



Department of Energy
Washington, DC 20585

WBS 1.2.9.3
QA

FEB 27 1992

Larry R. Hayes
Technical Project Officer
for Yucca Mountain
Site Characterization Project
U.S. Geological Survey
101 Convention Center Drive
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Las Vegas, NV 89109

OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT (OCRWM) QUALITY ASSURANCE
(QA) AUDIT YMP-92-13 OF THE U.S. GEOLOGICAL SURVEY (USGS) IN SUPPORT OF YUCCA
MOUNTAIN SITE CHARACTERIZATION PROJECT

Please be advised that a team of auditors from OCRWM's Yucca Mountain Quality Assurance Division will contact a QA audit of selected portions of the USGS QA Program, at the Nevada Test Site (NTS) on April 1-2, 1992, and at Denver, Colorado, during the period of April 6-10, 1992. The audit will be conducted in accordance with the enclosed audit plan.

Observers from the State of Nevada, the U.S. Nuclear Regulatory Commission or other interested parties may also accompany the audit team. It is anticipated that approximately nine auditors/observers will be present at the NTS and 12 auditors/observers present at Denver.

You are requested to arrange for appropriate space to conduct meetings, provide cognizant personnel to support the audit, and provide access to necessary USGS documentation and records.

If you have any questions regarding this audit, please contact either Mario R. Diaz at 794-7974 or Charles C. Warren at 794-7248.

R.C. Spence For
Donald G. Horton, Director
Office of Quality Assurance

OQA:MRD-2178

Enclosure: *on the shelf*
Audit YMP 92-13

9203040344 920227
PDR WASTE
WM-11 PDR

ADD: Bill Belke
Gr. Encl. due to additional info.
102-7
WM-11
14403
ADD: Ken Wilk Gr. Encl.

FEB 27 1992

cc w/encl:

R. W. Clark, HQ (RW-3.1) FORS
D. E. Shelor, HQ (RW-30) FORS
S. L. Skuchko, HQ (RW-331) FORS
~~K. R. HOOKS, NRC, Washington, DC~~
J. W. Gilray, NRC, Las Vegas, NV
R. R. Loux, NWPO, Carson City, NV
S. W. Zimmerman, NWPO, Carson City, NV
Cyril Schank, Churchill County Commission, Fallon, NV
J. W. Bingham, Clark County Commission, Las Vegas, NV
D. A. Bechtel, Clark County Comprehensive, Las Vegas, NV
E. von Tiesenhausen, Clark County Comprehensive, Las Vegas, NV
Leo Vaughan, Esmeralda County Commission, Goldfield, NV
P. J. Goicochea, Eureka County Commission, Eureka, NV
Gloria Derby, Lander County Commission, Battle Mountain, NV
M. L. Baughman, Lincoln County Commission, Pioche, NV
Keith Whipple, Lincoln County Commission, Pioche, NV
C. E. Jackson, Mineral County Commission, Hawthorne, NV
Frank Sperry, White Pine County Commission, Ely, NV
Robert Campbell, County of Inyo, Bishop, CA
Robert Michener, County of Inyo, Bishop, CA
R. J. Brackett, M&O/TRW, Fairfax, VA
J. A. Jackson, M&O/TRW, Las Vegas, NV
R. R. Richards, SNL, 6310, Albuquerque, NM
S. L. Bolivar, LANL, Los Alamos, NM
J. L. Day, LATA, Los Alamos, NM
T. H. Chaney, USGS, Denver, CO
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W. J. Glasser, REECo, Las Vegas, NV
M. J. Regenda, RSN, Las Vegas, NV
C. H. Prater, SAIC, Las Vegas, NV, 517/T-06
P. E. Seidler, SAIC, Las Vegas, NV, 517/T-18

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1.0 SCOPE

This limited scope audit will evaluate the effectiveness of the United States Geological Survey (USGS) Quality Assurance (QA) program in meeting the requirements and commitments imposed by the Office of Civilian Radioactive Waste Management (OCRWM).

The effectiveness of USGS QA Program requirements and implementing procedures for program elements and technical activities identified in Section 4.0 of this plan will be evaluated. A representative sample of deficiencies identified during previous QA audits and surveillances of USGS will also be included in the scope of the audit to determine effectiveness of corrective action. In addition, corrective action being taken in response to open Project Office and the U.S. Nuclear Regulatory Commission (NRC) identified deficiencies may be evaluated during the audit.

This audit will be conducted at the Nevada Test Site (NTS) and at Denver, Colorado in accordance with the schedule identified in Section 2.0.

2.0 AUDIT SCHEDULE

Pre-Audit Team/Observer Meeting (NTS)	8:30 a.m., April 1, 1992
Pre-Audit Meeting (NTS)	9:00 a.m., April 1, 1992
Conduct of Audit (NTS)	9:30 a.m. - 3:30 p.m. April 1, 1992
	8:30 a.m. - 3:30 p.m. April 2, 1992
Daily Team Debriefing (NTS)	3:30 p.m., April 1 & 2, 1992
Pre-Audit Team Observer Meeting (Denver)	12:30 p.m., April 6, 1992
Pre-Audit Meeting (Denver)	1:00 p.m., April 6, 1992
Conduct of Audit (Denver)	1:30 p.m. - 4:30 p.m. April 6, 1992
	8:00 a.m. - 4:30 p.m. April 7 - 9, 1992
	8:00 a.m. - 11:30 a.m. April 10, 1992

Daily Team Debriefing (Denver) 4:30 p.m., April 6 - 9, 1992

Post-Audit Meeting (Denver) 1:00 p.m., April 10, 1992

NOTE: Auditing may be continued at the NTS on April 3, 1992, if necessary to complete evaluations started on April 1 or 2. The Audit Team Leader will make this determination and inform USGS management of the continuation as early as possible.

3.0 REQUIREMENTS TO BE AUDITED AND APPLICABLE REFERENCES

USGS Quality Assurance Program Plan YMP-USGS-QAPP-01, Revision 5 and current Interim Change Notices

USGS Quality Management Procedures and applicable Yucca Mountain Site Characterization Project Administrative Procedures (Quality)

The audit will be conducted in accordance with the U.S. Department of Energy (DOE) documents listed below:

OCRWM Quality Assurance Administrative Procedure (QAAP) 18.2, Revision 5, Audit Program

OCRWM QAAP 16.1, Revision 4, Corrective Action

Audit Observer Inquiry

Policy for Participation of State, Tribal, and NRC Representatives as Observers on DOE Audits, Dated July 14, 1987

4.0 ACTIVITIES TO BE AUDITED

Programmatic Elements

- check lists for*
- 1.0 Organization
 - ✓ 3.0 Design Control
 - ✓ 5.0 Instructions, Procedures, Plans, and Drawings
 - ✓ 6.0 Document Control
 - ✓ 17.0 Quality Assurance Records
 - ✓ 19.0 Computer Software
 - ✓ 20.0 Scientific Investigation Control *incorporated into 3.0*

In addition, completion of the evaluation of Programmatic Element 1.0, "Organization", will be performed as a follow up to YMP Audit 92-02.

Technical Activities

ACTIVITY NUMBER

TITLE

8.3.1.2.2.1.2
(At NTS)

Evaluation of Natural Infiltration

*effective 1/25/71
SP 8.3.1.2.2.1, Rev. 0, Activity 2*

8.3.1.2.1.2.1
(At NTS)

Surface-water Runoff Monitoring

8.3.1.2.1.2.2
(At NTS)

Transport of Debris by Severe Runoff

8.3.1.2.2.6.1
(At Denver)

Gaseous-Phase Circulation Study

8.3.1.5.2.1.3
(At Denver)

Evaluation of Past Discharge Areas

8.3.1.2.1.3.2
(At Denver)

Regional Potentiometric Levels & Hydrologic Framework

8.3.1.4.2.2.2
(At Denver)

Surface Fracture Network Studies

Evaluation of the above activities by Technical Specialists will include a determination of adequacy in the following areas:

1. Technical qualifications of scientific personnel.
2. Understanding of procedural requirements as they pertain to scientific investigation activities.
3. Adequacy of technical procedures
4. Development of study plans, work supporting the Site Characterization Plan, and any related work.

5.0 AUDIT TEAM MEMBERS

Charles C. Warren, Audit Team Leader, MAC Technical Services (MACTEC), Las Vegas, Nevada

James Blaylock, Auditor, U.S. Department of Energy, Las Vegas, Nevada

Terry W. Noland, Auditor, Westinghouse, Las Vegas, Nevada (Denver only)

Neil Cox replaced him

Richard E. Powe, Auditor, Science Applications International Corporation (SAIC), Las Vegas, Nevada

Cynthia H. Prater, Auditor, SAIC, Las Vegas, Nevada (Denver only)

Kenneth T. McFall, Lead Technical Specialist, SAIC, Las Vegas, Nevada

Christine Barry, Technical Specialist, SAIC, Las Vegas Nevada (Denver only)

Paul L. Cloke, Technical Specialist, SAIC, Las Vegas, Nevada (Denver only)

Keith M. Kersch, Technical Specialist, SAIC, Las Vegas, Nevada (Denver only)

Marvin Saines, Technical Specialist, Harza, Las Vegas, Nevada (NTS only)

replaced by Bob Barton

Loren E. Thompson, Technical Specialist, SAIC, Las Vegas Nevada (NTS only).

6.0 AUDIT CHECKLISTS

The following checklists will be used to perform the audit:

92-13-1 Programmatic Checklist

92-13-2 Technical Checklist (NTS)

92-13-3 Technical Checklist (Denver)