

OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT

QUALITY ASSURANCE AUDIT PLAN

FOR AUDIT YMP-94-08

OF

LOS ALAMOS NATIONAL LABORATORY

LOS ALAMOS, NEW MEXICO

AUGUST 15 THROUGH 19, 1994

Prepared by: *S. R. Maslar* Date: *7/7/94*
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Yucca Mountain Quality Assurance Division

Approved by: *DG Horton* Date: *7/11/94*
Donald G. Horton
Director
Office of Quality Assurance

1.0 SCOPE

This full scope audit, to be performed by a team of auditors from the Office of Quality Assurance (OQA), will evaluate the Los Alamos National Laboratory (Los Alamos) Quality Assurance (QA) Program to determine whether it meets the requirements and commitments imposed by the Office of Civilian Radioactive Waste Management (OCRWM) Quality Assurance Requirements and Description (QARD) document. This will be done by verifying implementation, adequacy, and effectiveness of systems in place, as well as verifying compliance with requirements.

In addition to the follow-up on any open Corrective Action Requests, a representative sample of deficiencies identified during previous QA audits and surveillances of Los Alamos may be included in the scope of this audit to determine the effectiveness of Los Alamos corrective actions.

The programmatic and technical elements to be audited during this full scope audit are identified in Section 4.0 of this audit plan.

2.0 AUDIT SCHEDULE

Pre-audit Team/Observer Meeting	8:30 a.m., August 15, 1994 Los Alamos, New Mexico
Pre-audit Conference	9:00 a.m., August 15, 1994 Los Alamos, New Mexico
Audit Activities	9:30 a.m. to 4:00 p.m. August 15, 1994 Los Alamos, New Mexico
	8:00 a.m. to 4:00 p.m. August 16 through 18, 1994
	8:00 a.m. to 10:30 a.m. August 19, 1994
Post-audit Conference	11:00 a.m., August 19, 1994 Los Alamos, New Mexico

There will be a daily Audit Team/Observer meeting at 4:15 p.m. and also a daily Audit Team Leader (ATL)/Observer/Los Alamos meeting starting at 8:00 a.m. to discuss potential deficiencies and establish needed liaison.

3.0 REQUIREMENTS TO BE AUDITED AND APPLICABLE REFERENCES

The requirements to be audited will be contained in programmatic and technical checklists. These checklists will be developed from the latest available revision of the following documents.

- OCRWM Quality Assurance Requirements and Description Document
- Los Alamos Quality Assurance implementing procedures
- Applicable Yucca Mountain Site Characterization Office Administrative Procedures - Quality

The conduct of the audit will be guided by the documents (latest revision) listed below:

- Quality Assurance Procedure (QAP) 18.2, "Audit Program"
- QAP 16.1, "Corrective Action"

4.0 ACTIVITIES TO BE AUDITED

Programmatic Elements

- 1.0 Organization
- 2.0 Quality Assurance Program
- 4.0 Procurement Document Control
- 5.0 Implementing Documents
- 6.0 Document Control
- 7.0 Control of Purchased Items and Services
- 12.0 Control of Measuring and Test Equipment
- 15.0 Nonconformances
- 16.0 Corrective Action
- 17.0 Quality Assurance Records
- 18.0 Audits
- Supplement I, Software
- Supplement II, Sample Control
- Supplement III, Scientific Investigation

The following QA program elements were considered during the development of this audit plan and found to be not applicable, since OCRWM HQ currently has no activity to which these elements apply:

- 3.0 Design Control
- 8.0 Identification and Control of Items

9.0 Control of Special Processes
10.0 Inspection
11.0 Test Control
13.0 Handling, Storage, and Shipping
14.0 Inspection, Test and Operating Status
Supplement IV, Field Surveying
Appendix A, High Level Radioactive Waste Form Production
Appendix B, Transportation
Appendix C, Mined Geological Disposal System

Technical Elements

Selected quality-related work as follows:

- Work Breakdown Structure (WBS) No. 1.2.3.4.1.2.1, Batch Sorption Studies
- WBS No. 1.2.3.4.1.3.1, Dissolved Species Concentration Limits
- WBS No. 1.2.3.4.1.4.1, Dynamic Transport Column Experiments

In addition, the technical specialist will evaluate the above activities to determine adequacy in the following areas:

1. Technical qualifications of technical personnel.
2. Understanding of procedural requirements as they pertain to related work.
3. Adequacy of technical procedures, as applicable.
4. Development of study plans, scientific investigations, work supporting documents and any related work products.

If the audit team identifies a need to verify additional programmatic or technical areas during the audit, these areas will be added to the audit scope and evaluated accordingly.

5.0 AUDIT TEAM MEMBERS

Stephen R. Maslar, Yucca Mountain Quality Assurance Division (YMQAD)/Quality Assurance Technical Support Services (QATSS), Las Vegas, Nevada, ATL

Donald J. Harris, YMQAD/QATSS, Las Vegas, Nevada, Auditor

Stephen D. Harris, YMQAD/QATSS, Las Vegas, Nevada, Auditor

Thomas J. Higgins, YMQAD/QATSS, Las Vegas, Nevada, Auditor

John S. Martin, YMQAD/QATSS, Las Vegas, Nevada, Auditor

Charles C. Warren, YMQAD/QATSS, Las Vegas, Nevada, Auditor

**Dennis Threatt, Headquarters Quality Assurance Division (HQAD)/QATSS,
Washington, D.C.**

**Paul L. Cloke, Science Applications International Corporation/Technical and
Management Support Services, Las Vegas, Nevada, Technical Specialist**

6.0 AUDIT CHECKLISTS

The following checklists will be used during the audit:

YMP-94-08-01, Programmatic Checklist

YMP-94-08-02, Technical Checklist