 states in part, "The participating organization will submit clean, typed initial draft text that is consistent with the required format (Section 3.4) to the				
Completed by Organization in Block 5	9 Deficiency Although Study Plan 8.3.1.4.2.2 was issued in February 1989, the following conflicts had not been corrected using the Study Plan change process provided in the SCP Management Plan, Revision 2:				
	10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input type="checkbox"/> Investigative <input type="checkbox"/> Corrective				
	11 QAE/Lead Auditor/Date <i>Richard L. Weeks 7/17/90</i>		12 Division Manager/Date N/A		13 Project Quality Mgr./Date <i>Cathy [Signature] 7-17-90</i>
	14 Remedial/Investigative Action(s)				15 Effective Date _____
Comp. by Orig. QA Org.	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 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)

WMPO for review..."

SCP Management Plan, Revision 2, Paragraph 3.4 states in part,
"Programatic guidance relative to the content requirements and level
of detail for Study Plans was developed by and received concurrence
from the DOE and the NRC in the May 7-8, 1986, SCP level-of-detail
meeting (see Appendix A)."

9 Deficiency (continued)

- 1) Paragraph 3.1.1 (p. 3.1-2) states that transferring geologic data from photos to base maps is a QA Level III work; Appendix A (p. A-5) states that this work is QA Level I.
- 2) Study Plan 8.3.1.4.2.2 was sent to DOE on 12-20-88 (see letter Langer to Gertz) with reference to obsolete Technical Procedure GP-01, Revision 0 although, GP-01, Revision 1 had been issued on 11-8-88. Examples of references to GP-01, Revision 0, which was obsolete at the time Study Plan 8.3.1.4.2.2 was issued, are as follows:
 - o Paragraph 2.1 (p.2.1-1)
 - o Paragraph 3.4.3 (p. 3.4-5)
 - o Table 3.1-1 (p. T-17)
- 3) Table 3.2-1 (p. T-18) requires compliance with both Revisions 0 and 1 of Technical Procedure GP-12. Table 3.2-1 also indicates that the date of issue for both revisions of this procedure is 3-6-83.

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	3 Discovered During AUDIT 90-03		3a Identified By DENNIS BROWN/ JAMES E. CLARK		4 SDR No. 555 Rev. 0	
	5 Organization USGS		6 Person(s) Contacted J. ZIEMBA, M. MUSTARD		7 Response Due Date is 20 Working Days from Date of Transmittal	
	8 Requirement (Audit Checklist Reference, if Applicable) USGS-QMP-15.01, Rev. 4, states in part:					
Completed by Organization in Block 5	9 Deficiency NCRs are not being processed in accordance with procedural requirements. A sampling of NCRs revealed procedural noncompliances in four of seven: NCRs 89-24, 89-26, 89-30, and 90-02.					
	10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective					
	11 QAE/Lead Auditor/Date <i>J.E. Clark 7/16/90</i>		12 Division Manager/Date <i>N/A</i>		13 Project Quality Mgr./Date <i>[Signature] 7-17-90</i>	
	14 Remedial/Investigative Action(s) 15 Effective Date _____					
Comp. by Org. QA Org.	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	
20 Corrective Action Verif. Satisfactory		QAE/Lead Auditor/Date		Division Manager/Date		
21 Remarks						
22 QA CLOSURE		QAE/Lead Auditor/Date		Division Manager/Date		
				PQM/Date		

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8 Requirement (continued)

- Para. 5.5.3 When the methods specified in Para. 5.5.1 and 5.5.2 are not necessary, the assigned personnel shall assure that the documented condition is adequately identified and described and shall propose a disposition.
- Para. 5.5.3a ... The proposed disposition actions have been categorized, such as repair, rework, ...
- Para. 5.5.3c ... The cause and, if appropriate, action(s) to preclude recurrence, have been described ...
- Para. 5.5.4 The NCR shall be forwarded to the cognizant personnel or office for review and approval of the proposed disposition.
- Para. 5.5.5 The NCR is next forwarded to the QA office for review and approval which shall ensure that appropriate QA requirements have been included. The QA Manager or delegate shall ensure that the information identified in Para. 5.5.3 has been included or considered in the disposition.
- Para. 5.6.3 Upon completion of the disposition actions, the responsible personnel shall sign and date Part III of the NCR, then notify the QA office of action completion.
- Para. 5.7.3 If verification of the disposition and related records is acceptable, the QA Manager or delegate shall sign and date Part IV of the NCR ...
- Para. 5.1.5 ... If the condition or item is not out of conformance, the NCR shall be voided and the initiator of the NCR shall be informed of the basis for the voidance.

9 Deficiency (continued)

- 89-24 - Corrective action to prevent recurrence not addressed
- 89-26 - Two different dispositions indicated
Disposition action not signed as required
Corrective action to prevent recurrence not addressed
- 89-30 - Disposition not referenced on NCR
Disposition not approved by supervisor
Disposition not approved by QA
Disposition action not signed as completed
Verification action completed and accepted, but NCR not closed
NCR was voided; the reason was not clear or correct

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9 Deficiency (continued)

90-02 - Disposition block not marked
Disposition action not approved as completed

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	3 Discovered During Audit 90-03		3a Identified By James E. Clark		4 SDR No. 556 Rev. _____
	5 Organization USGS		6 Person(s) Contacted Jim Ziembra		7 Response Due Date is 20 Working Days from Date of Transmittal
	8 Requirement (Audit Checklist Reference, if Applicable) QMP-16.01, Revs. 2 & 3 Section 1 states that the procedure is to establish a system for identifying, determining the cause and providing corrective action				
Completed by Organization in Block 5	9 Deficiency Contrary to the requirements cited, on at least three occasions Corrective Action Reports (CARs) were not initiated to document recurring conditions adverse to quality, or potentially adverse to quality, identified in the				
	10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective				
	11 QAE/Lead Auditor/Date <i>J E Clark 7/16/90</i>		12 Division Manager/Date <i>N/A</i>		13 Project Quality Mgr./Date <i>Catherine Hampton 7-17-90</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 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)

for significant or recurring conditions adverse to quality or potentially adverse to quality, that include but are not limited to a breakdown of the USGS QA program and repetitive nonconformances.

QMP-16.01, Revs 2 & 3 Section 5.1.1 states in part "Any USGS personnel or USGS contractor personnel that observe a condition adverse to quality or potentially adverse to quality, are responsible for initiating a Corrective Action Report (CAR) and for notifying immediate and upper levels of management of the adverse condition."

9 Deficiency (continued)

September and November 1989 Trend Analysis Reports, and the March 1990 Trend Analysis Report.

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Completed by Originating QA Organization	1 Date 06/28/90		2 Severity Level <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3		Page 1 of 3
	3 Discovered During AUDIT 90-03		3a Identified By C.C. Warren		4 SDR No. 557 Rev. 0
	5 Organization USGS		6 Person(s) Contacted P. Warner		7 Response Due Date is 20 Working Days from Date of Transmittal
	8 Requirement (Audit Checklist Reference, if Applicable) YMP-USGS-QMP 17.01, Rev. 3 identifies the following requirements for record source:				
Completed by Organization in Block 5	9 Deficiency Contrary to the above requirements, a sample of 10 record packages from the LRC indicated the following:				
	10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective Identify the remedial action to be taken to correct the deficiencies noted in Block 9. Investigate the program, process, activities, or documentation				
	11 QAE/Lead Auditor/Date <i>C.C. Warren</i> / 7-16-90	12 Division Manager/Date N/A		13 Project Quality Mgr./Date <i>Alvin Hampton</i> 7-17-90	
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)

A. 5.1.4 INDEXING PARAMETERS: The Record Source shall ensure that the following indexing parameters for each Project record are available on the record prior to submittal to the LRC:

- o QA designation for correspondence (for QA Level I and II records designate "QA: QA" or for QA Level III, N/A or IND records designate "QA: N/A").
- o QA designation for packages ("QA levels I, II, III, N/A, or IND").
- o The Work Breakdown Structure (WBS) designation (through six digits when appropriate and separated by decimal points) of the subject of all QA records with periods.

B. 5.1.7 RECORD INSPECTION: The Records Source responsible for submitting the record (QA and/or non-QA) to the LRC shall inspect the record(s) prior to submittal to ensure the following:

5.1.7.1 Completeness - That all pages of the record, including attachments or enclosures, are accounted for and that all blocks on forms (including signature lines) are filled in or "N/A" (not applicable) is entered.

5.1.7.2 Copy Suitability - That written/typed records are legible, reproducible, and can be microfilmed in accordance with the standards for processing and microfilming outlined in Attachment 5 of this procedure and the following:

- c. Records shall not have any information scratched out or obliterated by correction fluids, etc., or have extraneous information handwritten on the record (with the exception of corrections made in accordance with Para. 5.1.8 of this procedure). If new information has been added to a record previously submitted to the LRC, it constitutes a new and separate record.
- d. No portion of any page shall be missing due to tearing or folding of the record edges nor, to the extent feasible, nor shall it contain stamps or other marks that obliterate text or other information.

C. 5.1.8 CORRECTIONS TO RECORDS: The Record Source may make corrections to completed written/typed records that have not been processed. Corrections shall be made by scribing a single line through the incorrect information using indelible black ink and entering the correct information in close proximity to the line-out. The incorrect information shall remain legible. The correction shall include the date and initials or signature of the Record Source making the correction. Erasures or correction fluid of any type shall not be used as a means of

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8 Requirement (continued)

correcting information on records.

D. 5.1.9.1 General Requirements - The following requirements apply to
submittal of all Packages.

- o Prepare a Table of Contents for each package that lists all records that are contained in the package. In the upper right corner of the first page, list the WBS number under which the Record Source activities are governed and the QA Level corresponding to the subject activity.

E. 5.2.1 TRANSMITTAL TO THE LRC: Records shall be forwarded to the LRC no later than 10 working days after either the completion date shown on the record, the date the Record Source receives the published manuscript, or after closeout of a record package (packages require a transmittal form - see Attachment 6). Correspondence is submitted directly to the LRC on an ongoing basis within 10 days of receipt or completion. YMP Records prepared by non-USGS Project departments.

9 Deficiency (continued)

- A. Five of the Record Packages contained records that did not indicate all required Indexing Parameters. Missing parameters included QA Designation/Level and WBS Designation.
- B. & C. One of the Record Packages contained a record with extensive use of correction fluid (in excess of 20 instances)
- D. The Table of Contents for six of the Record Packages did not list all records that were contained in the Package.
- E. Five of the Record Packages were not forwarded to the LRC within 10 working days after the completion date shown on the record.

The following Record Packages were reviewed:

NCR Package 89-26	Study Plan 8.3.1.2.1.3
NCR Package 89-30	Audit Package EA 90-02
NCR Package 90-02	Audit Package USGS 89-03
CAR Package 89-13	Surveillance Package 90-S05
Study Plan 8.3.1.4.2.2	Surveillance Package 90-S17

10 Recommended Actions (continued)

to determine the extent and depth of similar deficient conditions listed as examples on the SDR. Identify the cause of the condition and the planned action to prevent recurrence.

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Completed by Originating QA Organization	1 Date 06/29/90		2 Severity Level <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3		Page 1 of 3
	3 Discovered During AUDIT 90-03		3a Identified By D. Brown, C. Warren		4 SDR No. 558 Rev. 0
	5 Organization USGS		6 Person(s) Contacted P. Warner		7 Response Due Date is 20 Working Days from Date of Transmittal
	8 Requirement (Audit Checklist Reference, if Applicable) YMP-USGS-QMP 17.01, Rev. 3, Para. 5.3.3 states, "The LRC shall verify that all Records listed within the				
Completed by Originating QA Organization	9 Deficiency Contrary to the above, the LRC was not adequately performing quality verification of QA Record Packages. The following deficient conditions were identified:				
	10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective Identify the remedial action to be taken to correct the deficiencies noted in Block 9. Investigate the program, process, activities, or documentation				
	11 QAE/Lead Auditor/Date <i>C.P. Wynn</i> / 7-16-90		12 Division Manager/Date N/A		13 Project Quality Mgr./Date <i>Catherine...</i> 7-17-90
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)

Table of Contents to a Record Package are within that Record Package."

Para. 5.3.4 states, "The LRC shall check the Records which are being received by using the Quality Verification Checklist (Attachment 4)."

Para. 5.4 states, "The LRC shall transmit the completed Records to the CRF within 10 working days of receipt from the Record Source."

9 Deficiency (continued)

- a. QA Levels (I, II, III, N/A, or IND) were not indicated on QA Record Packages (listed on the Table of Contents). (2 out of 10 packages sampled were deficient).
- b. QA designations (QA or N/A) were not indicated on individual QA Records. (5 out of 10 packages sampled were deficient).
- c. Individual QA Records either have no WBS number or have conflicting WBS (5 out of 10 packages sampled were deficient).
- d. Attachments and enclosures to individual QA Records are not being accounted for prior to submittal to CRF. (One out of 10 packages sampled were deficient).
- e. The Table of Contents does not list all individual QA Records in QA Record Packages. (6 out of 10 packages sampled were deficient).
- f. Aerial photographs indicated by the Table of Contents for Package GS.89.M00022 were missing from the Package. These photos are one of a kind records. (This package was removed by others on the Audit Team)

The Audit Team sampled approximately 1% of all LRC QA Record Packages. Reviewed Record Packages include:

NCR Package 89-26	CAR Package 89-13
NCR Package 89-30	Audit Package EA 90-02
NCR Package 90-02	Audit Package USGS 89-03
Study Plan 8.3.1.4.2.2	Surveillance Package 90-S05
Study Plan 8.3.1.2.1.3;	Surveillance Package 90-S17

NOTE: Prior to 08/21/89, LRC was required to complete and sign the Quality Verification Checklist. The 08/21/89 modification to QMP-17.01 caused the checklist to be used as only a guide. The checklist covers many items addressed in this SDR.

10 Recommended Actions (continued)

to determine the extent and depth of similar deficient conditions listed as examples on the SDR. Identify the cause of the condition and the planned

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10 Recommended Actions (continued)
action to prevent recurrence.

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Completed by Originating QA Organization	1 Date 6-28-90		2 Severity Level <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input checked="" type="checkbox"/> 3		Page 1 of 2
	3 Discovered During YMP-90-03		3a Identified By R. Weeks and M. Meyer		4 SDR No. 559 Rev. 0
	5 Organization USGS		6 Person(s) Contacted Peggy Warner		7 Response Due Date is 20 Working Days from Date of Transmittal
	8 Requirement (Audit Checklist Reference, if Applicable) YMP-USGS-QMP-17.01, Revision 3, Paragraph 5.1.7.2 states in part, " That written/typed records are legible, reproducible, and can be microfilmed in accordance with the standards for processing and				
Completed by Organization in Block 5	9 Deficiency Contrary to the above requirement, record package No. GS.89.M.00025 contained illegible copies of aerial photos and field notebooks (by Scott 10/20/81 - 4/26/84) with illegible information.				
	10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input type="checkbox"/> Investigative <input type="checkbox"/> Corrective				
	11 QAE/Lead Auditor/Date <i>Rickard L. Weeks</i> 7/16/90		12 Division Manager/Date N/A		13 Project Quality Mgr./Date <i>Catherine Hampton</i> 7-17-90
Completed by Org. QA Org.	14 Remedial/Investigative Action(s)				
	15 Effective Date _____				
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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)
microfilming..."

9 Deficiency (continued)

Specific problems:

- o QA records submitted to the LRC had illegible information written on them. An example was aerial photos which documented sample locations however, the identifiers for specific sample locations were not legible.

- o Entries in field notebooks are not always legible (pencil entries) examples on pages 1, 2, 7, 8, 11, and 13. (Notebook No. 1)

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	3 Discovered During YMP-90-03		3a Identified By R. Weeks and B. Hurley		4 SDR No. 560 Rev. 0
	5 Organization USGS		6 Person(s) Contacted R. Spengler and R. Luckey		7 Response Due Date is 20 Working Days from Date of Transmittal
	8 Requirement (Audit Checklist Reference, if Applicable) AP-1.7Q, Revision 2, Paragraph 2.0 states in part, " This procedure is applicable to the Project Office and all other Project participants and to Project records generated, purchased, received, and/or maintained as				
Completed by Organization in Block 5	9 Deficiency Contrary to the above requirement, YMP-USGS-QMP-17.01, Revision 3, fails to implement the above stated requirement of AP-1.7Q. As a result of this condition, USGS investigators have collected data for more than				
	10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective				
	11 QAE/Lead Auditor/Date <i>Richard L. Weeks 7/16/90</i>		12 Division Manager/Date N/A		13 Project Quality Mgr./Date <i>Catherine [Signature] 7-17-90</i>
Completed by Org. 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 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	

YMI STANDARD DEFICIENCY REPORT
CONTINUATION SHEET

N-QA-038
2/89

SDR No. 560

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8 Requirement (continued)

a result of Project activities and functions...."

AP-1.7Q, Revision 2, Paragraph 5.5.4.3 states in part, " Interim record packages (data) shall be compiled and submitted to an LRC at 45 day intervals to ensure that all records are protected, accessible, and retrievable for Project use...."

9 Deficiency (continued)

80 days without submitting data to the Local Records Center (LRC).

Examples:

- 1) Data collected as part of Activity 8.3.1.4.2.2.2 has not been submitted to the LRC within the required 45 day period.
- 2) Data collected as part of Activity 8.3.1.5.2.1.3 has not been submitted to the LRC within the required 45 day period.
- 3) Data collected as part of Activity 8.3.1.2.3.1.2 has not been submitted to the LRC within the required 45 day period.

YMPO STANDARD DEFICIENCY REPORT

N-QA-038
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Completed by Originating QA Organization	1 Date JUNE 29, 1990		2 Severity Level <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3		Page 1 of 3
	3 Discovered During AUDIT 90-3		3a Identified By D. HARRIS/ J.E. CLARK		4 SDR No. 561 Rev. 0
	5 Organization USGS		6 Person(s) Contacted B. LANGSTEINER, A. WHITESIDE		7 Response Due Date is 20 Working Days from Date of Transmittal
	8 Requirement (Audit Checklist Reference, if Applicable) USGS-QMP-18.01, Rev. 4, states in part:				
Completed by Organization in Block 5	9 Deficiency The audits program is not being consistently implemented in accordance with cited procedure requirements. Procedure violations were noted as follows: (See Page 3.)				
	10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective				
	11 QAE/Lead Auditor/Date <i>J.E. Clark 7/16/90</i>	12 Division Manager/Date <i>N/A</i>		13 Project Quality Mgr./Date <i>Catherine [Signature] 7-17-90</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 _____				
	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		

**YMP STANDARD DEFICIENCY REPORT
CONTINUATION SHEET**

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2/89

SDR No. 561

Page 2 of 3

8 Requirement (continued)

1. Para. 5.1.2 INTERNAL AUDITS - Applicable elements of the YMP-USGS QAPP shall be audited at least annually or at least once during the life of the activity, whichever is shorter. The scope of an audit shall be established by considering the results of any previous audits, the nature and frequency of identified deficiencies, and any significant changes in personnel, organization, or the QA Program.
2. Para. 5.5.4 As the audit progresses, any identified deficiencies and concerns shall be prepared by the audit team members and recorded on the Audit Finding Report (Attachments 4 and 5) or the Audit Observation form (Attachment 6), as appropriate.
3. Para. 5.9.2 Annual supplier evaluations, supplier performance audits, or source verification shall be identified in the USGS Audit Schedule (refer to Para. 5.1) and conducted as directed by the QA Manager. Applicable procurement-related requirements shall be incorporated into the Audit Checklist.
4. Para. 5.4.1 Audit checklist characteristics or elements that have been selected shall be evaluated against specified requirements or effectiveness indicators and shall include a review of corrective actions taken on deficiencies identified during previous audits.
5. Para. 5.6 Audit Report: The Audit Team Leader, or delegate, shall prepare a written Audit Report that shall include the information shown in Attachment 7, as a minimum.

Attachment 7 requires the following:

AUDIT REPORT: (Include statement of the effectiveness of the QA program elements that were audited.)

9 Deficiency (continued)

1. The Fiscal Year 90 Audit Schedule, Rev. 0, Rev. 1, and Rev. 2, do not reflect scheduled audits to cover QAPP elements 1 and 15.
2. In Audit 90-07, conditions documented on Observations No. 2 and 3 were issued as concerns, when they actually cite program violations.
3. The USGS YMP Audit Schedule and Vendor Evaluation Schedule do not contain 3 suppliers due for requalification: ENSECO Rocky Mountain Lab, Stable Isotope Lab, and USGS National Water Lab.

**YMP STANDARD DEFICIENCY REPORT
CONTINUATION SHEET**

N-QA-038
2/89

SDR No. 561

Page 3 of 3

9 Deficiency (continued)

4. US Bureau of Reclamation Audit 90-07 and USGS Internal Audit 90-02 took credit for determining implementation of program elements when the audit records indicated that those criteria were not audited.
5. Audit 90-02 Audit Report did not contain an effectiveness statement.

YUCCA MOUNTAIN PROJECT OFFICE
1 YMPO OBSERVATION NO. 90-03-01

N-QA-012
4/89

Completed by Originating Organization	2 Noted During: Audit 90-03	3 Identified By: A.E. Cocoros	4 Date: 6/29/90
	5 Organization: USGS	6 Person(s) Contacted: P. Warner, T.Chaney, K.Kohn	7 Response Due Date is 20 Days from Date of Transmittal
	8 Discussion: The audit effort related to QMPs 2.02 & 2.07 (Indoctrination/Training of Personnel) reported that the Indoctrination/Training Program was being implemented in an acceptable manner. However, the effectiveness of the program is marginal as reported by the auditors of Criteria 3, 4, 7, 15, 16 & 17. Personnel were encountered who did not appear to fully understand the intent and application of the requirements documents. During the audit of QMPs 2.02 and 2.07, a review of the Indoctrination/Training Records of personnel performing quality-related effort, revealed that the Training/Indoctrination Program is		
	9 QAE/Lead Auditor <i>[Signature]</i>	Date 7/17/90	10 Branch Manager <i>[Signature]</i>
			Date 7-17-90
Completed by Respondee	11 Response:		
	12 Signature: _____ Date: _____		
Completed by QA Org.	13 Response Receipt Acceptable <input type="checkbox"/>		
	Initiator _____	Date _____	QA/Lead Auditor _____
	14 Remarks:		

8 Discussion: (continued)

directed predominately toward "required reading" type of effort as opposed to a formal classroom effort.

Since a "required reading" approach tends to only familiarize personnel with procedural steps rather than facilitating a complete understanding of the application of the procedure, it is recommended that USGS give strong consideration to conducting formal classroom Training/Indoctrination Programs for all personnel who are required to understand and implement specific requirements documents.

YUCCA MOUNTAIN PROJECT OFFICE
1 YMPO OBSERVATION NO. 90-03-02

N-QA-012
4/89

Completed by Originating Organization	2 Noted During: Audit 90-03		3 Identified By: R. Weeks, B. Hurley, K. Kersch		4 Date: 6/27/90	
	5 Organization: USGS		6 Person(s) Contacted: T. Chaney, R. Spengler		7 Response Due Date is 20 Days from Date of Transmittal	
	8 Discussion: YMP Administrative Procedure AP 1.10Q requires that each Study Plan contain a list of the procedures necessary to implement that Plan. It is USGS practice to include the revision number for each procedure as well. This has resulted in apparent discrepancies between the Study Plan-listed revision numbers and those found in the List of Controlled Documents at the time of comparison. The USGS should amend their existing Study Plans to list procedures without revision number and with a statement that the activity will be performed in accordance with the revision in force at the time the activity is performed.					
Completed by Respondee	9 QAE/Lead Auditor <i>Richard W. Weeks</i>		Date 7/16/90		10 Branch Manager <i>Cathy Hempt</i>	
					Date 7-17-90	
Completed by QA Org.	11 Response:					
	12 Signature: _____ Date: _____					
Completed by QA Org.	13 Response Receipt Acceptable <input type="checkbox"/>					
	Initiator _____		Date _____		QA/Lead Auditor _____	
14 Remarks:						
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8 Discussion: (continued)

This approach should be adopted in future Study Plans as well.

YUCCA MOUNTAIN PROJECT OFFICE
1 YMPO OBSERVATION NO. 90-03-03

N-QA-012
4/89

Completed by Originating Organization	2 Noted During: Audit 90-03	3 Identified By: Bob Constable, Ken Gilkerson	4 Date: 06/29/90
	5 Organization: USGS	6 Person(s) Contacted: Martha Mustard	7 Response Due Date is 20 Days from Date of Transmittal
	8 Discussion: QMP 4.01, Rev. 3, Par. 5.4.1, states in part that the Contracting Officer shall not award a QA Level I or II final procurement document until receipt of the review of final procurement documentation. (Attachment 3, QA & Technical Review of the Procurement Documentation.) No procedural controls exists to assure that the C.O. releases POs only after QAs documented review. USGS Surveillance 90-S05-OBS1 documents the occurrence of such an anomaly. It is recommended that USGS consider having the QA organization sign off on the PO approving that QA requirements have been met, or instituting other similar		
Completed by Respondee	9 QAE/Lead Auditor <i>Richard M. Powell</i>	Date 07/17/90	10 Branch Manager <i>Thomas J. Hampton</i>
	11 Response:		
	12 Signature: _____ Date: _____		
Completed by QA Org.	13 Response Receipt Acceptable <input type="checkbox"/>		
	Initiator _____	Date _____	QA/Lead Auditor _____ Date _____
14 Remarks:			Page <u>1</u> of <u>2</u>

8 Discussion: (continued)
procedural controls.

YUCCA MOUNTAIN PROJECT OFFICE
1 YMPO OBSERVATION NO. 90-03-04

N-QA-012
4/89

Completed by Originating Organization	2 Noted During: Audit 90-03		3 Identified By: Bob Constable-Ken Gilkerson		4 Date: 6/29/90	
	5 Organization: USGS		6 Person(s) Contacted: Tom Chaney, W. Rodman, M. Mustard		7 Response Due Date is 20 Days from Date of Transmittal	
	8 Discussion: Modification to QMP 7.01, Rev. 4, dated 6/8/90 eliminated the requirements for QA records for certain "commercial grade" items. Requirements for the acceptance of "commercial grade" items not requiring calibration should be addressed to delineate the following: a) who receives "commercial grade" items not requiring calibration. b) how are these items received. c) what documentation is generated upon acceptance. d) where does this documentation go.					
Completed by Respondee	9 QAE/Lead Auditor <i>Robert B Constable</i>		Date 7/16/90		10 Branch Manager <i>Catherine Hampton</i>	
					Date 7-17-90	
Completed by QA Org.	11 Response:					
	12 Signature: _____ Date: _____					
Completed by QA Org.	13 Response Receipt Acceptable <input type="checkbox"/>					
	Initiator _____		Date _____		QA/Lead Auditor _____	
14 Remarks:						
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8 Discussion: (continued)

e) how is it processed and sent to the LRC.

f) how/when does USGS-QA verify the adequacy of this documentation.

YUCCA MOUNTAIN PROJECT OFFICE
1 YMPO OBSERVATION NO. 90-03-05

N-QA-012
4/89

Completed by Originating Organization	2 Noted During: Audit 90-03		3 Identified By: R. L. Maudlin		4 Date: 07/02/90		
	5 Organization: USGS		6 Person(s) Contacted: R. Luckey		7 Response Due Date is 20 Days from Date of Transmittal		
	8 Discussion: During the review of calibration logs maintained at several data stations at the NTS, it was observed that the logs did not, in all cases, identify the procedural revision used to perform the calibration. It is recommended that all future entries in the logs at the NTS include the procedure and procedure revision used to do the calibration.						
9 QAE/Lead Auditor <i>R. Maudlin</i>		Date 07/16/90		10 Branch Manager <i>Allen Stumpf for 77-90</i>		Date	
Completed by Respondee	11 Response:						
	12 Signature: _____ Date: _____						
Completed by QA Org.	13 Response Receipt Acceptable <input type="checkbox"/>						
	Initiator _____		Date _____		QA/Lead Auditor _____		Date _____
14 Remarks:						Page 1 of 1	

YUCCA MOUNTAIN PROJECT OFFICE
1 YMPO OBSERVATION NO. 90-03-06

N-QA-012
4/89

Completed by Originating Organization	2 Noted During: AUDIT 90-03 (USGS)		3 Identified By: J.E. CLARK		4 Date: JUNE 27, 1990	
	5 Organization: USGS		6 Person(s) Contacted: J. ZIEMBA, R. LUCKEY, A. WHITESIDE, ET AL		7 Response Due Date is 20 Days from Date of Transmittal	
	8 Discussion: The NCR system established in QMP-15.01, Rev. 4, is applied to both hardware and programmatic deficiencies. The dispositioning process requires assigning resolutions such as "rework," "repair," and "use-as-is," which do not help identify corrective actions necessary for programmatic deficiencies. A dedicated programmatic deficiency documentation system (possibly an adaptation of the system used for audit findings) would facilitate corrective action identification and implementation by eliminating the force-fitting of irrelevant dispositioning terms.					
Completed by Respondee	9 QAE/Lead Auditor <i>J.E. Clark</i>		Date <i>7/16/90</i>		10 Branch Manager <i>Catherine Hampton</i>	
					Date <i>7-17-90</i>	
Completed by QA Org.	11 Response:					
	12 Signature: _____ Date: _____					
Completed by QA Org.	13 Response Receipt Acceptable <input type="checkbox"/>					
	Initiator		Date		QA/Lead Auditor	
14 Remarks:						
<table border="1"> <tr> <td>Page <u>1</u> of <u>1</u></td> </tr> </table>						Page <u>1</u> of <u>1</u>
Page <u>1</u> of <u>1</u>						

YUCCA MOUNTAIN PROJECT OFFICE
1 YMPO OBSERVATION NO. 90-03-07

N-QA-012
4/89

Completed by Originating Organization	2 Noted During: Audit 90-03	3 Identified By: C.C. Warren	4 Date: 6-26-90
	5 Organization: USGS	6 Person(s) Contacted: J. Ziemba	7 Response Due Date is 20 Days from Date of Transmittal
	8 Discussion: Procedure YMP-USGS-QMP-16.01, Rev. 3 requires verification of completion of corrective action for CARs be accomplished by audit, surveillance, or management review of the affected activity. Verification of completion of corrective action for CAR 89-13 was accomplished by surveillance and found "not to be adequate or effective". Revision 1 to CAR 89-13 was issued to document this unsatisfactory verification. No additional corrective action was specified in the response to CAR 89-13, Rev. 1		
	9 QAE/Lead Auditor <i>C.C. Warren</i>	Date <i>7-16-90</i>	10 Branch Manager <i>Catherine [Signature]</i>
Completed by Respondee	11 Response:		
	12 Signature: _____ Date: _____		
Completed by QA Org.	13 Response Receipt Acceptable <input type="checkbox"/>		
	Initiator _____	Date _____	QA/Lead Auditor _____
	14 Remarks:		

8 Discussion: (continued)

although this response was accepted and closed by USGS Quality Assurance. Verification action on CAR 89-13, Rev. 1 was then marked "N/A - No Action". Therefore, CARs 89-13 and 89-13, Rev. 1 were closed out without a satisfactory verification of corrective action being performed. In addition, there was no documented justification for acceptance of the Revision 1 response without additional corrective action being specified.

YUCCA MOUNTAIN PROJECT OFFICE

N-QA-012
4/89

1 YMPO OBSERVATION NO. 90-03-08

Completed by Originating Organization	2 Noted During: Audit 90-03		3 Identified By: C.C. Warren		4 Date: 6-26-90	
	5 Organization: USGS		6 Person(s) Contacted: J. Ziemba		7 Response Due Date is 20 Days from Date of Transmittal	
	8 Discussion: Procedure YMP-USGS-QMP-16.01, Rev. 3 requires responsible management to identify cause and propose appropriate corrective action to prevent recurrence or provide a plan describing future actions to resolve the CAR. A cause/corrective actions to prevent recurrence or a plan describing future actions to resolve the CAR were not clearly identified in the accepted response to CAR 89-11.					
Completed by Respondee	9 QAE/Lead Auditor		Date		10 Branch Manager	
	<i>C.C. Warren</i>		7-16-90		<i>[Signature]</i> 7/17/90	
Completed by QA Org.	11 Response:					
	12 Signature: _____ Date: _____					
Completed by QA Org.	13 Response Receipt Acceptable <input type="checkbox"/>					
	Initiator		Date		QA/Lead Auditor	
14 Remarks:						
Page 1 of 1						

YUCCA MOUNTAIN PROJECT OFFICE

N-QA-012
4/89

1 YMPO OBSERVATION NO. 90-03-09

Completed by Originating Organization	2 Noted During: Audit 90-03	3 Identified By: C.C. Warren	4 Date: 6-26-90
	5 Organization: USGS	6 Person(s) Contacted: J. Ziemba	7 Response Due Date is 20 Days from Date of Transmittal
	8 Discussion: Procedure YMP-USGS-QMP-16.01, Rev. 3 requires the initiator of a CAR to include in the description (part 4) a statement of immediate actions taken to remedy specific conditions, if immediate actions were necessary. None of the CARs reviewed during the audit included a statement of immediate actions taken although the following CAR identified conditions that appeared to require immediate action.		
Completed by Respondee	9 QAE/Lead Auditor <i>C.C. Warren</i>	Date 7-17-90	10 Branch Manager <i>Cathy Hampton</i>
	11 Response:		
Completed by QA Org.	12 Signature:		Date:
	13 Response Receipt Acceptable <input type="checkbox"/>	Initiator	QA/Lead Auditor
14 Remarks:			Page <u>1</u> of <u>2</u>

CONTINUATION PAGE

8 Discussion: (continued)

CAR 89-14, "ADVERSE TREND IN CALIBRATION OF EQUIPMENT" CARs reviewed were 89-10, 89-11, 89-12, 89-13, 89-14, and 90-01.

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YUCCA MOUNTAIN PROJECT OFFICE
1 YMPO OBSERVATION NO. 90-03-10

N-QA-012
4/89

Completed by Originating Organization

2 Noted During: YMP-90-03	3 Identified By: R.Weeks/M.Meyer	4 Date: 6-28-90
5 Organization: USGS	6 Person(s) Contacted: Peggy Warner	7 Response Due Date is 20 Days from Date of Transmittal
8 Discussion: Record package GS.89.M000112 was transmitted from the USGS LRC to the CRF stating that 786 pages were present in the record package; however, the CRF stated the page count to be 601 pages on the returned copy of the LRC Record Transmittal form. There is no indication that the LRC attempted to resolve the discrepancy that existed between the different page counts.		

9 QAE/Lead Auditor <i>Richard L. W...</i>	Date 7/16/90	10 Branch Manager <i>...</i>	Date 7-17-90
--	-----------------	---------------------------------	-----------------

Completed by Respondee

11 Response:

12 Signature: _____ Date: _____

Completed by QA Org.

13 Response Receipt Acceptable

Initiator	Date	QA/Lead Auditor	Date
-----------	------	-----------------	------

14 Remarks:

Larry R. Hayes

-2-

JUL 23 1990

cc w/encls:

D. G. Horton, HQ (RW-3) FORS
D. E. Shelor, HQ (RW-3) FORS
~~K. R. Hooks, NRC, Washington, DC~~
S. W. Zimmerman, NWPO, Carson City, NV
R. L. Maudlin, MACTEC, Las Vegas, NV
N. J. Brogan, SAIC, Las Vegas, NV, 517/T-08
C. H. Prater, SAIC, Las Vegas, NV, 517/T-06
D. H. Appel, USGS, Denver, CO

cc w/o encls:

J. W. Gilray, NRC, Las Vegas, NV
D. D. Porter, SAIC, Golden, CO