

U.S. DEPARTMENT OF ENERGY
OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
OFFICE OF QUALITY ASSURANCE
AUDIT REPORT
FOR LIMITED SCOPE AUDIT OF
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA
AUDIT NO. YMP-92-07
FEBRUARY 4 THROUGH 7, 1992

ACTIVITIES EVALUATED:

- 4.0 Procurement Document Control
- 7.0 Control of Purchased Items and Services
- 8.0 Identification and Control of Materials, Parts,
Components, and Samples
- 12.0 Control of Measuring and Test Equipment
- 13.0 Handling, Storage, and Shipping

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Audit Team Leader
Yucca Mountain Quality Assurance Division

Date: 2/26/92

Approved by: Donald G. Horton
Donald G. Horton
Director
Office of Quality Assurance

Date: 3/6/92

EXECUTIVE SUMMARY

This report contains the results of the U.S. Department of Energy (DOE) Office of Civilian Radioactive Waste Management (OCRWM) limited scope Audit YMP-92-07 of the Yucca Mountain Site Characterization Project Office (YMPO) that was conducted in Las Vegas, Nevada, on February 4 through 7, 1992. This internal audit, conducted by a team of auditors from the Yucca Mountain Quality Assurance Division (YMQAD) of the Office of Quality Assurance (OQA), evaluated the YMPO implementation of the OCRWM Quality Assurance (QA) Program to determine whether it meets the requirements and commitments imposed by OCRWM. This was done by verifying implementation and effectiveness of the system in place, as well as verifying compliance with requirements.

Criterion 4 (Procurement Document Control) is still considered to be ineffective based upon the pending resolution to Corrective Action Request YMP-92-007 which is still in process with a scheduled completion date of February 28, 1992. In addition, the Technical Direction Letters were not processed in accordance with the instructions given in Interim Guidance Letter, YMP:RVB-954, dated November 22, 1991, from Carl P. Gertz to distribution. This condition was corrected during the audit.

Criterion 7 (Control of Purchased Items and Services) is considered to be indeterminate due to lack of activity.

Criteria 8 (Identification and Control of Materials, Parts, Components, and Samples) and 13 (Handling, Storage and Shipping) are considered to be effective based upon a review of objective evidence and interviews with Sample Management Facility personnel.

Criterion 12 (Control of Measuring and Test Equipment) is considered to be not applicable to the YMPO at this time.

The criteria for procurement (4 and 7), due to their status of ineffective and indeterminate respectively, will be added to the scope of the next limited scope audit of YMPO.

1.0 INTRODUCTION

This report contains the results of the U.S. Department of Energy (DOE) Office of Civilian Radioactive Waste Management (OCRWM) Audit No. YMP-92-07 of the Yucca Mountain Site Characterization Project Office (YMPO) conducted in Las Vegas, Nevada, on February 4 through 7, 1992. This audit was performed in accordance with the approved Audit Plan (Reference: Letter, Horton to Gertz, OQA:JB-1392, dated December 23, 1991).

2.0 AUDIT SCOPE

This limited scope internal audit, conducted by a team of auditors from the Yucca Mountain Quality Assurance Division (YMQAD) of the Office of Quality Assurance (OQA), evaluated the YMPO implementation of the OCRWM Quality Assurance (QA) Program to determine whether it meets the requirements and commitments imposed by the OCRWM. This was done by verifying implementation and effectiveness of the system in place, as well as verifying compliance with requirements.

In addition the audit team followed up on open Corrective Action Requests (CARs), and reviewed a representative sample of closed CARs within the audit scope to determine the effectiveness of YMPO corrective actions.

YMPO activities associated with the following QA Program elements were audited:

Program Elements

- 4.0 Procurement Document Control
- 7.0 Control of Purchased Items and Services
- 8.0 Identification and Control of Materials, Parts, Components, and Samples
- 12.0 Control of Measuring and Test Equipment
- 13.0 Handling, Storage, and Shipping

The following programmatic elements shown on the schedule were not audited since there is no YMPO implementation:

- 9.0 Control of Processes
- 10.0 Inspection
- 14.0 Inspection, Test, and Operating Status

Technical Areas

No technical activities were audited.

3.0 AUDIT TEAM AND OBSERVERS

The list of audit team members and observers is listed in Enclosure 1 to this report.

4.0 AUDIT MEETINGS AND PERSONNEL CONTACTED

The pre-audit conference was held at YMPO facilities in Las Vegas, Nevada, on February 4, 1992. Daily coordination meetings were held with YMPO management and staff, and daily Audit Team/Observer meetings were held to discuss issues and potential deficiencies. The audit was concluded with a post-audit conference held at YMPO facilities in Las Vegas, Nevada, on February 7, 1992. Personnel contacted during the audit are listed in Enclosure 2 to this report. The list includes an indication of those who attended the pre- and post-audit conferences.

5.0 SUMMARY OF AUDIT RESULTS

5.1 Program Effectiveness

Criterion 4, "Procurement Document Control," is still considered to be ineffective based upon the pending resolution to Corrective Action Request YMP-92-007 which is still in process with a scheduled completion date of February 28, 1992. In addition, the Technical Direction Letters were not processed in accordance with the instructions given in Interim Guidance Letter, YMP:RVB-954, dated November 22, 1991, from Carl P. Gertz to distribution. This condition was corrected during the audit.

Criterion 7, "Control of Purchased Items and Services," is considered to be indeterminate due to lack of activity.

Criteria 8, "Identification and Control of Materials, Parts, Components, and Samples," and 13, "Handling, Storage and Shipping," are considered to be effective based upon a review of objective evidence and interviews with Sample Management Facility personnel.

Criterion 12, "Control of Measuring and Test Equipment," is considered to be not applicable to the YMPO at this time.

5.2 Programmatic Audit Activities

Details of the programmatic audit activities can be found in Enclosure 3 to this report.

5.3 Summary of Deficiencies

The audit team identified two deficiencies during the audit and both deficiencies were corrected prior to the post-audit conference. The deficiencies corrected during the audit are detailed in Section 6.0 of this report.

6.0 SYNOPSIS OF DEFICIENCIES

6.1 Corrective Action Requests (CARs)

No CARs were generated as a result of this audit.

6.2 Deficiencies Corrected During the Audit

Deficiencies which are considered isolated in nature and only require remedial corrective action can be corrected during the audit. The following deficiencies were identified and corrected during the audit:

1. Five records of Sample Examination Request forms were found to have incomplete entries. The deficient records were corrected and a revised records package, dated February 6, 1992, was submitted to the LRC.
2. The audit team reviewed for compliance the eight Technical Direction Letters (TDLs) generated subsequent to Interim Guidance Letter Number YMP:RVB-954. Two TDLs, numbers EDD-EHP-1332 and EDD-JMP-1580, were issued without QA review and without the concurrence of the Contracting Officer. This deficiency was corrected during the course of the audit.

7.0 RECOMMENDATIONS

During the audit several areas were identified within the YMPO organization where there were opportunities for improvements. The following recommendations are offered for YMPO management consideration:

1. During the implementation of corrective action to CAR YM-92-007 it is recommended that the following items be considered:
 - a) The review, approval, and issuance of management-type agreements.
 - b) Make certain that Management Agreements are in place dealing with YMPO and organizations such as Argonne National Laboratory, Oak Ridge National Laboratory, and Pacific Northwest Laboratory.
 - c) The new procedure addressing TDLs should contain instructions precluding the issuance of TDLs prior to ensuring the Contractor's QA Program was approved for the scope of quality-affecting work defined in new or revised TDLs.
 - d) Appropriate classroom training should be conducted to the content of the new/revised procedure(s) dealing with procurement document control.
 - e) A system should be developed that will permit the quick retrieval of TDLs without a "Y" designation.

2. The Site Investigations Branch (SIB) should update the letter which delegates sign-off authority for the Sample Examination Request form. The current letter (NNA.910123.0078, dated November 26, 1990) includes an individual no longer on the project.
3. The following procedures should be revised to eliminate references to obsolete procedures:

AP-6.2Q, Revision 0	BTP-SMF-002, Revision 2
AP-6.4Q, Revision 0	BTP-SMF-010, Revision 0
4. The QAPD refers to the Sample Management Plan which does not exist. It is recommended that all references to the Sample Management Plan be removed or the Sample Management Plan be issued.

8.0 LIST OF ENCLOSURES

- Enclosure 1: Audit Team Members and Observers
- Enclosure 2: Personnel Contacted During the Audit
- Enclosure 3: Audit Details
- Enclosure 4: Objective Evidence Reviewed During the Audit

ENCLOSURE 1

AUDIT TEAM MEMBERS AND OBSERVERS

AUDIT TEAM AND OBSERVERS

AUDIT TEAM

<u>Name</u>	<u>QA Program Element</u>
Frank J. Kratzinger, Audit Team Leader	
Sandra D. Bates	Criteria 4 & 7
Donald J. Harris	Criteria 4 & 7
Thomas J. Higgins	Criteria 8, 12, 13
Richard L. Maudlin	Criteria 4 & 7
Richard L. Weeks	Criteria 8, 12, 13

OBSERVER

John Buckley U.S. Nuclear Regulatory Commission

ENCLOSURE 2
PERSONNEL CONTACTED DURING THE AUDIT

PERSONNEL CONTACTED DURING THE AUDIT

<u>Name</u>	<u>Organization</u>	<u>Title</u>	<u>Pre-Audit</u>	<u>Contacted During Audit</u>	<u>Post-Audit</u>
Barton, Robert V.	DOE/YMP	Sr. Tech. Mgr.	X	X	X
Blanchard, Maxwell B.	DOE/YMP	Deputy Proj. Mgr.	X	X	X
Blaylock, James	DOE/YMP	QA Engineer		X	X
Chandler, Doug K.	SAIC/T&MSS	Assoc. Proj. Mgr.	X		
Clanton, Uel S.	DOE/YMP	Branch Chief	X	X	X
Dixon, Wendy	DOE/YMP	POCD Div. Director	X		
Doyle, John R.	Harza/T&MSS	Drilling Support		X	
Dyer, J. Russ	DOE/YMP	Director RSED	X		X
Estella, John W.	SAIC/T&MSS	Staff Advisor	X	X	X
Gilray, John	NRC	On Site Rep.	X		
Grassmeier, Kathleen F.	DOE/YMP	Branch Chief	X		X
Hampton, Catherine E.	DOE/YMP	QA Specialist		X	
Harper, James B.	SAIC/T&MSS	QA Manager	X		
Helms, Ronald G.	SAIC/T&MSS	Sr. Proj. Analyst	X	X	X
Iorii, Vince F.	DOE/YMP	Director PCB	X		
Jones, Susan	DOE/YMP	Branch Chief	X		X
Kamoski, Peter J.	SAIC/T&MSS	Mgr. QA Support			X
Kettell, Richard A.	SAIC/T&MSS	QAE		X	
Lewis, Chris	Harza/T&MSS	DS&SM		X	
Lugo, Candace L.	SAIC/T&MSS	Dep. Dept. Mgr.	X		X
Peck, John H.	SAIC/T&MSS	DS&SM		X	
Petrie, Edgar H.	DOE/YMP	Branch Chief			X
Phillips, Garth	DOE/YMP	Contract Officer	X	X	
Potee, Brenda L.	REEC0	Chief Clerk		X	
Rehkop, Carol E.	DOE/YMP	Admin. Officer			X
Roberson, Gary D.	DOE/YMP	Acting Deputy Dir.	X	X	X
Robison, A. C.	DOE/YMP	Institutional Aff.	X		
Royer, Dennis C.	DOE/YMP	Acting Chief	X		X
Simecka, William B.	DOE/YMP	Director EDD	X		X
Smith, William C.	REEC0	LRC Mgr.	X	X	X
Spence, Richard E.	DOE/YMP	Director QA		X	X
Taylor, Rufus L.	SAIC/T&MSS	Sr. Advisor	X		X
Therien, John E.	SAIC/T&MSS	QA Integration	X		
Thomure, Dawn A.	REEC0	Records Mgmt. Supr.		X	
Verna, Bernard J.	MACTEC	Staff EDD	X		X
Wilson, Winfred A.	DOE/YMP	Site Manager	X		

ENCLOSURE 3
AUDIT DETAILS

AUDIT DETAILS

The following is a summary of programmatic activity covered during the audit. A list of objective evidence reviewed during the audit is shown in Enclosure 4 to this report.

1.0 Criterion 4, "Procurement Document Control"

1. The audit team verified that no new contracts have been issued since the last YMPO (YMPO) audit in October 1991. However, a replacement for an Interagency Agreement with USGS was processed and became effective February 1, 1992. The new agreement number is DE-A108-92NV10874.

Since no procurement activities have occurred which implement QMP-04-02, an evaluation was performed to determine the status of corrective action for CAR YM-92-007. The results are as follows:

2. The audit team verified that no contractual authority has been transferred to the YMP Project Manager. The YMPO is currently providing Technical Guidance Letters (TDLs) to the Field Office Manager for site characterization work. This response was provided by R. W. Minning, Director, Contract Management Division, in a memorandum dated December 23, 1991.
3. The audit team verified that all contractors performing quality activities have previously had their QA programs evaluated and approved, with the exception of Pacific Northwest Laboratory, which was performing quality-affecting work. CAR YM 92-005 was previously initiated for this condition.
4. The audit team reviewed the eight TDLs generated subsequent to Interim Guidance letter No. YMP:RVB-954, for compliance to the letter. Two TDLs, Nos. EDD-EHP-1332, and EDD JMP-1580, were issued without QA review and without the concurrence of the Contracting Officer. This deficiency was corrected during the course of the audit by the following actions:
 - 1) Submittal of the two TDLs to QA for review. The review performed on February 6, 1992, by QA determined that the documents (TDLs) were adequate.
 - 2) The TDLs were processed through the Contracting Officer for his concurrence.
 - 3) The YMP Project Manager issued a letter on February 6, 1992, YMP:RVB-1958; subject, TDLs, which discussed the anomaly and reiterated the requirement to follow the Interim Guidance letter.

- 4) An Informal Memorandum was issued on January 7, 1992, to all secretaries at the direction of the Senior Technical Manager. The memo requires that secretaries, when proofing quality-affecting letters with the Work Breakdown Structure (WBS) element ending with a "Y", to ensure the proper concurrence of the letter prior to submittal for final acceptance.
5. The audit team verified that the TDLs were retrieved from the Records Center via WBS element 1.2.9.1.1.Y. However, there is no mechanism for efficient retrieval of other TDLs issued before initiation of the Interim Plan using the "Y" indicator.
6. The audit team reviewed the draft procedure dated February 2, 1992, regarding TDLs being prepared in response to CAR YM-92-007, and conferred with the author regarding clarification of the proposed procedure.

2.0 Criterion 7, "Control of Purchased Items and Services"

The audit team verified by discussions with the Contracting Officer and review of the Qualified Suppliers List that there has been no activities associated with the QMP for this criterion since Audit YMP-91-I-01 was performed in October, 1991.

3.0 Criterion 8, "Identification and Control of Materials, Parts, Components, and Samples"

An evaluation of programmatic compliance to the requirements of this criterion was based on a review of objective evidence in the form of documentation and sample containers. It was determined during the audit that boreholes UZN-37, -54 and -55, which were classified as quality-affecting, and JF-3, a nonquality-affecting borehole, have been completed to-date. Quality records that resulted as a result of implementation of AP-6.2Q, AP-6.3Q, AP-6.4Q, and BTP-SMF-002, -005, -006, -007, -008, and -013 were examined and found to be acceptable.

SMF personnel were interviewed to determine their knowledge of procedural requirements and to clarify specific issues.

It was determined that BTP-SMF-010, Revision 0, has not been implemented for quality-affecting work as of the date of this audit.

4.0 Criterion 12, "Control of Measuring and Test Equipment"

As indicated by Quality Assurance Grading Report No. RSE-007, Revision 0, Criterion 12 is graded not applicable since YMPO does not utilize any measuring and test equipment (M&TE). The status of "not applicable" has not changed.

5.0 Criterion 13, "Handling, Storage and Shipping"

Sample containers for borehole cuttings from UZN-55 and core from UZN-37 were examined. The sample containers were located in a locked area within building 4320. All examined sample containers were stored in appropriate locations and properly marked.

ENCLOSURE 4
OBJECTIVE EVIDENCE

OBJECTIVE EVIDENCE REVIEWED

Procedures

QARD, Revision 4, Quality Assurance Requirements Document
QAPD, Revision 3, Quality Assurance Program Document
QAAP 16.1, Revision 4, Corrective Action
QAAP 18.2, Revision 5, Audit Program
QMP-04-02, Revision 0, ICN 1, Yucca Mountain Project Office Procurement Actions
QMP-07-04, Revision 2, Supplier Evaluation/Qualified Suppliers List
AP-6.2Q, Revision 0, Management and Operation of Sample Handling Activities at Borehole Sites
AP-6.3Q, Revision 0, ICN 1, Interaction of Participants and Outside Interests with Yucca Mountain Project Sample Management
AP-6.4Q, Revision 0, ICNs 1, 2, 3, Procedure for the Submittal, Review, and Approval of Requests for Yucca Mountain Project Geologic Specimens
BTP-SMF-002, Revision 2, Transport, Receipt, Admittance, and Processing of Borehole Samples for SMF
BTP-SMF-005, Revision 2, Examination of Samples by Participants at the SMF
BTP-SMF-006, Revision 2, Removal of Whole and Other Specimens from Samples by the SMF for Shipment and Remnant Return
BTP-SMF-007, Revision 0, Acceptance for Curation by the SMF of Selected Samples and Documentation
BTP-SMF-008, Revision 2, Field Logging, Handling, and Documenting Borehole Samples
BTP-SMF-010, Revision 0, Gamma-Ray Logging of Yucca Mountain Core
BTP-SMF-013, Revision 0, Staging, Packaging, and Documenting Neutron-Access Borehole Samples

Draft Procedure - Technical Direction/Guidance Procedure, dated 2/2/92

Technical Direction Letters

92-1320	92-1580	92-859	92-764
92-954	92-810	92-1332	92-875

Samples Reviewed

UZ1-CD-2-17C	UZ1-CD-7-17C	91-PR-24	91-PR-28
91-PR-8	91-PR-12	USW-UZN-37	USW-UZN-55

Sample QA Records Reviewed

Sample Examination Requests
SOC Specimen Removal Requests
Specimen Removal Contracts
Unqualified Samples Examination Agreements
Sample Collection Reports
Field Container Summary and Transmittal Documents
Confirmation Checklists
Cutting Processing Checklists
Core Processing Checklists
Video Tape of UZN-54
Daily Activities Log for UZN-55
Shift Drilling Summary
SMF Specimen Shipment Packaging Log
Transfer of Custody Forms
SMF Specimen Custody Receipt
SMF Specimen Removal Log
SOC Specimen Removal Request
Field Photography Log

Miscellaneous

Management Agreements, Inter-Agency Agreements, and Memoranda of Understanding
Replacement for Inter-Agency Agreement Number DE-A108-92NV10874 with United States
Geological Survey
Draft Management Agreement between Richland Field Office and YMPO, dated February, 1992
Memorandum, response from Contract Management Agreement Division, dated
December 23, 1991
Technical Direction - Quality Assurance Matrix
Memoranda and letters associated with procurement