

MINUTES OF THE JULY 16, 1992, QUALITY ASSURANCE MEETING

A meeting of the staff of the U.S. Nuclear Regulatory Commission and representatives of the U.S. Department of Energy (DOE) Office of Civilian Radioactive Waste Management (OCRWM), to discuss items of mutual interest with regard to quality assurance (QA), was held at the NRC Headquarters, Rockville, Maryland on July 16, 1992. An attendance list is included as Attachment 1. The State of Nevada was represented at this meeting. Nye County, NV was the only affected unit of local government in attendance.

At this meeting, DOE presented information on the following topics: (1) update of the Management and Operating (M&O) Contractor's QA program; (2) changes to the QA grading program; (3) the status of the response to the question from the State of Nevada on unauthorized persons collecting data; and (4) update on trending. DOE and other participants discussed the status of changes in the mini-audit process. The NRC staff presented observation summaries of U.S. Geological Survey (USGS) audit (YMP 92-13) and Science Applications International Corporation (SAIC)/ Technical & Management Support Services (T&MSS) audit (YMP 92-16). NRC also discussed the status of QA Open Items and the need to receive audit plan books and checklists sufficiently well ahead of the audit for the observers to prepare.

The meeting began with introductory remarks followed by introduction of the attendees. Following the introductions, DOE presented an update on the M&O QA program. By letter dated July 13, 1992, OCRWM has authorized the M&O to start quality affecting work under the M&O's QA program with certain conditions (Attachment 2). Quality affecting work is being done under an agreement executed in January 1992 for evaluating the effectiveness of the M&O QA program in fiscal year (FY) 1992 (Attachment 3). The M&O is ready for all FY 1992 work except for work currently subject to hold points. No work can be started later in the year without work authorization, which will include QA as part of the review. The NRC will be sent readiness review reports as existing hold points are lifted. Surveillances will follow the start of work in various areas.

The NRC noted that the NRC is very interested in tracking the M&O program. The NRC expressed an interest in observing surveillances and in receiving readiness review reports when holds are lifted and work items are started. In response to the State's inquiry as to when the NRC will decide on the acceptability of the M&O's QA program, the NRC reiterated its position that it will continue to review all aspects of DOE's QA program. In addition, the NRC wants continued visibility of DOE's verification activities. In response to a question from the NRC about the status of the new OCRWM Quality Assurance Document (QARD), the DOE stated that the QARD would be issued after the supplement for software is revised.

Next, the DOE made a presentation on changes in the QA classification and grading process (Attachment 4). The new approach is expected to be more efficient than the old. QA grading reports are to be eliminated. Instead an activity will assume the same importance as the item on the Q-list. The Q-list will include natural barriers. A key change is eliminating the activities list. There will be no quality grading reports to submit to the Quality Review Board. The change was effective June 10, 1992. The NRC requested a copy of

the transition plan when it is issued. In response to a question from NRC, DOE stated that any items anticipated to be used for licensing would still be on the Q-list, which is expected to be issued in August, 1992. The NRC stated that it would like a copy of the new Q-list when it is issued.

DOE and the State then discussed DOE's response (Attachment 5) to the concerns that the State of Nevada had expressed regarding whether all work being done by the USGS for the Yucca Mountain Site Characterization Project (YMP) is covered by the QA program and whether there had been unauthorized access to the site. The response stated that many USGS scientists who are not associated with YMP studies, conduct research at the Nevada Test Site and that for all scientists who provide support for the YMP study plans, "the scientific work must comply with applicable OCRWM USGS/YMP QA Program requirements." Deficiencies with respect to Study Plan 8.3.1.2.2.6 had previously been identified and were being addressed in a USGS/YMP Corrective Action Report (CAR 92-04). In response to a question by the State, DOE pointed out that audits and surveillances for 12 organizations had revealed no similar problems. When the CAR 92-04 is closed, DOE plans a surveillance. The NRC requested advance notice of the surveillance as early as possible. The State also asked for early notice of the surveillance.

The NRC then discussed its open items list (Attachment 6). Highlighted was the NRC's need to receive adequate information (a checklist or the equivalent) at least one week prior to an audit so as to permit sufficient preparation. The State of Nevada also requested early receipt of audit information. Timely receipt of the information has not been happening because it is not a stated requirement. In response to an NRC open item, DOE stated that the change control process for the Lawrence Livermore National Laboratory QA Program Plan is still in process.

Next on the agenda was DOE's update on trending. DOE pointed out that only CARs that are significant are being trended and that no trends had been identified to date. The trending report is expected to be issued soon. NRC acknowledged receipt of a letter on trending. The agenda item on the field trip to CER Corporation in Washington, D.C. on corrective actions and trending was not discussed because the field trip had not yet taken place.

DOE, NRC and the State discussed DOE's update on possible changes to the limited-scope audit (mini-audit) process. DOE pointed out that the proposed approach is in the new Quality Assurance Requirements Document (QARD), expected to be issued in the near future. In general the plan is to have less frequent compliance-only audits, supplemented by performance-based audits that will include horizontal and vertical slices. The QARD is expected to be issued shortly after the start of the new fiscal year. DOE will provide a briefing on the QARD in September, with a separate briefing on the mini-audit process, to seek NRC agreement to the new approach.

The NRC then presented the results of its observations of QA audits YMP-92-16 of Science Applications International Corporation/Technical and Management Support Services and YMP-92-13 of the USGS (Attachment 7). Again, the NRC highlighted the need for receiving audit information early. The NRC also requested feedback on the observers.

The NRC then invited the State and the affected units of local government to express any items of concern. The State presented several items of concern. In response to the State's inquiry about a planned DOE audit of the Energy Information Administration (EIA), the DOE stated that it will audit the collection of the utilities' information on spent fuel for Oak Ridge because it wants to ensure correct input information for the system. The question of whether QA controls were used when scientists looked at the possible effects of recent earthquakes was raised by the State. DOE confirmed that there were procedures for this activity as required by the QA program. Nye County asked if there were formal procedures to review data from scientific studies. DOE will include a briefing on this subject at the next meeting. The question of QA controls on scientific studies and the use of corroborative data will be addressed at the next meeting.

There were no closing remarks.

The meeting was adjourned after tentatively selecting September 17, 1992, as the next NRC/DOE QA meeting date.

Pauline P. Brooks 9/14/92
Pauline P. Brooks
Repository Licensing and Quality
Assurance Project Directorate
Division of High-Level Waste Management
U.S. Nuclear Regulatory Commission

Sharon L. Skuchko 9/14/92
Sharon L. Skuchko
Regulatory Integration Branch
Office of Civilian Radioactive
Waste Management
U.S. Department of Energy

7/16/92

NRC/DOE QA MEETING

ORGANIZATION/NAME

PHONE NUMBER

NRC

John Buckley	301-504-2513
Bill Belke	301-504-2445
Kenneth R. Hooks	301-504-2447
Ken Kalman	301-504-2428
Jack Spraul	301-504-2446
Pauline Brooks	301-504-3465
John Jankovich (Transportation)	301-504-2454
Don Loosley	301-504-2657

DOE

Bob Clark	202-586-1238
Richard E. Spence	702-794-7504
Sharon Skuchko	202-586-4590

State of Nevada

Susan Zimmerman	703-687-3744
-----------------	--------------

Nye County

Elgie Holstein	703-834-1173
----------------	--------------

EEl

Tom Colandrea	619-487-7510
---------------	--------------

M&O

R. J. Brackett	703-204-8760
----------------	--------------

TSI

Jack McEwen	703-757-5997
-------------	--------------

U.S. Geological Survey

Ray Wallace	202-586-1244
-------------	--------------

7/16/92

NRC/DOE QA MEETING

ORGANIZATION/NAME

PHONE NUMBER

WESTON

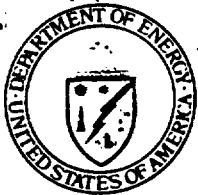
Wayne E. Booth

202-646-6750

WINSTON & STRAWN

Stan Echols

202-371-5777



R. 920715.0005
Department of Energy
Washington, DC 20585

JUL 13 1992

RECEIVED

1992 JUL 15 A 9:44

DOCUMENT CONTROL

R. L. Robertson
General Manager CRWMS M&O
TRW Environmental Safety Systems, Inc.
2650 Park Tower Drive, Suite 800
Vienna, VA 22180

Subject: Authorization to Implement the M&O Quality Assurance Program for Quality Affecting Work

Dear Mr. Robertson:

The Office of Civilian Radioactive Waste Management (OCRWM) Office of Quality Assurance (OQA) participated in all phases of the M&O's Readiness Reviews and reviewed the Readiness Review Report dated June 16, 1992, to determine the M&O's ability to proceed with quality affecting work. In addition to participating in the Readiness Review, OQA has also observed M&O internal audits and has conducted surveillances to gain confidence that the M&O has put together an adequate Quality Assurance (QA) Program and is capable of implementing it.

Based on the Readiness Review Report, audit observations, and surveillances, OCRWM authorizes the M&O to commence with quality affecting work under the M&O's Quality Assurance Program with the following conditions:

- o The M&O will not commence any quality affecting work where the Readiness Review Team has identified and placed hold points until those hold points have been satisfied and lifted. The M&O must notify OCRWM when those hold points are lifted.
- o The M&O shall perform quality affecting work as outlined in the letter of agreement between J. Brackett and D. Horton dated January 24, 1992.
- o For work not yet scheduled, therefore, not within the scope of the Readiness Review, it is required and fully expected to be performed in accordance with all applicable M&O QAPD requirements.

JUL 15 1992

If you have any questions on this matter, please contact Mr. Donald Horton, Director, Office of Quality Assurance at (202) 586-8858.

Trudy Wood

Trudy Wood, Director
M&O Management Division
Office of Civilian Radioactive
Waste Management

cc:

F. Peters, RW-2
D. Horton, RW-3
D. Spence, YMPO
T. Isaacs, RW-4
J. Saltzman, RW-5
S. Rousso, RW-10
C. Gertz, RW-20
S. Brocoum, RW-22
J. Roberts, RW-30
R. Milner, RW-40
J. Brackett, TRW



Department of Energy
Washington, DC 20585

JAN 24 1992

Jim Brackett
10306 Eaton Pl.
Suite 300
Fairfax, Va. 22030

**Subject: Agreement for Evaluation of Effectiveness of M&O
Quality Assurance (QA) Program**

Dear Mr. Brackett:

Enclosed for your use is a copy of the subject executed agreement. The agreement will provide the basis for evaluating the effectiveness of the M&O QA Program during FY 1992. If you have any questions, contact me at (202) 586-8858.


Donald G. Horton, Director
Office of Quality Assurance

Enclosure

cc:

J. Bartlett, RW-1
F. Peters, RW-2
T. Wood, RW-52
D. Spence, YMPO
OCRWM ADs/ODs
R. Robertson (TESS)

**AGREEMENT FOR FY 1992 EVALUATION
OF THE EFFECTIVENESS OF
THE M&O QUALITY ASSURANCE PROGRAM**

I. Background:

The Civilian Radioactive Waste Management (CRWM) M&O Contractor has established a Quality Assurance (QA) Program as described in the M&O Quality Assurance Program Description (QAPD) document. As a basis for QA implementation, the M&O QAPD has been conditionally accepted by OCRWM with the exception of Section 19, Computer Software Design and Control. To have the M&O QAPD fully accepted by OCRWM and for OCRWM to assess effective implementation, the M&O QA Program must meet the following requirements:

II. Requirements:

- 1) M&O QA Computer Software Plan accepted by OCRWM;
- 2) M&O Classification Procedure accepted by OCRWM;
- 3) OCRWM verification of effective implementation of selected products under the control of the M&O QA Program.

III. Implementation:

- 1) OCRWM and the M&O, through the review, resolution and approval process, will accomplish Requirements II.1) and II.2) above.
- 2) OCRWM will, through the process of surveillance and observation of M&O internal audits*, verify incrementally those applicable criteria of Requirement II.3) above as they are implemented by the M&O.

IV. Effectiveness:

When verification of satisfactory implementation of selected products under the controls of the M&O QA Program is accomplished, the OCRWM Office of Quality Assurance will issue letters stating effective implementation of the M&O QA Program.

* The M&O QA Program on classification and grading places the applicable QARD requirements in the M&O controlling documents rather than in grading packages. For M&O audit and surveillance activities these committed requirements are addressed in Section 2 and 18 of the M&O QAPD and are implemented through applicable M&O procedures. As such, the M&O is not required in its QA Program to generate a grading package in order to perform audits and surveillances of M&O quality affecting activities.

This agreement has been coordinated between and agreed to by:



D. G. Horton, Director
Office Quality Assurance
Office of Civilian Radioactive
Waste Management



R.J. Brackett, Manager M&O
Quality Assurance

CLASSIFICATION AND GRADING PROCESS

Reasons For Change

- **Eliminate confusion on applicability of Quality Activities List (QAL) by relating activities to items.**
- **Work controlling procedures have applicable criteria built in as requirements which allows the focus to be on the applicable level of controls and eliminates the need for justification.**
- **Allows Participants who have been selected for their expertise in a given field to control the work under their QA Program without external approval processes.**

CLASSIFICATION AND GRADING PROCESS

Previous Classification Process

- Performed in accordance with AP-6.17Q, Revision 0

 - Produced the following:
 - "Q" List
 - Quality Activities List (QAL)
 - Project Requirements List (PRL)
- } Approved by the Quality Review Board (QRB)

CLASSIFICATION AND GRADING PROCESS

New Classification Process

- Performed in accordance with AP-6.17Q, Revision 1
 - Produces the following:
 - "Q" List
 - Management Control (MC) List
- } Reviewed by
an Assessment Team (AT) and
Approved by Deputy Project Manager

Changes

- The new classification process requires that an activity take on the same level of importance as the items listed on the "Q" List.
- Therefore:
 - The QA Program applies to activities that are being performed on the "Q" List items.
 - The listing of all activities as they relate to items is unnecessary.
 - The need for the QAL has been eliminated and the QAL itself superceded.

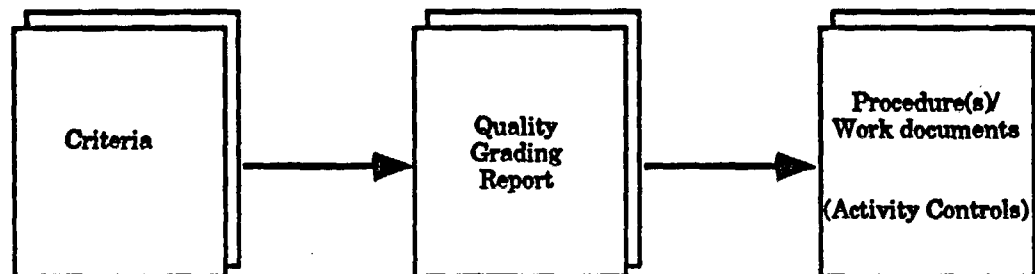
CLASSIFICATION AND GRADING PROCESS

Previous Grading Process

- Performed in accordance with AP-5.28Q, Revision 2 in conjunction with AP-6.17Q.
- Produced Grading Reports which:
 - Delineated "applicable" criteria with justification
 - Delineated "not applicable" criteria with justification
 - Was reviewed and accepted by the QRB to control standardization of criteria applied and justification thereof.

Discussion

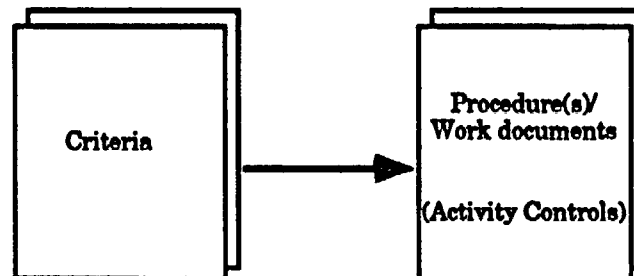
- The Quality Grading Report information was not used as an implementing document.
- The information was used to develop procedures/work controlling documents.



CLASSIFICATION AND GRADING PROCESS

New Grading Process

- Uses "Q" List to determine if the QA Program applies
- If it is determined that the QA Program applies (i.e. will be doing some activity to an item on the "Q" List), the activity is performed under the QA Program as appropriate for the activity.
- Which criteria, to what extent and level of controls are determined during the development of procedures/work controlling documents for the activity.
- Therefore, QA Program controls are built into the procedures/work controlling documents for quality affecting activities and are approved on a case by case basis





Department of Energy
Yucca Mountain Site Characterization
Project Office
P. O. Box 98608
Las Vegas, NV 89193-8608

WBS 1.2.9.3

JUL 0 1 1992

Robert R. Loux
Executive Director
Agency for Nuclear Projects
State of Nevada
Evergreen Center, Suite 252
1802 North Carson Street
Carson City, NV 89710

**U.S. DEPARTMENT OF ENERGY (DOE) YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT
OFFICE (YMPO) RESPONSE TO STATE OF NEVADA INQUIRY**

Reference: Ltr, Loux to Gertz, dtd 4/22/92

Review of the referenced letter identifies two key issues involving the U.S. Geological Survey (USGS). DOE's YMPO position on these issues are as follows:

ISSUE 1 - Scientific Work Conducted by USGS at Yucca Mountain, Nevada.

The USGS has many scientists conducting research at the Nevada Test Site, (NTS) with only a portion of whom are associated with the Yucca Mountain Site Characterization Project (YMP). Scientists not associated with the YMP program are not committed to work to the Office of Civilian Radioactive Waste Management (OCRWM), USGS/YMP quality assurance (QA) program. As in any scientific community, USGS scientists are not precluded from sharing information with the USGS scientists working on the YMP program.

Access for all USGS scientists is afforded by the DOE regulations governing NTS operations. As the YMP work is only one of many activities conducted at the NTS, it is not mandatory for USGS scientists to gain permission from YMP for access to the NTS. All personnel must comply with the DOE security badging and rules governing different levels of access to the site.

ISSUE 2 - Scientific Work Conducted to Support Study Plan 8.3.1.2.2.6.

For scientists providing support for YMP study plans, the scientific work must comply with applicable OCRWM USGS/YMP QA program requirements and obtain authorization to conduct work activities through management controls such as study plans, planning and control system, YMP job packages, YMP/USGS technical procedures, etc.

JUL 01 1992

For this particular activity, the scientific research was conducted in support of Study Plan 8.3.1.2.2.6. Prior to the DOE/YMP audit, the USGS/YMP QA program had identified deficiencies with Activity 8.3.1.2.2.6 and the applicable rules governing the conduct of work. This condition was documented and is being addressed in a USGS/YMP Corrective Action Report (CAR) 92-04 in accordance with the requirements of the USGS/YMP QA program. This CAR covers the conditions described in your letter.

DOE's Yucca Mountain Quality Assurance Division (YMQAD) will perform a surveillance upon closure of USGS CAR 92-04 to verify the adequacy and effectiveness of USGS's investigation and corrective actions. As the State of Nevada is on distribution for all YMQAD surveillance reports, closure of the CAR can be tracked by your office.

As the referenced correspondence also questioned, "Are there other instances in the YMP program where site investigations are being performed by personnel outside the YMP that directly support a study plan?", YMQAD and USGS/YMP QA completed a review of audit and surveillance reports since the date of DOE's approval of the USGS/YMP QA program approval (May 1989). Since that time, a minimum of 45 study plans have been evaluated by YMQAD with no similar deficiencies identified. A total of 33 YMQAD audits and 98 surveillances covering 12 organizations were conducted since May 1989. No similar circumstances were identified.

During the conduct of DOE YMQAD Audit YMP-92-13, conducted April 1-10, 1992, the audit team expanded its investigation of USGS CAR 92-04 to look at the evaluation of other technical activities under the USGS/YMP QA Program. Four USGS audit reports and five surveillance reports were reviewed during the audit to determine if noncompliance with USGS Quality Management Procedures by technical personnel was a pervasive problem. The review of these reports indicated no other problems of this nature have been uncovered by USGS QA. Therefore, it is the conclusion of YMQAD and the USGS/YMP QA organization that this is an isolated case and is not indicative of a program attitude towards less adherence to QA requirements as suggested in the referenced letter.

YMQAD:CEH-4149

Maxwell Blankenship
for Carl P. Gertz
Project Manager

cc:

J. W. Bartlett, HQ (RW-1) FORS
S. J. Brocoum, HQ (RW-22) FORS
J. P. Roberts, HQ (RW-30) FORS
D. G. Horton, HQ (RW-3) FORS
Allen Benson, HQ (RW-5.2) FORS
B. J. Youngblood, NRC, Washington, DC
B. E. Reilly, SAIC, Las Vegas, NV
S. B. Jones, YMP, NV



**AGENCY FOR NUCLEAR PROJECTS
NUCLEAR WASTE PROJECT OFFICE**

Capitol Complex
Carson City, Nevada 89710
Telephone: (702) 687-3744
Fax: (702) 687-5277

April 22, 1992

Mr. Carl Gertz, Program Manager
Yucca Mountain Project Office
U.S. Department of Energy
P.O. Box 98608
Las Vegas, Nevada 89193-8608

Dear Mr. Gertz:

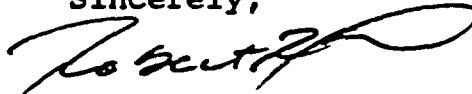
At the DOE quality assurance audit of the USGS performed April 6-10, 1992, it was revealed that scientists outside the Yucca Mountain Project were doing research on the mountain, including taking samples. Specifically, a scientist from Southern Methodist University and a USGS-National Research Project scientist from Reston, Virginia have been regularly accessing the site and performing research activities, in support of the Unsaturated-Zone Gaseous Phase Movement Study Plan (Study 8.3.1.2.2.6). However, at the audit, there was no documentation presented to indicate that this work is covered under the USGS quality assurance program. Additionally, it was stated that these scientists do not obtain permission through the USGS-YMP to access the site. An obvious conclusion is that the USGS-YMP does not seem to have control of this work that is in support of a Yucca Mountain study plan. A number of questions logically follow: How are these scientists obtaining access to the site? Who is authorizing this access? Does DOE-YMP have knowledge of these activities? If this work is in support of a Yucca Mountain study plan, why isn't it performed under a qualified QA program?

From discussions during the audit, there is a strong likelihood that much work has already been performed relative to this study plan, outside the USGS-YMP QA program. It is a reasonable assumption that work will have to be re-performed in order to obtain data that can be used in licensing. Are there other instances in the DOE Yucca Mountain program where site investigations are being performed by personnel outside the Yucca Mountain project that directly support a study plan? If so, what

are the plans to qualify this work? If this is not an isolated case, does this reflect a program attitude toward less adherence to QA requirements?

The State has been concerned with adherence to quality assurance requirements for the program since 1983 and has reservations about the Department and its contractors' commitment to a nuclear-level, quality assured scientific study. Your prompt response to this letter including a commitment to corrective action is appreciated.

Sincerely,



Robert R. Loux
Executive Director

cc: Mr. Don Horton, Director
Office of Quality Assurance
OCRWM
U.S. Department of Energy
Washington, D.C. 20585

Mr. Joe Youngblood, Director
Nuclear Regulatory Commission
High-Level Waste Management Division
Washington, D.C. 20555

COPIES TO:

B.J.Y.
J.L.
J.H.
K.H.
C.A.
J.S.
J.B.
P.B.
K.K.

*** BRACKETED PORTIONS INDICATE CHANGES RESULTING FROM 4/30/92
QA MEETING OR ADDED AS A RESULT OF NRC REVIEW ACTIONS.

FROM: B. BELKE

SUBJECT: STATUS OF NRC/DOE OPEN ITEMS - JULY 16, 1992

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>STATUS</u>	<u>RECOMMENDATION FOR CLOSURE/REMARKS</u>
10-90	Response to NRC Observation Audit		DOE should respond within 30 days after NRC Observation Audit Report transmittal the following NRC staff Observation Audit Report:
10.e	LLNL	OPEN	(1) Observation noted in the 7/31/91 NRC Obs. report: Changes made to the LLNL QA Program Plan w/o being furnished to NRC as previously agreed to by DOE. At the 8/29/91 and 4/30/92 NRC/DOE QA mtgs., DOE stated it will provide a list to NRC identifying all DOE approved changes since NRC staff accepted the LLNL QA Program Plan.
2-92	Changes to OCRWM and YMP participant's QA programs	OPEN	Review and acceptance of changes to DOE QARD/QAPD, LANL, USGS, REECo, and SNL QA program requirements/ description documents appear questionable and require additional information as discussed at the 4/30/92 NRC/DOE QA mtg.
3/92	NRC/SAIC Obs. Audit Report.	OPEN	Weakness noted in the 6/19/92 NRC Obs. Audit Report and discussed at the 4/30/92 NRC/DOE QA mtg. Adequate information should be provided to NRC to prepare for observing DOE audits at least one week prior to audit (e.g., checklist or equivalent information).

SAIC 6/23/92

1.0 INTRODUCTION

From May 18-22, 1992, members of the U.S. Nuclear Regulatory Commission quality assurance (QA) staff participated as observers on the U.S. Department of Energy (DOE) Office of Civilian Radioactive Waste Management (OCRWM), Yucca Mountain Quality Assurance Division (YMQAD) QA Audit No. YMP-92-16 of Science Applications International Corporation (SAIC)/Technical & Management Support Services (T&MSS) in Las Vegas, Nevada. The audit scope was limited to six QA programmatic elements and two technical areas evaluated by QA programmatic and technical specialists.

This report addresses the effectiveness of the DOE/YMQAD audit and the adequacy of the SAIC/T&MSS QA program.

2.0 OBJECTIVES

The objective of the DOE/YMQAD audit was to evaluate the implementation and effectiveness of the SAIC/T&MSS QA program in meeting the applicable requirements of DOE/RW-0214, "Quality Assurance Requirements Document" (QARD), Revision 4. The NRC staff's objective was to gain confidence that SAIC/T&MSS is properly implementing the requirements of its QA program in accordance with Title 10 Code of Federal Regulations (10 CFR) Part 60, Subpart G, (which references 10 CFR Part 50, Appendix B) and the QARD.

3.0 SUMMARY AND CONCLUSIONS

The NRC staff based its evaluation of the DOE/YMQAD audit process and the SAIC/T&MSS QA program on direct observations of the auditors, discussions with the audit team and SAIC/T&MSS personnel, and reviews of the pertinent audit information (e.g., audit plan, checklists, and SAIC/T&MSS documents). The audit was well organized and conducted in a professional manner with minimal logistic delays. The audit team was well qualified in the QA discipline, and its assignments and checklist items were adequately described in the audit plan.

The NRC staff has determined that the audit was effective, and agreed with the DOE/YMQAD audit team that implementation of the SAIC/T&MSS QA program was satisfactorily for five of the six QA program elements that were audited. The NRC staff also agreed with the DOE/YMQAD audit team that Criterion 12, "Control of Measuring and Test Equipment," was marginally effective in its implementation. This will not have a significant impact in the overall implementation of Criterion 12. Two preliminary Corrective Action Requests (CARs) were issued by the DOE/YMQAD audit team, one in the area of calibration, and the other in the area of training. These deficiencies are not significant in terms of the overall QA program and did not affect the quality of any SAIC/T&MSS site characterization activities.

USGS 6/23/92

1.0 INTRODUCTION

From April 1-2, and April 6-10, 1992, U.S. Nuclear Regulatory Commission (NRC) staff members participated as observers on the U.S. Department of Energy (DOE), Office of Civilian Radioactive Waste Management (OCRWM), Yucca Mountain Quality Assurance Division (YMQAD) Quality Assurance (QA) Audit YMP-92-13 of the U.S. Geological Survey (USGS) Yucca Mountain Project (YMP) QA program at the Nevada Test Site (NTS) and in the USGS offices at the Denver Federal Center, Lakewood, Colorado. The audit scope included seven programmatic elements and seven technical areas.

2.0 OBJECTIVES

The objectives of this YMQAD audit were to evaluate the implementation and effectiveness of the USGS YMP QA program in meeting the requirements of the USGS YMP Quality Assurance Program Description (QAPD). The NRC staff's objective was to gain confidence that the YMQAD and the USGS are properly implementing the requirements of their QA programs in accordance with the OCRWM Quality Assurance Requirements Document (QARD), DOE/RW-0214, Revision 4 and Title 10, Code of Federal Regulations (10 CFR), Part 60, Subpart G.

3.0 SUMMARY AND CONCLUSIONS

The NRC staff based its evaluation of the YMQAD audit process and the USGS QA program on direct observations of the auditors, discussions with the audit team, USGS and contractor personnel, and reviews of pertinent audit information (e.g., audit plan, checklists and USGS documents). The audit was well organized and conducted in a thorough and professional manner with minimal logistic delays. The audit team members were well qualified in the QA and technical disciplines, and their assignments and checklist items were, for the most part, acceptably described in the audit plan.

The NRC staff agrees with the preliminary YMQAD audit team findings that the USGS QA program has adequate procedural controls in place, and program implementation is adequate, in six of the programmatic elements and six of the technical areas audited. Scientific Investigation Control was found to be implemented ineffectively due to deficiencies previously identified by the USGS in an audit of activities associated with Technical Activity 8.3.1.2.2.6.1, "Gaseous Phase Circulation Study." Three preliminary Corrective Action Requests (CARs) were issued by the YMQAD audit team. The deficiencies identified by the YMQAD audit team are not significant in terms of the overall QA program.

5.10 SUMMARY OF NRC STAFF FINDINGS

(a) Observations

The NRC staff did not identify any observations relating to deficiencies in either the audit process or the other elements of SAIC/T&MSS QA program implementation.

(b) Weaknesses

The observers received the audit notebook on the day of the audit. It is recognized that NRC agreed with DOE that for the "mini-audit process," the audit notification letter would be furnished to NRC in advance, and the audit books (including the audit checklists, procedures etc.) at the audit. As noted in the NRC Audit Observation Reports for the DOE Oak Ridge and Los Alamos National Laboratory Audits, this system does not allow ample time for adequate preparation for the audit by the NRC programmatic and technical observers. (This matter was also discussed at the April 30, 1992, NRC/DOE QA meeting.) It also becomes difficult for the observers to accurately critique the DOE audit team and audit effectiveness if appropriate information has not been either provided or reviewed. Had the audit book been provided a week in advance with appropriate background and information, many of the observer's questions could have been answered prior to the audit instead of during the audit.

The NRC staff recommends that DOE reconsider providing the observers the audit book at least a week prior to the audit with adequate information and subject matter to allow ample time for observers to prepare for the audit and facilitate the audit process. By furnishing the audit checklist in an expeditious manner, the NRC staff believes that the intent of item (6) in the policy agreed to by the DOE, State, Tribal, and NRC representatives (referred to in the July 14, 1987 letter from S. Kale to State and Tribal Representatives) will be satisfied.

A response from DOE to this weakness is requested by the NRC staff. This item will also be entered and tracked on the NRC Open Items List.

(c) Good Practices

After the NRC staff Observation Audit Team briefed the DOE/YMQAD Audit Team on the NRC staff observations, weaknesses, and good practices, the NRC staff requested feedback on the NRC Observers, the observation audit process, and in general, any constructive criticism that would help improve the overall audit process. This request was not for the purposes of debate but rather a vehicle to communicate and improve the overall audit/observation process.

5.10 Summary of NRC Staff Findings

(a) Observations

The NRC staff did not identify any Observations relating to deficiencies in either the audit process or of USGS QA program implementation.

The observer from the State of Nevada did not raise any new issues at the audit exit meeting.

(b) Weaknesses

The NRC observers are concerned about the extent of the deficiencies associated with Study Plan 8.3.1.2.2.6, and intend to closely review the corrective actions, and the implementation and verification of the corrective actions (See Sections 5.3(b) and 5.4(a)).

The audit checklists, particularly the technical checklists, should be provided to the observers ten working days prior to the start of the audit. Review of the checklists prior to the start of the audit would enable the observers to be better prepared, and to provide meaningful feedback on the proposed audit scope. This weakness is common to the limited scope audits begun by YMQAD in fiscal year 1992.

(c) Good Practices

The audit team was well prepared, thorough, and displayed acceptable knowledge of the appropriate USGS programmatic and technical procedures.

The USGS YMP QA staff has done a good job recently of identifying program deficiencies and initiating corrective actions. (See Section 5.3 (a)).