

## MINUTES OF THE APRIL 15, 1993, 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 in Rockville, MD on April 15, 1993. An attendance list is included as Attachment 1. Representatives of the State of Nevada and Inyo County, California participated in the meeting by telephone conference.

At this meeting, DOE presented information on the following topics: (1) update on the status of implementation of new Quality Assurance Requirements and Description Document for the Civilian Radioactive Waste Management Program (QARD); (2) update on QA oversight of core drilling and other field activities of the participants; (3) update on FY93 audit schedule; (4) the OCRWM QA Director's observations of recent audits; and (5) an update on DOE's evaluation of QA program implementation by the Management and Operating Contractor (M&O). The NRC staff presented summaries of observations of recent DOE audits and surveillances.

The meeting began with introductory remarks followed by introduction of the attendees. Following the introductions, DOE presented an update on the status of implementation of the new QARD. The DOE stated that information copies of the Transition Plans for the Management and Operating (M&O) Contractor, the U. S. Geological Survey (USGS), and for OCRWM had been transmitted to the NRC by letter dated April 14, 1993, with copies to other meeting participants. DOE stated that the new QARD is expected to be implemented in the fourth quarter of Fiscal Year 1993. DOE indicated that there will be a clear commitment to the QARD by each participant through a policy statement. When the process is complete, QA Plans will be eliminated and their content will be in the matrix of the QARD requirements vs. where the requirement is covered in the supplier's QA procedures.

Next, the DOE provided an update on the oversight of core drilling and other field activities. DOE made a brief video presentation on the field activities update (Attachment 2). This presentation included information on the following topics: (1) completed boreholes to date; (2) in-progress boreholes; (3) other borehole activities; (4) job packages and test planning packages reviewed; (5) Corrective Action Requests (CARs) associated with field activities; (6) QA activities of field activities by participants; and (7) status of the exploratory studies facility. DOE noted that it had provided a list of the major and minor participants and suppliers by letter dated March 4, 1993.

Next on the agenda was an update on DOE's audit schedule. Attachment 3 is Revision 2 of OCRWM's FY 1993 audit schedule. The schedule was sent to the NRC, State of Nevada and affected units of local government by copy of DOE memorandum dated March 18, 1993.

Next on the agenda was NRC's update on observation of recent DOE audits and surveillances. The NRC presented summaries of the observation of the following audits: (1) M&O Headquarters at the TRW Environmental Safety

Systems, Inc. offices in Vienna, Virginia (HQ 93-03); (2) M&O Las Vegas Nevada Office (YMP-93-07); (3) Technical and Management Services Contractor, Science Applications International Corporation (YMP 93-05); and (4) DOE Office of Environmental Restoration and Waste Management Vitrification Projects Division (EM-343) (HQ-93-02). It also reported on the surveillance of the USGS QA program in Lakewood, California (YMP-SR-93-11). The summaries presented are excerpts from publicly available NRC reports (Attachment 4). During the discussion of the QA open items, the NRC stated it is waiting for a response to weakness 5.10 (b) of NRC Observation Audit Report 93-01. This will remain as Open Item 1-93 until a response is received by the NRC (Attachment 5). The OCRWM QA Director commented that the issuance of a CAR constitutes DOE's identification of the problem and NRC acknowledged that issuing a CAR can close a weakness. The State commented on particular weaknesses identified by NRC and also expressed concern about whether the importance of procedural compliance was appropriately understood in all participating organizations. OCRWM reported that although procedural compliance had been noted initially as a problem, it has not been a recurring problem at any participant level.

The OCRWM QA Director then presented his observations of recent audits of the M&O and the Yucca Mountain Site Characterization Project Office. A summary report of audits and surveillances has been sent to the NRC .

The State of Nevada and affected units of local government were then invited to present comments, ask questions, or raise any items of concern. The State inquired as whether the USGS will oversee quality assurance for work on paleoclimatology by Desert Research Institute. The representative from the USGS responded that USGS will oversee the Desert Research Institute QA activities. The representative from Inyo County asked about the NRC's response to its February 1, 1993 letter concerning the M&O QA program and NRC review and acceptance of the M&O QA program. Both the NRC staff and OCRWM representatives explained that the M&O QA program and delegation of work to the M&O were in accordance with NRC QA regulations and that there were no licensing implications. After a discussion, Inyo County representative stated that he still considers this an open item.

There were no closing remarks.

The meeting was adjourned after the participants tentatively set Tuesday, July 20, 1993 as the next NRC/DOE QA meeting date.

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April 15, 1993 NRC/DOE QA Meeting

**ORGANIZATION/NAME**

**PHONE NUMBER**

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R.J. Brackett	703-204-8760
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Tom Colandrea	619-487-7510
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USGS

Gene Roseboom	703-648-4422
Tom Chaney	303-236-1418

CER

Marc Meyer	703-276-9300
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# FIELD ACTIVITIES UPDATE

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# FIELD ACTIVITIES UPDATE

(continued)

## In-Progress Boreholes

- ▶ UZ #14 Rigging-up: Drilling to begin on April 8, 1993  
with LM - 300

# **FIELD ACTIVITIES UPDATE**

## **Other Borehole Activities**

**Down Hole Logs**

**Video Camera**

**Gyroscopic (Hole Deviation)**

**Caliper (Hole Diameter)**

# FIELD ACTIVITIES UPDATE

(continued)

- ▶ Job Packages Reviewed - 6
- ▶ Test Planning Package Reviewed - 6

# FIELD ACTIVITIES UPDATE

(continued)

## Corrective Action Requests

### Open CARs: (significant\*)

- |            |  |
|------------|--|
| YM-92-035  | Relocation of borehole without test interference or impact check |
| YM-93-011  | Remediation program does not address all requirements            |
| YM-93-016  | FCR evaluation not performed                                     |
| *YM-93-027 | TFM Plan not implemented   |

# FIELD ACTIVITIES UPDATE

(continued)

## Corrective Action Requests

### Closed CARs:

- |           |  |
|-----------|--|
| YM-93-025 | Calibration status stickers missing                                  |
| YM-93-026 | Lack of monitoring of tracer gas exiting borehole                    |
| YM-93-028 | Field Verification Plan not revised as required                      |
| YM-93-029 | Inspected attributes not identified on Verification Activity Reports |

# FIELD ACTIVITIES UPDATE

## EXPLORATORY STUDIES FACILITY (ESF)

### STATUS

- ▶ Mesh and bolting of North Portal entrance complete
- ▶ Pull test for rock bolts in-progress
- ▶ Blast holes for first round nearly complete

# Field Activities - Activities

## Q.A. Activities of Field Activities by Participants

	Completed Audits/Surveillances	Planned Audits/Surv.
M&O	1	0
LANL	0	0
LLNL	0	0
REEC <sub>o</sub>	2	0
RSN	7	1
SNL	1	2
SAIC	13	4
USGS	2	2

# FIELD ACTIVITIES UPDATE

(continued)

## SURVEILLANCES OF FIELD ACTIVITIES

▶ Three Surveillance Reports Issued or In-Preparation

93-014 Geologic Mapping of North Ramp Portal  
of the ESF (USGS/USBR)

93-017 Test Interference/Waste Isolation Evaluation  
(YMPO/M&O)

93-019 Field Surveying Activities (RSN)

**OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT**  
**FY-93 QUALITY ASSURANCE AUDIT SCHEDULE**  
**Revision 2**

ORGANIZATION	LOCATION	NUMBER	TEAM LEADER	DATES	QA CRITERIA
OCRWM	Washington, DC /Las Vegas, NV	HQ-93-01	R. D. Brown	Completed	C1
USGS	Denver, CO	YMP-93-01	K. T. McFall	Completed	C2
EM-343	Germantown, MD	HQ-93-02	T. E. Rodgers	Completed	C1 & C2
LANL	Los Alamos, NM	YMP-93-02	F. J. Kratzinger	Completed	C2
M&O	Vienna, VA	HQ-93-03	R. D. Brown	Completed	C1 & C2
SNL	Albuquerque, NM	YMP-93-03	D. N. Harris	Completed	C1
LLNL	Livermore, CA	YMP-93-04	A. I. Arco	Completed	C1
SAIC	Las Vegas, NV	YMP-93-05	R. B. Constable	Completed	C2
REEC <sub>o</sub>	Las Vegas, NV	YMP-93-06	R. H. Klemens	Completed	C1
M&O	Las Vegas, NV	YMP-93-07	R. E. Powe	Completed	C1
YMPO	Las Vegas, NV	YMP-93-09	K. T. McFall	4/5-9/93	C1
PNL	Richland, WA	See Note #1	M. Horseman	4/6-8/93	C1 & C2
OCRWM	Washington, DC	See Note #1	F. H. Lentz	5/10-14/93	C2
USGS	Denver, CO	See Note #1	J. S. Martin	5/17-21/93	C1
LANL	Los Almos, NM	See Note #1	T. J. Higgins	5/24-28/93	C1
EG&G	Las Vegas, NV	See Note #1	F. J. Kratzinger	6/7-11/1/93	C1 & C2
REEC <sub>o</sub>	Las Vegas, NV	See Note #1	A. I. Arco	6/21-25/93	C2

**OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT  
FY-93 QUALITY ASSURANCE AUDIT SCHEDULE  
Revision 2**

ORGANIZATION	LOCATION	NUMBER	TEAM LEADER	DATES	QA CRITERIA
GA	San Diego, CA	See Note #1	M. Horseman	7/5-9/93	C1 & C2
B&W	Lynchburg, VA	See Note #1	T. E. Rodgers	7/12-16/93	C1 & C2
RSN	Las Vegas, NV	See Note #1	J. S. Martin	7/12-16/93	C1 & C2
LLNL	Livermore, CA	See Note #1	R. L. Weeks	7/26-30/93	C2
YMPO	Las Vegas, NV	See Note #1	R. L. Maudlin	8/9-13/93	C2
SAIC	Las Vegas, NV	See Note #1	R. H. Klemens	8/23-27/93	C1
SNL	Albuquerque, NM	See Note #1	C. C. Warren	9/13-17/93	C2
M&O	Las Vegas, NV	See Note #1	S. R. Dana	9/27-10/1/93	C2

QA Criteria Key: C1 = 1, 2, 5, 6, 9, 12, 13, 16, 17 & 18      C2 = 3, 4, 7, 8, 10, 11, 14, 15, 19 & 20  
 Note #1 - Audit number's will be assigned when the Audit Plan is issued.

  
 Director, OQA

3/18/93  
 Date

# M&O (VA)

## 1.0 INTRODUCTION

During February 1 through 5, 1993, members of the quality assurance (QA) staff of the NRC Division of High-Level Waste Management (HLWM) observed an OCRWM compliance-based QA audit of the M&O Headquarters at the TRW Environmental Safety Systems, Inc. offices in Vienna, Virginia. This was the first audit of M&O Headquarters to be performed by OCRWM and observed by the NRC. The audit, HQ-93-03, evaluated the adequacy and effectiveness of the M&O Headquarters QA program. The audit scope included the 11 applicable QA programmatic elements. No technical areas were evaluated by the audit team.

This report addresses the effectiveness of the OCRWM audit, the adequacy of M&O Headquarters QA procedures, and the implementation of the M&O Headquarters QA program.

## 2.0 OBJECTIVES

The objective of the OCRWM audit was to determine whether the M&O Headquarters QA program and its implementation meet the applicable requirements of the OCRWM Quality Assurance Requirements Document (QARD), the M&O Quality Assurance Program Description (QAPD), and associated implementing procedures and to assess the extent and effectiveness of implementation of the program.

The NRC staff's objective was to gain confidence that OCRWM and M&O Headquarters are properly implementing the requirements of their QA programs in accordance with the QARD and Title 10 Code of Federal Regulations (10 CFR), Part 60, Subpart G (which references 10 CFR Part 50, Appendix B).

## 3.0 SUMMARY AND CONCLUSIONS

The NRC staff based its evaluation of the OCRWM audit process and the M&O QA program on direct observations of the auditors; discussions with audit team and M&O Headquarters personnel; and reviews of the audit plan, the audit checklists, and pertinent M&O documents. The NRC staff has determined that OCRWM QA Audit No. HQ-93-03 was useful and effective. The audit was well organized and conducted in a thorough and professional manner with minimal logistic delays. Audit team members were independent of the activities that they audited. 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 agrees with the preliminary audit team findings that the M&O Headquarters QA procedures need to be upgraded and that implementation of the QA program is marginally effective even though Corrective Action and Audits were preliminarily assessed by the audit team to be ineffective. Nine preliminary Corrective Action Requests (CARs) were discussed by the OCRWM audit team at the post-audit meeting with the M&O. Also, several other preliminary CARs were acceptably resolved by the M&O organization during the audit. None of the preliminary CARs identified by the OCRWM audit team is significant in terms of the overall M&O QA program.

OCRWM should closely monitor the M&O QA program to ensure that the deficiencies identified during this audit are corrected in a timely manner and future implementation is carried out effectively. The NRC staff expects to participate in this monitoring as observers and may perform its own independent audits later to assess the M&O QA program.

## **5.9 Summary of NRC Staff Findings**

### **5.9.1 Observations**

The NRC staff did not identify any observations relating to deficiencies in either the audit process or the M&O Headquarters QA program implementation.

### **5.9.2 Good Practices**

- M&O upper management demonstrated its interest in the M&O QA program by the M&O General Manager and the two Assistant General Managers' attendance at the daily audit status meetings (in addition to the M&O QA manager).
- A representative from the Yucca Mountain Site Characterization Project Office (YMPO) observed this audit as part of the preparation for a YMPO audit of the M&O in Las Vegas in early March, 1993. The NRC believes this was worthwhile and that DOE should encourage this type of interaction to enhance consistency in its auditing process.

# M&O (NV)

## 1.0 INTRODUCTION

From March 1-8, 1993, quality assurance (QA) staff of the U.S. Nuclear Regulatory Commission Division of High-Level Waste Management participated as observers on the U.S. Department of Energy (DOE) Office of Civilian Radioactive Waste Management (OCRWM), Yucca Mountain QA Division (YMQAD) QA Audit No. YMP-93-07 of the Civilian Radioactive Waste Management System Management and Operating Contractor (M&O) in Las Vegas, Nevada, and at the Nevada Test Site (NTS). The audit evaluated the adequacy and effectiveness of the M&O Las Vegas, Nevada QA program. The audit scope evaluated seven QA programmatic elements to determine whether the M&O QA program meets the requirements and commitments imposed by the OCRWM. No technical areas were evaluated by the audit team.

This report addresses the effectiveness of the YMQAD audit and the adequacy and effectiveness of implementation of QA controls of the M&O QA program.

## 2.0 OBJECTIVES

The objective of this YMQAD audit was to evaluate the implementation and effectiveness of the M&O QA program in meeting the applicable requirements of the OCRWM document, DOE/RW-0214, "Quality Assurance Requirements Document" (QARD), Revision 4. The NRC staff's objective was to gain confidence that YMQAD and the M&O are properly implementing the requirements of their QA programs 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 YMQAD audit process and the M&O QA program on direct observations of the auditors; discussions with the audit team and M&O personnel; and reviews of pertinent audit information (e.g., audit plan, audit checklists, and M&O documents). The audit was well organized and conducted in a professional manner. 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 audit YMP-93-07 was useful and effective. The NRC staff agrees with the YMQAD audit team's preliminary findings that the M&O QA program generally has adequate procedural controls in place and that the overall implementation of the M&O QA program is marginally effective. The M&O QA Program was adequate in four of the seven areas audited; two areas were unsatisfactory; and the remaining area marginally effective.

Three preliminary Corrective Action Requests (CARs) were issued by the YMQAD audit team; one in the area of procedure preparation, one in the area of inadequate procedures, and one in the area of nonconformance control. Two other conditions adverse to quality, pertaining to personnel qualifications and inadequate procedures, were noted. Due to their similarity in nature to findings previously identified during the M&O Headquarters audit conducted February 1-5, 1993, in Vienna, Virginia, these deficiencies were added to the CARs developed during that audit. Another deficiency pertaining to the generation, processing, and distribution of Field Change Requests to drawings and specifications was noted during this audit. However, since the finding was within the Yucca Mountain Site Characterization Project Office's (YMPO) area of responsibility, the CAR was issued to YMPO.

The deficiencies identified in the CARs are not significant in terms of the overall M&O QA program and should not affect the quality of any M&O quality affecting activities if corrected in a timely manner.

## **5.9 Summary of NRC Staff Findings**

### **5.9.1 Observations**

The NRC staff did not identify any observations relating to deficiencies in either the YMQAD audit process or the M&O Las Vegas, Nevada office QA program implementation.

### **5.9.2 Weaknesses**

- The NRC staff is concerned about personnel knowingly not following implementing procedures without documenting the authority or justification to do so. This is a recurring problem as noted by the NRC staff in other NRC staff Audit Observation Reports. The NRC staff recommends DOE management initiate provisions which emphasize the importance of following procedures and the need to document corrective action measures when procedures cannot be followed. The NRC staff will carry this as an open item on the NRC/DOE Open Items List until satisfactory resolution is achieved. (see Section 5.3.1 for details)
- The NRC staff has a concern regarding the number of deficiencies combined into a single CAR, and how the corrective actions would be accurately tracked. The NRC staff will carry this as an open item on the NRC/DOE Open Items List until satisfactory resolution is achieved. (see Section 5.4 for details)
- The effectiveness of the Readiness Review process is questionable in view of the number of audit team findings. (see Section 5.3.1 for details)

### **5.9.3 Good Practices**

- The DOE OCRWM Headquarters QA Manager was in attendance to observe this audit. When the auditor revealed potential problems associated with the Field Change Control process of design specifications, the QA Manager recognized the importance of this process, and indicated that a surveillance would be conducted shortly to identify any other potential problem areas.
- Also attending this audit was a representative from the OCRWM Headquarters Project Office for the purposes of observing how YMQAD conducts its audits. The NRC staff believes this is a worthwhile effort and that on future audits, DOE continues to encourage involved audit participants to attend both the OCRWM and YMPO audits to enhance consistency in the auditing process.

# SAIC/T&MSS

## 1.0 INTRODUCTION

During February 1-4, 1993, U.S. Nuclear Regulatory Commission quality assurance (QA) and technical staff members participated as observers of the U.S. Department of Energy (DOE), Office of Civilian Radioactive Waste Management (OCRWM), Office of Quality Assurance, Yucca Mountain Quality Assurance Division (YMQAD) QA Audit No. YMP-93-05 of the Technical and Management Support Services contractor (T&MSS), Science Applications International Corporation (SAIC). This audit was conducted at the T&MSS offices in Las Vegas, Nevada and at the Nevada Test Site (NTS). The audit scope included nine QA programmatic areas and one technical area.

This report addresses the effectiveness of the YMQAD audit and the adequacy of implementation of QA controls in the audited areas of the T&MSS QA program.

## 2.0 OBJECTIVES

The objective of the YMQAD audit was to evaluate the implementation and effectiveness of the T&MSS QA program in meeting the applicable requirements of the OCRWM Quality Assurance Requirements Document (QARD), the T&MSS Quality Assurance Program Description (QAPD), and associated T&MSS implementing procedures.

The NRC staff's objective was to gain confidence that YMQAD and the T&MSS are properly implementing the requirements of their QA programs in accordance with the QARD and Title 10 Code of Federal Regulations (10 CFR), Part 60, Subpart G (which references 10 CFR Part 50, Appendix B).

## 3.0 SUMMARY AND CONCLUSIONS

The NRC staff based its evaluation of the YMQAD audit process and the T&MSS QA program on direct observations of the auditors; discussions with audit team, T&MSS, and contractor personnel; and reviews of the audit plan, the audit checklists, and pertinent T&MSS documents. The NRC staff has determined that YMQAD QA Audit No. YMP-93-05 was useful and effective. The audit was well organized and conducted in a thorough and professional manner with minimal logistic delays. The audit team was well qualified in the QA and technical disciplines and its assignments and checklists item were adequately described in the audit plan.

The NRC staff agrees with the preliminary YMQAD audit team findings that the T&MSS QA program has adequate procedural controls in place and that QA program implementation in the areas audited is generally effective. Three deficiencies were identified by the YMQAD audit team; however, all of them were acceptably addressed by the T&MSS organization during the audit, and no Corrective Action Requests (CARs) were issued by the audit team.

OCRWM should continue to monitor the T&MSS QA program to ensure that future implementation is carried out effectively. The NRC staff expects to participate in this monitoring as observers and may perform its own independent audits at a later date to assess the T&MSS QA program.

## 5.9 Summary of NRC Staff Findings

### 5.9.1 Observations

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

## 1.0 INTRODUCTION

From January 13-15, 1993, the U.S. Department of Energy Office of Civilian Radioactive Waste Management (OCRWM) conducted Quality Assurance (QA) Surveillance No. YMP-SR-93-11 of the U.S. Geological Survey (USGS) QA program in Lakewood, CO.

## 2.0 PURPOSE

The U.S. Nuclear Regulatory Commission staff observed and evaluated the OCRWM QA surveillance to gain confidence that OCRWM and USGS are properly implementing the requirements of their QA programs by assessing the effectiveness of the OCRWM surveillance and determining the adequacy of the USGS QA program in the areas observed. The staff's evaluation is based on direct observations of the surveillance process, discussions with the Yucca Mountain Site Characterization Project (YMP) Surveillance Team Leader (STL) and technical specialist, and reviews of pertinent USGS records.

## 3.0 SCOPE

The scope of this surveillance was limited to evaluating the verification and closure of Corrective Action Request (CAR) YM-92-04. CAR YM-92-04, which was issued by the USGS, documents the same deficiencies involving failure to follow procedures in field data gathering activities that were identified as a result of YMP Audit No. YMP-92-13. During that audit it was determined that implementation of Quality Program Element 20.0, "Scientific Investigation Control" was unsatisfactory.

## 7.0 NRC CONCLUSIONS

The NRC staff has determined that the DOE/OCRWM surveillance of the USGS QA program was useful and effective. The STL and technical specialist were very familiar with the USGS QA procedures in the areas being surveilled. The NRC staff agrees with the OCRWM surveillance team's preliminary conclusion that USGS is now adequately implementing its QA program requirements in the area of Quality Program Element 20.0.

Although USGS has committed to complete the required training for investigators prior to collecting Carbon 14 samples in March 1993, the NRC staff is concerned that USGS did not place a higher priority to date on training the investigator most responsible for CAR YM-92-04. The NRC staff concurs with the surveillance team's recommendations and believes that implementation of these recommendations will serve to improve the USGS QA program.

# EM-343

## 1.0 INTRODUCTION

From January 11-15, 1993, members of the U.S. Nuclear Regulatory Commission Division of High-Level Waste Management quality assurance (QA) staff participated as observers on the U.S. Department of Energy (DOE) Office of Civilian Radioactive Waste Management (OCRWM), performance-based QA Audit No. HQ-93-02 of the DOE Office of Environmental Restoration and Waste Management Vitrification Projects Division (EM-343) in Germantown, Maryland. The audit scope included the evaluation of the processes and products of the EM-343 Technical Review Group, Operational Readiness Reviews, verification activities (audits/surveillance), program execution documents, and eleven of the QA programmatic elements to determine whether the EM-343 QA program meets the requirements and commitments imposed by the OCRWM.

This report addresses the effectiveness of the OCRWM performance-based audit and the adequacy and effectiveness of implementation of QA controls of the EM-343 QA program.

## 2.0 OBJECTIVES

The objective of the OCRWM audit was to evaluate the implementation and effectiveness of the EM-343 QA program in meeting the applicable requirements of the OCRWM document, DOE/RW-0214, "Quality Assurance Requirements Document" (QARD), Revision 4. The NRC staff's objective was to gain confidence that OCRWM and EM-343 are properly implementing the requirements of its QA programs 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 OCRWM audit process and the EM-343 QA program on direct observations of the auditors; discussions with the audit team, EM-343 personnel, and EM-343 contractor personnel; and reviews of the pertinent information (e.g., audit plan, audit checklists, and EM-343 documents). The audit was well organized and conducted in a professional manner. 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. The NRC staff agreed with the OCRWM audit team's preliminary findings that the EM-343 QA program has adequate procedural controls in place, and implementation of the EM-343 QA program was adequate in nine of the fifteen areas audited with the remaining determined to be marginally effective. Four preliminary Corrective Action Requests (CARs) were issued by the OCRWM audit team; one in the area of technical reviews, one in the area of operational readiness reviews, one in the area of auditing, and one in the area of QA program controls. The deficiencies identified in the CARs are not significant in terms of the overall EM-343 QA program and should not affect the quality of any EM-343 vitrification activities if corrected in a timely manner.

## **5.9 Summary of NRC Staff Findings**

### **5.9.1 Observations**

- The NRC staff did not identify any Observations relating to deficiencies in either the audit process or the other elements of EM-343 QA program implementation.

### **5.9.2 Weaknesses**

- The NRC staff had a concern regarding the development and implementation of the list for those items and activities to which the EM-343 QA program applies. The NRC staff acknowledges that the audit team documented this finding in a CAR, and that there was no indication during the audit that the lack of a list had, to date, affected the implementation of the EM-343 QA program. However, the NRC staff does not understand how the EM-343 QA program can be properly applied throughout the life of the program without a definition of what it applies to. The absence of the list methodology and development was brought to the attention of EM-343 in CAR HQ-91-039 during the August 1991 audit of EM-343. The CAR was closed on June 3, 1992, based on the development and issuance of SPP 2.05. However, it appears SPP 2.05 was never implemented or there would have been a list available at the HQ-93-02 audit. More importantly, this CAR condition appears to be somewhat repetitive of previous findings: (1) CAR HQ-91-039 noting no method for defining the work subject to the EM-343 QA program, and (2) Weakness noted in Section 5.3.(c) of the NRC staff Observation Audit Report No. 91-13, dated October 23, 1992, from J. Holonich to J. Roberts noting the EM-343 attitude regarding compliance (or lack thereof) with procedures. The NRC staff recommends more attention be devoted by EM-343 to ensure corrective action in the above two areas is effective (see Section 5.3.1).

- Records of TRG activities did not appear adequate to allow EM-343 management to assess the effectiveness or depth of review of individual TRG members (see Section 5.3.2).

- During the entire audit, the audit team presented its potential findings as soon as they were identified. The audit team gave the EM-343 organization every opportunity to provide additional information which may have clarified a potential finding. At the audit entrance meeting, EM-343 management commented that they hoped to benefit from any of the audit team's findings and use them as a tool to improve the EM-343 QA program. The NRC staff supported the EM-343 management position since this is the basic purpose of an audit, i.e., to improve the program and build upon the audit findings. However, the last day of the audit, EM-343 requested a special meeting to discuss the audit team's findings. This meeting lasted almost two hours and EM-343 reacted to either lessen the audit team's findings or have them dispense with the finding entirely. This type of discussion is contrary to the July 24, 1992, memorandum from D. Horton which clarifies the purpose of a CAR explaining that it is not to be viewed as a measure of job performance or punitive action.

- Key personnel were sometimes not available to answer questions due to conflicts with other commitments. The NRC staff believes that with the issuance of the Audit Notification letter to EM-343 on December 31, 1992, there was ample time for EM-343 to have appropriate personnel available when needed. This may have caused some delays in the auditing process and led to possible misunderstandings about potential auditor findings.

- The Observers received the audit book just prior to commencement of the audit. The NRC staff agreed with DOE, on a trial basis, to receive the audit book on the day of the audit. However, with this type of audit, with the NRC

staff not having the book in advance of the audit, it placed the NRC staff at a disadvantage in not being totally informed and knowledgeable in the overall conduct of the audit. The NRC staff had to ask several questions which at times, may have caused inconveniences to the auditors. This could have been avoided had the NRC staff received the audit books several days in advance.

### 5.9.3. Good Practices

- Attending this audit were representatives from the Yucca Mountain Site Characterization Project Office (YMPO) and the Management and Operating Contractor for the purposes of observing how OCRWM conducts its audits. The NRC staff believes this is a worthwhile project and that on future audits DOE should encourage involved audit participants to attend both the OCRWM and YMPO audits to enhance consistency in the auditing process.