

OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT

QUALITY ASSURANCE AUDIT PLAN

FOR

AUDIT NO. 91-07

OF

SANDIA NATIONAL LABORATORIES

ALBUQUERQUE, NEW MEXICO

AUGUST 19 THROUGH AUGUST 23, 1991

Prepared by: Neil D. Cox Date: 7/15/91
Neil D. Cox
Audit Team Leader

Prepared by: Thomas J. Higgins Date: 7/15/91
Thomas J. Higgins
Lead Technical Specialist

Approved by: James B. Dayton for Date: 7/15/91
Donald G. Horton
Director
Office of Quality Assurance

1.0 SCOPE

This audit will evaluate the Sandia National Laboratories (SNL) Quality Assurance (QA) Program to determine whether it meets the requirements and commitments imposed by the Office of Civilian Radioactive Waste Management (OCRWM). This will be done by verifying implementation and effectiveness of the system in place, as well as verifying compliance with requirements.

Discrepancies identified during previous OCRWM audits and surveillances of SNL that have not been closed will be included in the scope of this audit to determine the effectiveness of corrective actions at SNL.

The programmatic elements and technical areas to be audited, as well as those programmatic elements not included in this audit, are identified in Section 4.0 of this audit plan.

2.0 ORGANIZATION TO BE AUDITED

Sandia National Laboratories, Albuquerque, New Mexico

3.0 AUDIT SCHEDULE

Team/Observers Room Location	8:00 a.m., August 19, 1991, Albuquerque, New Mexico*
Pre-Audit Team/Observers Meeting	8:30 a.m., August 19, 1991, Albuquerque, New Mexico
Pre-Audit Conference	9:30 a.m., August 19, 1991, Albuquerque, New Mexico
Audit Activities	10:30 a.m. to 4:00 p.m., August 19, 1991**
	8:00 a.m. to 4:00 p.m., August 20 - 22, 1991**
	8:00 a.m. to 11:30 a.m. August 23, 1991
Post-Audit Conference	1:00 p.m., August 23, 1991 Albuquerque, New Mexico

* This room will become the central meeting place for the audit team and observers.

** There will be daily debriefings of the audit team starting at 5:00 p.m. at the Barcelona Court Hotel.

4.0 REQUIREMENTS TO BE AUDITED AND APPLICABLE REFERENCES

The requirements to be audited are contained in pre-approved programmatic and technical checklists. These checklists were developed from the latest available revision of the following documents:

- o SNL Quality Assurance Program Plan (QAPP), Revision E and applicable implementing procedures
- o SNL Scientific Investigation Plans, Study Plans, and applicable technical procedures
- o SNL activities supporting the Site Characterization Plan (SCP)
- o Yucca Mountain Site Characterization Project Office (YMPO) Administrative Procedures--Quality (APQs)
- o Quality Assurance Grading Reports for Sandia National Laboratories, Volumes 1, 2, and 3, Revision 15, YMP/90-79, June 11, 1991

The conduct of the audit will be guided by the following:

- o Quality Assurance Administrative Procedure QAAP 18.2, Revision 3, "Audit Program"
- o QAAP 16.1, Revision 3, "Corrective Action Requests"
- o YMP Audit Observer Inquiry
- o Policy for Participation of State, Tribal, and NRC Representatives as Observers on U.S. Department of Energy (DOE) Audits, dated July 14, 1987

5.0 ACTIVITIES TO BE AUDITED

Programmatic Elements:

- 1.0 Organization
- 2.0 Quality Assurance Program
- 3.0 Scientific Investigation Control and Design Control (including Software Control)
- 4.0 Procurement Document Control
- 5.0 Instructions, Procedures, Plans, and Drawings
- 6.0 Document Control
- 7.0 Control of Purchased Items and Services
- 8.0 Identification and Control of Items (Samples and Data)
- 12.0 Control of Measuring and Test Equipment
- 13.0 Handling, Storage and Shipping

- 15.0 Control of Nonconforming Items
- 16.0 Corrective Action
- 17.0 Quality Assurance Records
- 18.0 Audits

The following Programmatic Elements will not be included in the scope of the audit since Sandia currently has no activities to which these elements apply:

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

Technical Areas

Technical Specialists will review and evaluate the following technical activities:

<u>WBS Number</u>	<u>Title</u>	<u>SCP Reference</u>
1.2.1.4.7	Support. Calc. F/Postclosure Performance Analysis	NONE
1.2.3.2.7.1	Mechanical and Thermal Properties	8.3.1.15.1

In addition, the above technical activities will be evaluated to determine adequacy in the following areas:

1. Technical qualifications of scientific investigators and design personnel.
2. Understanding of procedural requirements as they pertain to scientific investigation activities.
3. Adequacy of technical procedures.
4. Development of scientific investigation planning documents, study plans, work supporting the SCP, and any related work products.

If the audit team identifies a need to verify additional programmatic or technical areas during the audit, these will be added to the audit checklist(s) and verified accordingly.

5.0 AUDIT TEAM MEMBERS

James Blaylock--Audit Manager, U.S. Department of Energy (DOE)/Yucca Mountain Quality Assurance Division (YMQAD), Las Vegas, Nevada
Neil D. Cox--Audit Team Leader, Science Applications International Corporation (SAIC)/YMQAD, Las Vegas, Nevada
Mario R. Diaz--Auditor, DOE/YMQAD, Las Vegas, Nevada
Donald J. Harris--Auditor, Harza Engineering/YMQAD, Las Vegas, Nevada
Frank J. Kratzinger--Auditor, SAIC/YMQAD, Las Vegas, Nevada
John R. Matras--Auditor, SAIC/YMQAD, Las Vegas, Nevada
Richard L. Maudlin--Auditor, MAC Technical Services Company/YMQAD, Las Vegas, Nevada
Terry W. Noland--Auditor, Westinghouse/YMQAD, Las Vegas, Nevada
Thomas J. Higgins--Lead Technical Specialist, SAIC/YMQAD, Las Vegas, Nevada
William R. Sublette, Technical Specialist, SAIC, Las Vegas, Nevada

6.0 AUDIT CHECKLISTS

The following checklists will be used in conjunction with this audit:

91-07-1 Programmatic Audit Checklists
91-07-2 Technical Audit Checklists