

OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT

QUALITY ASSURANCE AUDIT PLAN

FOR AUDIT YM-ARP-96-12

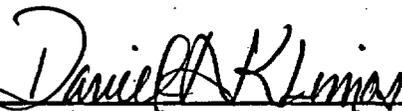
OF

UNITED STATES GEOLOGICAL SURVEY

DENVER, COLORADO

APRIL 29 THROUGH MAY 3, 1996

Prepared by:



Date:

3/22/96

**Daniel A. Klimas
Audit Team Leader
Yucca Mountain Quality Assurance Division**

Approved by:



Date:

3/28/96

**Donald G. Horton
Director
Office of Quality Assurance**

1.0 SCOPE

This performance based audit of the U.S. Geological Survey (USGS) will be conducted by a team of auditors from Yucca Mountain Quality Assurance Division (YMQAD) and technical specialists from the Civilian Radioactive Waste Management System Management and Operating Contractor (CRWMS M&O). The audit will evaluate the effectiveness of implementation of the USGS Quality Assurance (QA) program requirements for selected activities that result in the products identified in Section 4.0 of this audit plan.

2.0 AUDIT SCHEDULE

Pre-audit Team/Observer Meeting	8:30 a.m., April 29, 1996 Denver, Colorado
Pre-audit Conference	9:15 a.m., April 29, 1996 Denver, Colorado
Audit Activities	10:00 a.m. to 4:00 p.m. April 29, 1996 Denver, Colorado
	8:00 a.m. to 4:00 p.m. April 30 through May 2, 1996 Denver, Colorado
	8:00 a.m. to 11:00 a.m. May 3, 1996 Denver, Colorado
Post-audit conference	1:00 p.m., May 3, 1996 Denver, Colorado

There will be a daily Audit Team/Observer meeting at 4:00 p.m. to review audit progress. Beginning Tuesday, April 30, 1996, there will also be a daily Audit Team Leader (ATL)/Observer/USGS management meeting at 8:15 a.m. to communicate audit progress, to discuss potential deficiencies and establish needed liaison. Both daily meetings will be held at locations provided by USGS.

3.0 REQUIREMENTS TO BE AUDITED AND APPLICABLE REFERENCES

The requirements to be audited will be contained in performance based and technical checklists. These checklists will be developed from the latest available revision of USGS's approved and issued QA Program procedures, study plans, technical procedures, and the performance objectives established and agreed upon with USGS management.

The conduct of the audit will be in accordance with the documents (latest revision) listed below:

- - Quality Assurance Procedure QAP 18.2, "Internal Audit Program"
- Administrative Procedure (AP) 16.1Q, "Performance/Deficiency Reporting"
- AP 16.2Q, "Corrective Action and Stop Work"

4.0 ACTIVITIES TO BE AUDITED

A performance based audit evaluates products and activities to determine the degree to which they meet program requirements and management commitments and expectations. This evaluation of process effectiveness and product acceptability will be based upon:

- 1) Satisfactory completion of the critical process steps;
- 2) Acceptable results and quality of the end products;
- 3) Documentation that substantiates quality of products;
- 4) Performance of trained and qualified personnel; and
- 5) Implementation of applicable QA Program Elements

The specific products to be audited are:

- "Preliminary Site Saturated Zone 3-Dimensional Ground Water Flow Model," Work Breakdown Structure (WBS) 1.2.3.3.1.3.3.
- "Unsaturated Zone Hydrochemistry Data Synthesis Report," WBS 1.2.3.3.1.2.7.

5.0 AUDIT TEAM MEMBERS

Daniel A. Klimas, YMQAD, Las Vegas, Nevada, Audit Team Leader

John R. Doyle, YMQAD, Las Vegas, Nevada, Auditor

Stephan T. Nelson, CRWMS M&O, Las Vegas, Nevada, Technical Specialist

Cady L. Johnson, CRWMS M&O, Las Vegas, Nevada, Technical Specialist

6.0 AUDIT CHECKLIST

The following checklists will be used during the audit:

YM-ARP-96-12-01, Performance-Based Checklist

YM-ARP-96-12-02, Technical Checklist

YM-ARP-96-12-03, Technical Checklist