March 1, 1995

0359

Mr. Ronald A. Milner, Director
Office of Program Management & Integration
U.S. Department of Energy/OCRWM
1000 Independence Avenue, S.W.
Washington, D.C. 20585

SUBJECT: MINUTES OF THE JANUARY 18, 1995, QUALITY ASSURANCE MEETING

Dear Mr. Milner:

I am transmitting the enclosed minutes of the periodic quality assurance (QA) meeting. The meeting was held by videoconference between Department of Energy (DOE) offices in Las Vegas, Nevada and DOE Headquarters in Washington, D.C. In Las Vegas, attendees represented the Nuclear Regulatory Commission, DOE's Office of Civilian Radiation Waste Management (OCRWM), OCRWM's QA Technical Support Services Contractor (QATSS), OCRWM's Management and Operating Contractor (M&O), Reynolds Electrical & Engineering Company and Los Alamos National Laboratory. In Washington, attendees represented the NRC, OCRWM, M&O, Weston, and QATSS.

At this meeting, DOE presented information on the following topics: (1) the DOE/Nye County cooperative drilling program, (2) DOE's fiscal year 1995 audit and surveillance schedule, (3) QA overview of site characterization field activities, (4) proposed changes in the QA program, (5) the status of implementing the revised Quality Assurance Requirements and Description document, and (6) the status of the M&O Exploratory Shaft Facility Subsurface Design Package for the North Ramp and related Corrective Action Requests.

The NRC staff presented information of the following topics: (1) status of its QA open items, (2) results of NRC observations of recent DOE audits, and (3) the status of planning for in-field verification of the Yucca Mountain site activities.

If you have any questions regarding this letter or the enclosed meeting minutes, please contact Pauline Brooks of my staff at (301) 415-6604.

Sincerely,
(Original signed by John O. Thoma for)
Joseph J. Holonich, Chief
High-Level Waste and Uranium
Recovery Projects Branch
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards

Enclosure: As Stated

cc: See Attached List

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CC List for R. Milner Letter dated: March 1, 1995

R. Loux, State of Nevada
J. Meder, Nevada Legislative Counsel Bureau
R. Nelson, YMPO
C. Einberg, DOE/Wash, DC
M. Murphy, Nye County, NV
M. Baughman, Lincoln County, NV
D. Bechtel, Clark County, NV
D. Weigel, GAO
P. Niedzielski-Eichner, Nye County, NV
B. Mettam, Inyo County, CA
V. Poe, Mineral County, NV
W. Cameron, White Pine County, NV
R. Williams, Lander County, NV
L. Fiorenzi, Eureka County, NV
J. Hoffman, Esmeralda County, NV
C. Schank, Churchill County, NV
L. Bradshaw, Nye County, NV
W. Barnard, NWTRB
R. Holden, NCAI
E. Lowery, NIEC
S. Brocoum, YMPO
R. Arnold, Pahrump, NV

Rec'd w/ enclosed ltr
3/1/95

MINUTES OF THE JANUARY 18, 1995, 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 by videoconference between DOE offices in Las Vegas, Nevada, and DOE Headquarters in Washington, D.C., on January 18, 1995. In Las Vegas, attendees represented the NRC, OCRWM, OCRWM's QA Technical Support Services Contractor (QATSS), OCRWM's Management and Operating Contractor (M&O), Reynolds Electrical & Engineering Company, and Los Alamos National Laboratory (LANL). In Washington, attendees represented the NRC, OCRWM, M&O, Weston, and QATSS. Attendance lists are included as Attachment 1.

At this meeting, DOE presented information on the following topics: (1) status of DOE/Nye County cooperative drilling program, (2) status of DOE fiscal year (FY) 95 audit/surveillance schedule and proposed changes, (3) update on QA overview of site characterization field activities, (4) QA program changes, (5) status of implementation of the Quality Assurance Requirements and Description document (QARD: DOE/RW-0333P, Rev. 0), and (6) status of M&O Design Package 2C and related Corrective Action Requests (CARs).

The NRC presented information on the following topics: (1) status of its QA open items, (2) results of NRC observations of recent DOE audits, and (3) its planning for in-field verification of the Yucca Mountain site activities. Attachment 2 is the agenda for the meeting and shows the attachment numbers for the overheads/handouts presented during the meetings.

The meeting began with opening remarks followed by self-introduction of the attendees. Following the introductions, NRC presented an update on the status of its QA open items. One new open item resulting from NRC Observation Audit Report 94-07 (dated 12/19/94) was discussed. Attachment 3 summarizes this open item.

NRC followed with a summary report of NRC observations of the DOE audits YMP-94-01 of OCRWM's M&O offices in Las Vegas, Nevada, YMP-94-09 of Sandia National Laboratories in Albuquerque, New Mexico, HQ-94-02 of the M&O offices in Vienna, Virginia and Las Vegas, Nevada, and HQ-94-01 of the M&O offices in Vienna, Virginia. NRC staff agreed with preliminary DOE audit team findings at each of these audits and noted that audit team leaders are becoming more proficient. With regard to audits of the M&O, the report noted that NRC staff agreed with preliminary audit findings that M&O design controls are ineffective (YMP-94-09) and overall implementation of the M&O QA program (HQ-94-02) and of the procurement control program is marginal (HQ-95-01). Attachment 4 contains additional details.

102.7

The status of the DOE/Nye County cooperative drilling program was then presented by DOE. The Nye County Test Planning Package 95-03, Revision 0, issued on December 1, 1994, outlines controls to be used during Nye County's independent site investigation activities. A borehole was drilled December 6-14, 1994, with a surveillance performed by OCRWM's Yucca Mountain Quality Assurance Division (YMQAD) on December 9, 1994. See Attachment 5.

DOE then discussed the status of its Fiscal Year 1995 (FY 95) schedule for audits and surveillances. Revision 2 of the FY 95 audit schedule appears as Attachment 6. Reasons for rescheduling the audit of Lawrence Livermore National Laboratories and the M&O are noted on the second page of the attachment.

An update on QA overview of the Yucca Mountain Site Characterization field activities was provided by DOE. Field coverage was summarized in several different ways as shown in Attachment 7. To date, 43 boreholes have been completed, with a total footage of 17,327 feet. Six surveillances of field activities of affected organizations were completed by YMQAD in FY 95, resulting in three CARs related to the procurement of steel sets. The ensuing discussion provided greater detail on the steel sets which are being installed as the Tunnel Boring Machine bores into Yucca Mountain.

QA program changes were then discussed by DOE. The revision of DOE's QARD is underway, with issuance scheduled for July, 1995. This revision will respond to 248 comments, including those from the NRC. Most of the comments call for clarification only. NRC expressed an interest in Lessons Learned, a part of the program in which participants are made aware of problems and their solutions or clarifications. See Attachment 8.

In the following discussion DOE addressed ongoing and planned activities identified in the transition plan for dealing with changes in the QA program. Attachment 9 summarizes target dates and status of procedure changes and corrective action functions.

DOE's progress in implementing the QARD was discussed. Attachment 10 shows that the QARD Implementation Matrix has now been completed for all program participants except OCRWM and EM-343. These are expected to be completed in February and March, respectively.

The current status of CARs related to the M&O Exploratory Studies Facility (ESF) Design Package 2C CARs was discussed by DOE. Of 19 CARs issued, four have been closed. See Attachment 11.

NRC described its plan for In-Field Verification (IFV). DOE expressed concern about the impact of relatively large numbers of verifiers on DOE/M&O work. The planned date for the first IFV was discussed; however, the actual date will be transmitted in a letter to DOE approximately thirty days prior to the IFV.

In closing remarks, participants agreed that the videoconference had proved to be an effective and efficient means of meeting. A tentative date of April 12, 1995, at 1:00 p.m. was set for the next meeting. The meeting was adjourned at 2:40 p.m., EST.

Pauline P. Brooks
Pauline P. Brooks
High-Level Waste and Uranium
Recovery Projects Branch
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards

Frederick C. Rodgers
Frederick C. Rodgers
Regulatory Integration
Division
Office of Civilian Radioactive
Waste Management
U.S. Department of Energy

NRC-DOE QA MEETING ATTENDANCE LIST
January 18, 1995

Attendees in Las Vegas, Nevada

Name:	Organization:	Phone:
Bill Belke	NRC	702-388-6125
Jim Blaylock	DOE/YMQAD	702-794-7913
Andrew Burningham	LANL-QA	702-794-7155
Robert B. Constable	DOE/YMQAD	702-794-7945
Mario R. Diaz	DOE/YMQAD	702-794-7974
William J. Glasser	REECo	702-794-7567
Hank Greene	YMQATSS	702-794-7369
Catherine Hampton	DOE/YMQAD	702-794-7973
Marlin L. Horseman	OQA/QATSS	202-488-5436
Donald G. Horton	DOE	702-794-7675
Sam Horton	DOE/QATSS	702-794-7399
Nadine R. Karas	YMQAD	702-794-9601
John S. Martial	YMQAD	702-794-5794
Richard L. Maudlin	YMQAD/QATSS	702-794-7290
John Meder	NV-LCB/OC	702-687-6825
R. E. Powe	OQA/QATSS	702-794-7349
Jim Schmit	DOE/YMQAD	702-794-7709
Richard E. Spence	DOE/OQA	702-794-7504
Les Wagner	OQA/QATSS	202-488-5420
Charles C. Warren	YMQAD/QATSS	702-794-7248
Albert C. Williams	DOE/YMQAD	702-794-7591

Attendees in Washington, D.C.

Name:	Organization:	Phone:
Wayne Booth	Weston	202-646-6750
Pauline Brooks	NRC	301-415-6604
John Buckley	NRC	301-415-6607
Priscilla Bunton	DOE	202-586-8365
Bob Clark	DOE	202-586-1238
Tim Johnson	DOE	202-586-5969
Robert Johnson	NRC	301-415-7282
Robert A. Morgan	M&O	702-204-8761
Richard G. Peck	QATSS	202-488-5438
Tom Rogers	M&O	202-488-2320
Ron Ruth	M&O	702-794-7130
Jack Spraul	NRC	301-415-6715

AGENDA
NRC/DOE VIDEOCONFERENCE ON QUALITY ASSURANCE
January 18, 1994

Introductory Remarks	ALL	
QA Open Items	NRC	3*
Update on Observation of Recent DOE Audits	NRC/NV/LG	4
Status of DOE/Nye County Cooperative Drilling Program	DOE/LG	5
Status of DOE FY 95 Audit/Surveillance Schedule and Any Proposed Changes	DOE	6
Update on QA Overview of Site Characterization Field Activities	DOE	7
Discussion of QA Program Changes	DOE	8, 9
Status of Implementing the Revised QARD	DOE	10
Status of M&O Design Package and Related CARs	DOE	11
In-Field Verification of Yucca Mountain Site Activities	NRC	
Items of Concern to the State of Nevada and Affected Local Governments	NV, LG	
Closing Remarks	All	
Adjournment		

* This column lists the number of the pertinent attachment.

Attachment 2

January 18, 1995

NOTE TO: File

FROM: Jack Spraul

SUBJECT: STATUS OF NRC/DOE QA OPEN ITEMS

ITEM	DESCRIPTION	RECOMMENDATION FOR CLOSURE/REMARKS	STATUS
1-95	Test cases used to "validate" software programs were those supplied by the software developer. Thus, "validation" was primarily an installation test that showed that the computer software functioned the same on the user's computer hardware as it did on the developer's computer hardware. (See OA Report 94-07 dated 12/19/94)	The NRC staff recommends that acquired computer software (not developed under an Appendix B QA program) be "validated" by more than rerunning the developer's test cases.	Open

cc:
HLPD r/f
JJHolonich
RLJohnson
PPBrooks
JTBuckley

P:OpenItem
January 11, 1995

Attachment 3

ATTACHMENT 4

4a. Yucca Mountain QA Division Audit, Audit-YMP-94-01 of the OCRWM Management and Operating Contractor Design Package 2C Activities

4b. Yucca Mountain Quality Assurance Division Audit, YMP-94-09 of Sandia National Laboratories

4c. Office of Quality Assurance Audit HQ-94-02 of OCRWM Management and Operating Contractor

4d. Office of Quality Assurance Audit HQ-95-01, of the OCRWM Management and Operating Contractor

YUCCA MOUNTAIN QA DIVISION AUDIT AUDIT YMP-94-01 OF THE OCRWM MANAGEMENT AND OPERATING CONTRACTOR DESIGN PACKAGE 2C ACTIVITIES

INTRODUCTION

During July 25-29, 1994, members of the U.S. Nuclear Regulatory Commission Division of Waste Management quality assurance (QA) staff observed a U.S. Department of Energy (DOE), Office of Civilian Radioactive Waste Management (OCRWM), Yucca Mountain Quality Assurance Division (YMQAD) audit of the Civilian Radioactive Waste Management System Management and Operating Contractor (M&O). The limited-scope, performance-based audit, YMP-94-01, conducted at the M&O offices in Las Vegas, Nevada, evaluated the effectiveness of selected M&O design processes, and the quality of the resultant end products, specifically concentrating on Design Package 2C, "Topopah Spring North Ramp." A State of Nevada representative also participated as an observer of this audit.

This report addresses the effectiveness of the audit and the adequacy of implementation of the M&O design control process.

OBJECTIVES

The objectives of the audit were to evaluate the effectiveness of the M&O design controls in meeting program requirements and management commitments and expectations in the development and preparation of design documents and issuance of acceptable design packages for construction.

The NRC staff's objectives were to gain confidence that the M&O organization was properly implementing the design control requirements of their QA program in accordance with the OCRWM Quality Assurance Requirements and Description document (QARD-DOE/RW-0333P) and Title 10 of the Code of Federal Regulations (10 CFR), Part 60, Subpart G (which references 10 CFR Part 50, Appendix B) and to determine if the audit was performed in such a manner as to provide continued confidence in the DOE audit process.

MANAGEMENT SUMMARY AND CONCLUSIONS

Even though it was scheduled very soon after a full scope DOE QA System Evaluation audit of the M&O, the NRC staff has determined that M&O Audit YMP-94-01 was useful and effective in identifying additional design control problem areas. The audit was organized and conducted in a thorough and professional manner. Audit team members were independent of the activities they audited. The audit team qualifications were verified and personnel were found to be knowledgeable of program QA requirements. The audit team assignments and the checklist items were adequately described in the audit plan. The team included a technical specialist.

The NRC staff agrees with the preliminary audit team finding that M&O design controls are ineffective. Fifteen preliminary Corrective Action Requests (CARs) were discussed by the audit team leader at the post-audit meeting, and several others were resolved during the audit. Many of the preliminary CARs are significant and need to be addressed with consideration on how they affect the overall design of the Exploratory Studies Facility (ESF) and other M&O design activities. As a consequence of the number and significance of these

findings, M&O management decided late in the audit to withdraw Design Package 2C from the DOE review and approval process. A full-scope audit of the M&O (HQ-94-02), an internal M&O surveillance, and the Design Package 2C 90% design review have previously identified additional design control and design product deficiencies. These deficiencies were identified after the M&O undertook its Design Control Improvement Plan (Revision 1 is dated September 28, 1993). Apparently the improvements proposed in the Design Control Improvement Plan had not yet been implemented or are not adequate to address the problems recognized in Fiscal Year 1993.

The NRC staff expects to be kept advised of the corrective action process, will participate in closely monitoring the corrective actions of the M&O as observers, and may perform its own independent audits/surveillances at a later date to assess implementation of the M&O QA program.

Summary of NRC Staff Findings

The NRC staff agrees with the preliminary YMQAD audit team finding that the overall implementation of the Design Control Programmatic Element is ineffective. The NRC staff did not observe any deficiencies in the audit process.

Observations

The NRC staff is concerned that this audit was conducted despite several outstanding and significant deficiencies resulting from the DOE QA System Evaluation audit conducted in June 1994 and a recent M&O internal surveillance. There appeared to be no attempt to analyze these deficiencies and comments from a root cause perspective and to implement effective corrective actions. The attitude of the M&O management appeared to be one of "meeting a planned audit schedule" rather than considering the overall effect on quality and how these deficiencies impact the overall design and construction of the ESF (see Section 5.3.3).

There appears to be a cumbersome document hierarchy with numerous implementing procedures associated with the ESF Technical Baseline. When a revision is made to a top-tier document, it necessitates a review of all related documents. This becomes more complex and opens the possibility for errors when a given design is in process that must be continually updated in conjunction with procedural revisions. The NRC recommends that this process be reviewed with consideration being given to eliminating redundancy and making the process, wherever possible, more "user friendly" (see Section 5.3.1).

Weakness

Absence of key M&O technical personnel during the audit to provide information in the geotechnical area caused some delay and rescheduling during the auditing process. This weakness is a repetitive occurrence as similarly noted in NRC Observation Audit Reports 90-08, 11/27/90 (Fenix and Scisson); 92-14, 9/10/92 (Raytheon); and 93-04, 2/17/93 (EM-343) (see Section 5.3).

Good Practices

The audit team was thoroughly prepared and understood the programmatic and technical aspects associated with performance-based auditing. The audit team expressed potential findings in a professional manner and described its effect relative to the completeness of design. The ATL was especially effective and knowledgeable during the daily briefings with M&O management in completely expressing the importance of potential findings.

At the pre-audit meeting, the ATL emphasized that the practice of volunteering information by individuals other than the auditee should be discontinued. During previous audits of DOE and DOE participants, personnel other than the individual specifically being audited (escorts, for example) frequently volunteered information. This sometimes defeated the purpose of the audit whereby the auditor, during the interview, attempts to determine a particular individual's knowledge of the QA requirements of the area being audited.

YUCCA MOUNTAIN QUALITY ASSURANCE DIVISION AUDIT YMP-94-09 OF SANDIA NATIONAL LABORATORIES

INTRODUCTION

During August 29, 1994, through September 2, 1994, members of the U.S. Nuclear Regulatory Commission, Division of Waste Management quality assurance (QA) and technical staff observed a U.S. Department of Energy (DOE), Office of Civilian Radioactive Waste Management (OCRWM), Office of Quality Assurance, Yucca Mountain Site Characterization Quality Assurance Division (YMQAD) audit of the QA program of the Sandia National Laboratories (SNL). The audit, YMP-94-09, was conducted at the SNL offices and laboratories in Albuquerque, New Mexico. The audit evaluated the adequacy and effectiveness of the SNL QA program in all applicable QA programmatic areas and in nine technical areas.

Representatives of the U.S. Environmental Protection Agency (EPA) also observed this audit. The State of Nevada did not have a representative at this audit.

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

OBJECTIVES

The objectives of the audit by the YMQAD team were to determine whether the SNL QA program and its implementation meet the applicable requirements and commitments of the OCRWM "Quality Assurance Requirements and Description" document (QARD - DOE/RW-0333P), the SNL Quality Assurance Implementing Procedures (QAIPs), and other documents which comprise the SNL QA program.

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

MANAGEMENT SUMMARY AND CONCLUSIONS

The NRC staff has determined that YMQAD Audit YMP-94-09 was useful and effective. The audit was organized and conducted in a thorough and professional manner. Audit team members were independent of the activities they audited. The audit team was well qualified in the QA and technical disciplines, and its assignments and checklist items were adequately described in the audit plan.

The NRC staff agrees with the preliminary YMQAD audit team finding that the overall implementation of the SNL QA program was effective. Thirteen preliminary Corrective Action Requests (CARs) were discussed by the YMQAD audit team at the post-audit meeting. Four other potential CARs were acceptably resolved by the SNL organization during the audit. Neither the preliminary nor potential CARs identified by the YMQAD audit team were significant in terms of the overall SNL QA program.

OCRWM should continue to closely monitor implementation of the SNL QA program to ensure that the deficiencies identified during this audit are corrected in

a timely manner and that future QA program implementation is effective. The NRC staff expects to participate in this monitoring as observers and may perform its own independent audits at a later date to assess implementation of the SNL QA program.

Summary of NRC Staff Findings

The NRC staff agrees with the preliminary YMQAD audit team findings that the overall implementation of the SNL QA program is adequate and with the individual Program Element findings presented in Section 5.9. Two areas that were identified as deficient deserve close attention because of their significance to scientific investigations: 1) QAIPs do not meet QARD requirements in a number of areas and do not provide sufficient detail beyond QARD requirements (CAR YM-94-096), and 2) scientific notebooks lack detail to retrace experiments and lack required information (CAR YM-94-099).

The NRC staff did not observe any deficiencies in the audit process.

Good Practice

After auditors identified an apparent trend of insufficient detail in SNL procedures, the ATL promptly arranged for a meeting with SNL management to discuss this issue. In a follow-up meeting, the ATL explained the action (a CAR) that the team was taking and basis for this action. The NRC staff feels that this action should be accepted by SNL in a positive light and that this should lead to appropriate and effective corrective measures.

OFFICE OF QUALITY ASSURANCE AUDIT HQ-94-02 OF OCRWM MANAGEMENT AND OPERATING CONTRACTOR

INTRODUCTION

During June 6-10 and June 20-24, 1994, members of the U.S. Nuclear Regulatory Commission Division of Waste Management quality assurance (QA) staff observed a U.S. Department of Energy (DOE), Office of Civilian Radioactive Waste Management (OCRWM), Office of Quality Assurance (OQA), audit of the quality assurance (QA) program of the Civilian Radioactive Waste Management System Management and Operating Contractor (M&O). The OCRWM audit, HQ-94-02, was conducted at the M&O offices in Vienna, Virginia and Las Vegas, Nevada. M&O offices in Charlotte, North Carolina were not included in this audit since a recent HQ surveillance and an internal audit, observed by OQA, had been conducted. The audit evaluated the adequacy and effectiveness of the M&O QA program in all applicable QA programmatic areas. This represented the "baseline audit" of the M&O in meeting applicable requirements of OCRWM's "Quality Assurance Requirements and Description" document (QARD - DOE/RW-0333P). The State of Nevada and Clark County, Nevada observers participated in the Las Vegas portion of this audit.

This report addresses the effectiveness of the OCRWM OQA audit and the adequacy of implementation of QA controls in the audited areas of the M&O QA program. In the examination of programmatic areas, observations at Vienna and Las Vegas are presented separately, however, conclusions are presented for the audit overall.

OBJECTIVES

The objectives of the audit by OCRWM OQA were to determine whether the M&O QA program and its implementation meet the applicable requirements and commitments of the QARD and M&O implementing procedures.

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

MANAGEMENT SUMMARY AND CONCLUSIONS

The NRC staff based its evaluation of the audit process and the M&O QA program on direct observations of the audit team members; discussions with audit team and M&O personnel; and reviews of the audit plan, audit checklists, and pertinent M&O documents. The NRC staff has determined that OCRWM Audit HQ-94-02 was useful and effective. The audit was organized and conducted in a thorough and professional manner. Audit team members were independent of the activities 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 finding that implementation of the M&O QA program overall is marginally effective. Fourteen Corrective Action Requests (CARs) addressing thirty-three individual deficiencies were identified by the OQA audit team. Thirty other potential

CARs were acceptably resolved by the M&O organization during the audit. The audit team also presented 17 recommendations. M&O implementing procedures appeared to adequately address the QARD; that is, they form an adequate baseline. However, implementation was not yet effective, particularly in the critical design control and corrective action areas.

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

Summary of NRC Staff Findings

The NRC staff agrees with the preliminary OCRWM audit team finding that implementation of the M&O QA program is marginally effective overall. The NRC staff did not observe any deficiencies in the audit process.

Observations

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

Good Practices

The NRC staff identified a good practice in the use of status sheets which identified potential findings and concerns, and which were presented in each of the daily meetings with M&O management. These were very helpful in tracking potentially adverse conditions.

Weaknesses

1. Training methodology is inconsistent between the Vienna, Virginia, and the Las Vegas, Nevada M&O offices (See Section 5.3.1).

2. There seems to be a complex document hierarchy and excessive number of procedures which may lead or contribute to QA program implementation problems. When a changes is initiated, numerous documents and procedures need to be checked and revised to accommodate the change. It may be prudent for the M&O to check this document hierarchy and eliminate redundancy where possible (See Section 5.3.4).

3. In the area of software, most test cases used by the M&O to "validate" computer programs were the test cases supplied by the computer software developer. Thus, the "validation" was primarily a check that showed that the computer software functioned the same on the M&O computer as it did on the developer's computer (see Section 5.3.8). The NRC staff recommends that acquired computer software (not developed under an Appendix B QA program) be "validated" by more than rerunning the developer's test cases. *(Note that this item is carried as an open item on the NRC/DOE QA Open Item List)*

OFFICE OF QUALITY ASSURANCE AUDIT HQ-95-01 OF THE OCRWM MANAGEMENT AND OPERATING CONTRACTOR

INTRODUCTION

During October 10-14, 1994, members of the U. S. Nuclear Regulatory Commission Division of Waste Management Quality Assurance staff observed a U. S. Department of Energy (DOE) Office of Civilian Radioactive Waste Management (OCRWM) Office of Quality Assurance audit of Civilian Radioactive Waste Management System Management and Operating Contractor (M&O) quality assurance (QA) program relative to procurement control. The OCRWM audit, HQ-95-01, was conducted at the M&O offices in Vienna, Virginia. The audit was a performance-based evaluation of the processes and products to determine the effectiveness of the M&O QA program with regard to procurement control. In addition, the clarity of task descriptions provided to the M&O by OCRWM were also evaluated. No other organization had observers at this audit.

This report addresses the effectiveness of the OCRWM audit and the adequacy of QA controls in the audited area of the M&O QA program.

OBJECTIVES

The objectives of the OCRWM audit were to determine whether the M&O QA program for procurement control and its implementation meet the applicable requirements of and commitments to the OCRWM "Quality Assurance Requirements and Description" document (QARD, DOE/RW-0333P) and associated implementing procedures.

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

MANAGEMENT SUMMARY AND CONCLUSIONS

The NRC staff has determined that OCRWM audit HQ-95-01 was useful and effective. The audit was well organized and conducted in a thorough and professional manner. Audit team members were independent of the activities they audited. They were well qualified in the QA discipline, and their assignments and checklist items were adequately described in the OCRWM audit plan.

The NRC staff agrees with the preliminary audit team finding that the overall implementation of the M&O QA program relative to procurement control is marginal. One preliminary Corrective Action Request (CAR) was discussed by the OCRWM audit team at the post-audit meeting. Five other potential CARs were acceptably resolved by the M&O organization during the audit. Nine recommendations were also made by the OCRWM audit team to improve various aspects of the M&O's procurement control program. Though the preliminary CAR and items corrected during the audit were minor in nature, three of the M&O process steps for the procurement control program - No. 2 dealing with work classification, No. 7 dealing with evaluation and acceptance, and No. 8 dealing with the overall process control (See Section 5.3)- were judged marginal. Four other process steps were judged effective and one step - No. 5

dealing with subcontractor (supplier) evaluation and acceptance - could not be evaluated due to the lack of activity. Procurement control should have continued M&O management attention.

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

Summary of NRC Staff Findings

The NRC staff agrees with the preliminary OCRWM audit team findings that the overall implementation of the M&O procurement control program is marginal. This determination is based on the preliminary CAR resulting from the audit, on deficiencies corrected during the audit, and on several internal M&O CARs for which corrective action was not being implemented in a timely manner.

The NRC staff observed that each of the auditors reviewed an appropriate amount of documentation and interviewed sufficient M&O personnel to make valued judgments on the adequacy of each step of the procurement control process. In addition, the OCRWM audit team performed a follow-up of corrective actions resulting from previous OCRWM audits covering the same area of procurement control. As a result of this follow-up, planned corrective action completion dates identified with National Underground Storage subcontract deficiencies were moved ahead six months, from June 1995 to December 1994, by M&O management.

The OCRWM auditors followed the prepared checklists, adding questions when necessary to assure complete understanding of the process. Interviews were conducted in a professional manner, with questioning continuing until the auditor felt confident that the personnel were familiar and understood the process. In addition, M&O personnel departmental interfaces were also evaluated. Weaknesses were found in the interfaces, and the OCRWM audit team made four recommendations to improve communication and coordination in this area.

Though the audit findings were minor in nature, the NRC is concerned that the lack of attention to detail on the procurement process for the five subcontracts, if left unchecked, could cause major difficulties with the procurement of multi-purpose canisters.

Good Practices

The OCRWM audit team was well prepared and each team member understood the programmatic and technical aspects of performance-based auditing. The auditors were thorough, persistent, and professional in approach.

The ATL was very effective in the performance of his function. When difficulties arose in contacting M&O personnel, immediate action was taken to resolve the problem. His use of the "numbered" concerns led to good caucus discussions and effective tracking of concerns throughout the week.

The daily management meetings were very effective and conducted ir a professional manner, the ATL making sure M&O personnel fully understood each problem. The closing meeting was short, but the ATL provided a detailed summary of the week's activities, making effective use of charts and computer-generated summaries.

Weakness

The assignment of a number of subcontracts to one M&O quality engineer slowed the interview process and caused some audit delay. The functions of M&O Quality Engineering and Quality Engineering Support need to be more clearly defined. The interviews showed that M&O personnel were sometimes confused over which QA organization handles what.

Spraul/Trbovich December 29, 1994

NOTE: The following DOE audits have been observed by the NRC staff with the observation audit reports yet to be issued.

YMP-94-10 - LLNL (Mabrito/Spraul)
HQ-ARP-95-03 - M&O, Virginia (Buckley/Mabrito)
YM-ARP-95-02 - M&O, Nevada (Buckley/Mabrito)

DOE/NYE COUNTY COOPERATIVE DRILLING PROGRAM

Attachment 5

DOE/NYE COUNTY COOPERATIVE DRILLING

In accordance with the provisions of the "Protocol Addressing Procedures for Nye County On-Site Representation During Yucca Mountain Project Site Characterization Activities" and "Appendix A: Access and Procedures for On-Site Independent Verification and Testing", the responsibility of DOE during independent testing by Nye County is limited to maintaining the integrity of the site in accordance with 10 CFR 60. The protocol and appendix A, dated 10/19/2 and 6/1/94 respectively, represent the formal agreements between the county and DOE at the Yucca Mountain Site.

DOE/NYE COUNTY COOPERATIVE DRILLING

- Nye County was issued Test Planning Package (TPP) 95 -03, Revision 0 on 12/1/94. This TPP outlines controls to be utilized by Nye County during independent site investigation activities.
- Drilling activities by Nye County on borehole UE-25 ONC#1 began on 12/6/94 and were completed on 12/14/94. Portions of the drill cuttings splits and water samples collected were provided to the Sample Management Facility for corroborative non-q use by other Affected Organizations.
- Surveillance (YMP-SR-95-014) was performed by YMQAD on 12/9/94. The surveillance was conducted to assure Nye County's compliance with the requirements of TPP-95-03. No deficiencies or concerns were noted during this surveillance.

STATUS OF DOE FY 95 AUDIT/SURVEILLANCE SCHEDULE AND ANY PROPOSED CHANGES

Attachment 6

JAN 17 '95 19:29

CHANGES TO OCRWM AUDIT SCHEDULE REV. 1 TO REV 2

Substantive changes from Revision 1 to Revision 2 are as follows:

- ✓ **LLNL Audit Scheduled for 2/13-17/95 has been rescheduled to 3/6-10/95 due to the unavailability of personnel to support the scheduled February date.**

- ✓ **M&O Audit Scheduled for 3/13-17/95 and 3/27-31/95 has been rescheduled to 2/7-10/95 and 2/21-24/95 due to HQQAD request identifying this as a partial baseline audit.**

OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
FY-95 QUALITY ASSURANCE AUDIT SCHEDULE, REVISION 2

January 11, 1995

ORGANIZATION	LOCATION	NUMBER	TEAM LEADER	DATES	QA CRITERIA
M&O	Vienna, VA	HQ-95-01	D. Threatt	Completed	PB 2
REECo	Las Vegas, NV	YM-ARP-95-01	A. Arceo	Completed	PB 3
SNL	Albuquerque, NM	YM-ARP-95-03	R. Weeks	Completed	PB 5
EM/M&O	Washington DC & Vienna, VA	HQ-ARP-95-02	W. Coutier	Completed	PB 6, 33
USGS	Denver, CO	YM-ARP-95-04	R. Maudlin	Completed	P/PB 7, 34
M&O	Vienna, VA	HQ-ARP-95-03	H. Lentz	Completed	PB 8, 20, 29, and 35
SAIC	Las Vegas, NV	YM-ARP-95-05	S. Maslar	Completed	PB 9
LANL	Los Alamos, NM	YM-ARP-95-06	T. Higgins	Completed	P/PB 10
M&O	Las Vegas, NV	YM-ARP-95-02	S. Nolan	Completed	P/PB 4, 36
M&O	Vienna, VA	1	R. Peck	N/A	PB 12, 37
M&O	Vienna, VA Las Vegas, NV	HQ-ARC-95-04	M. Horseman	2/7-10/95 2/21-24/95	38
SNL	Albuquerque, NM	1	J. Martin	2/27-3/3/95	PB 13
LLNL	Livermore, CA	1	S. Maslar	3/6-10/95	ALL, 34
USGS	Denver, CO	1	D. Harris	3/13-17/95	P/PB 15
EM	Various	1	F. Bearham	3/20-31/95	PB 14
SAIC	Las Vegas, NV	1	K. Gilkerson	3/27-31/95	PB 16
M&O	Vienna, VA	1	R. Peck	4/3-7/95	PB 17
M&O	Las Vegas, NV	1	R. Howard	4/3-7/95	PB 18

ORGANIZATION	LOCATION	NUMBER	TEAM LEADER	DATES	QA CRITERIA
OCRWM/HQ	Washington DC	1	T. Rodgers	4/10-14/95	ALL
OCRWM/YMSCO	Las Vegas, NV	1	H. Lentz	4/24-28/95	ALL
RW	Washington DC	1	D. Threatt	May 1995	PB 19
REECo	Las Vegas, NV	1	C. Humphries	May 1995	PB 21
LANL	Los Alamos, NM	1	A. Arceo	May 1995	ALL
M&O/ORNL/BIA	VA, TN, MD	1	T. Swift	June 1995	PB 11, 36
EM	Germantown, MD	1	F. Bearham	June 1995	PB 23
USGS	Denver, CO	1	S. Maslar	June 1995	PB 24
YMSCO	Las Vegas, NV	1	F. Kratzinger	June 1995	PB 25
M&O/RW	Vienna, VA	1	H. Lentz	37	PB 26,
M&O	Las Vegas, NV	1	R. Constable	July 1995	PB 27
LLNL & M&O	Livermore, CA & Las Vegas, NV	1	K. McFall	July 1995	PB 28
LANL	Los Alamos, NM	1	S. Nolan	August 1995	PB 30
USGS	Denver, CO	1	T. Rodgers	August 1995	PB 31
SNL & M&O	Albuquerque, NM & Las Vegas, NV	1	R. Weeks	August 1995	PB 32

See Notes - Pages 3 and 4

NOTES:

1. Audit Number will be assigned when the Audit Plan is issued.
2. Overview Process of Subcontract Work Scopes (WBS 3.2.02).
3. Lithium bromide water samples activities including Inspection, Corrective Action, QA Records, Audits and Surveillances.
4. Corrective Action process including Implementing Documents, Nonconformances, and QA Records.
5. Surface Facilities Exploration Program (WBS 1.2.3.2.6.2.1) including Organization, QA Program, Implementing Documents, Document Control, and QA Records.
6. HQ Affected Organizations Corrective Action Process (WBS 9.1.03.3).
7. Implementing Documents, Control of Measuring and Test Equipment, Corrective Action, Audits and Surveillances, plus Percolation in the Unsaturated Zone-Surface Based Study (WBS 1.2.3.3.1.2.3) and Site Unsaturated Zone Modeling and Synthesis (WBS 1.2.3.3.1.2.9).
8. Process used to prepare revisions to CRD, SRDs, and ICDs (WBS 3.1.01.01.02).
9. Meteorology Program activities including QA Program, Procurement Document Control, Control of Purchased Items and Services, and Measuring and Test Equipment.
10. Mineralogy, Petrology, Rock Chemistry, and Geochemistry Investigations (WBS 1.2.3.2.1.1 and 1.2.3.4.1) including Procurement Document Control, Control of Purchased Items and Services, Nonconformances and QA Records.
11. Process to prepare, maintain, and validate the Characteristics Data Base (WBS 9.2.01.01.06.07).
12. Work Controls and Item Classification (WBS 3.1 and 3.2).
13. Activities to support Systematic Drilling Program for first and second hole (WBS 1.2.3.2.2.2.1).
14. The EM-323 process of oversight of the production of high-level waste at waste form producer facilities.
15. Procurement process including Procurement Document Control, Control of Purchased Items and Services, QA Program, and Audits.
16. Corrective Action process including Implementing Documents, Document Control, and Audits.
17. MCP Procurement Process (WBS 3.2.02.06).
18. Design Analysis Repository Subsurface Ventilation Report (WBS 1.2.4.3.5).
19. The RW-HQ process of oversight and technical direction of Affected Organization's technical workscope (M&O/EM-323/General Atomics).
20. System Engineering Process.
21. Corrective Action process including QA Program, Implementing Documents, and QA Records.
23. Interfaces between Waste Accept Documents.
24. Characterization of UZ Percolation; UZ-16 Completion Report, Preclosure Tectonics Data Collection and Analysis (WBS 1.2.3.3.1.2.3 and 1.2.3.2.8.4).

NOTES:

25. Procurement process including Procurement Document Control, Control of Purchased Items and Services, QA Program, Implementing Documents, and QA Records.
26. Records Management process.
27. Waste Package Design and Technical Data Management (WBS 1.2.2.4.1 and 1.2.5.3).
28. Waste Form Testing-Spent Fuel and Metal Barriers (WBS 1.2.2.3.1.1 and 1.2.2.3.2).
29. Control of Design Inputs.
30. Caisson Experiment (WBS 1.2.5.4.6).
31. Structural Features within the Site Area and Percolation in the Unsaturated Zone - Surface Based Study (WBS 1.2.3.2.2.1.2 and 1.2.3.3.1.2.3).
32. Mechanical Behavior of North Ramp-Design Package 2C and Radionuclide Retardation (WBS 1.2.4.2.3.2 and 1.2.3.4.1.5).
33. RW will be part of OCRWM/HQ audit in April 1995.
34. Postponed based upon availability of Auditee personnel.
35. Combined to increase the scope within the design process.
36. Rescheduled until sufficient product is available for evaluation.
37. This will be performed as a surveillance.
38. Partial Baseline Audit

ALL - Compliance to DOE/RW-0333P, Revision 0 and Revision 1
P - Programmatic Audit to follow-up on previous audit results
PB - Performance Based Audit
C - Compliance Based Audit

SURV. NO	ORGANIZATION/ LOCATION	ACTIVITY	DATES SCHEDULED	LEAD
95-002	YMSCO/LV	FOLLOW-UP TO CARS YM-93-004 AND YM-94-061 ON RECORDS MGMT.	01/25/95	ARCEO
95-007	REECO/LV	REVIEW OF PETER KIEWIT NCR PROCESS	01/31/95	WEEKS
95-015	M&O/LV	TECHNICAL DATA SURVEILLANCE	12/19/94 TO 1/13/95	MATRAS
95-017	REECO, Kiewit, M&O/LV	REQUIRED SPECIFICATION SUBMITTALS	01/17-24/95	HINOJOSA

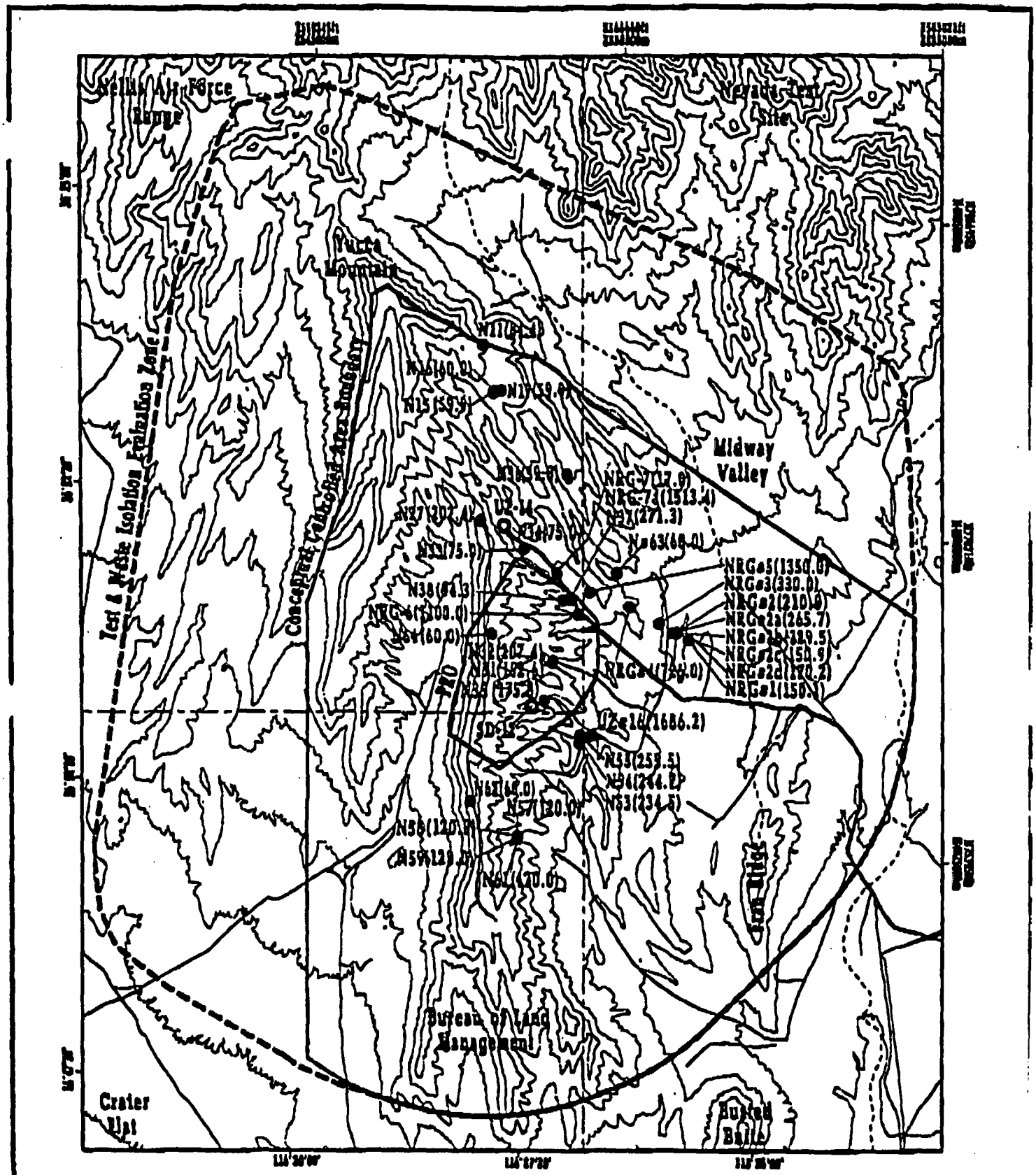
UPDATE ON QA OVERVIEW OF SITE CHARACTERIZATION FIELD ACTIVITIES

Field Activities Update

January 18, 1995

FIELD ACTIVITIES UPDATE

- Completed Boreholes to Date
  - Total holes completed - 43
  - Total footage drilled to date - 17,327 feet


Nellis Air Force Range
Nevada Test Site
Yucca Mountain
Test & Training Range (Restricted Area)
Solitario Canyon Fault
Midway Valley
Bureau of Land Management
Crater Flat
Buried Butte
Legend
In Progress Borehole
Completed Borehole (with total depth in feet)
Contour Interval 200 feet
YUCCA MOUNTAIN
SITE CHARACTERIZATION PROJECT
Borehole Summary
(as of April 01, 1994)
YMP-94-087.0

FIELD ACTIVITIES UPDATE

◆In-Progress Boreholes

- One hole is in progress for a total of 256 feet drilled as of January 10, 1995

FIELD ACTIVITIES UPDATE

- Other Borehole Activities
  - Geophysical Logging
  - Borehole G - 2
    - Dual porosity gamma
    - Natural Gamma
    - Litho Density
    - Sidewall Neutron
  - Borehole USW UZ - 14 (Partial List)
    - Dual Induction
    - Spectral Gamma Log
    - Geochemical Log

FIELD ACTIVITIES UPDATE

◆Surveillances of Field Activities FY 95 to Date

- ❖ YMQAD Staff has completed 6 surveillances of Field Activities of Affected Organizations

FIELD ACTIVITIES UPDATE

Surveillances Completed by OQA of Field Activities

Affected Organization	Total Number of Surveillances FY 95 to Date
M&O	1
REECo	2
SNL	1
USGS	1
NYE County	1

YMQAD Staff Completed 6 Surveillances of Field Activities Resulting in Issuance of 3 CARs

THE FOLLOWING ACTIVITIES HAVE BEEN SURVEILLED TO DATE:

(Number of Surveillances/Number of CARS)

RADIAL BOREHOLE TESTS (1/0)

M&TE (1/0)

TBM OPERATIONAL ACTIVITIES (1/0)

PROCUREMENT OF STEEL SETS (1/3)

CONTROL OF DRAWINGS (1/0)

NYE COUNTY DRILLING (1/0)

FIELD ACTIVITIES UPDATE

- Corrective Action Requests Issued and Closed Related to Field and Test Activities to Date for FY'95
  - CARs ISSUED - 4
  - CARs CLOSED - 0

FIELD ACTIVITIES UPDATE

QA VERIFICATION OF FIELD ACTIVITIES BY AFFECTED ORGANIZATIONS FOR FY 95

(INFORMATION AS OF DECEMBER 31, 1994)

COMPLETED AUDITS/SURVEILLANCES	TO DATE	PLANNED
M&O	9	0
LANL	0	0
LLNL	0	2
REECo	4	0
SNL	0	3
T&MSS	8	1
USGS	6	14

NOTE: INSPECTIONS INCLUDED FOR M&O

FIELD ACTIVITIES UPDATE

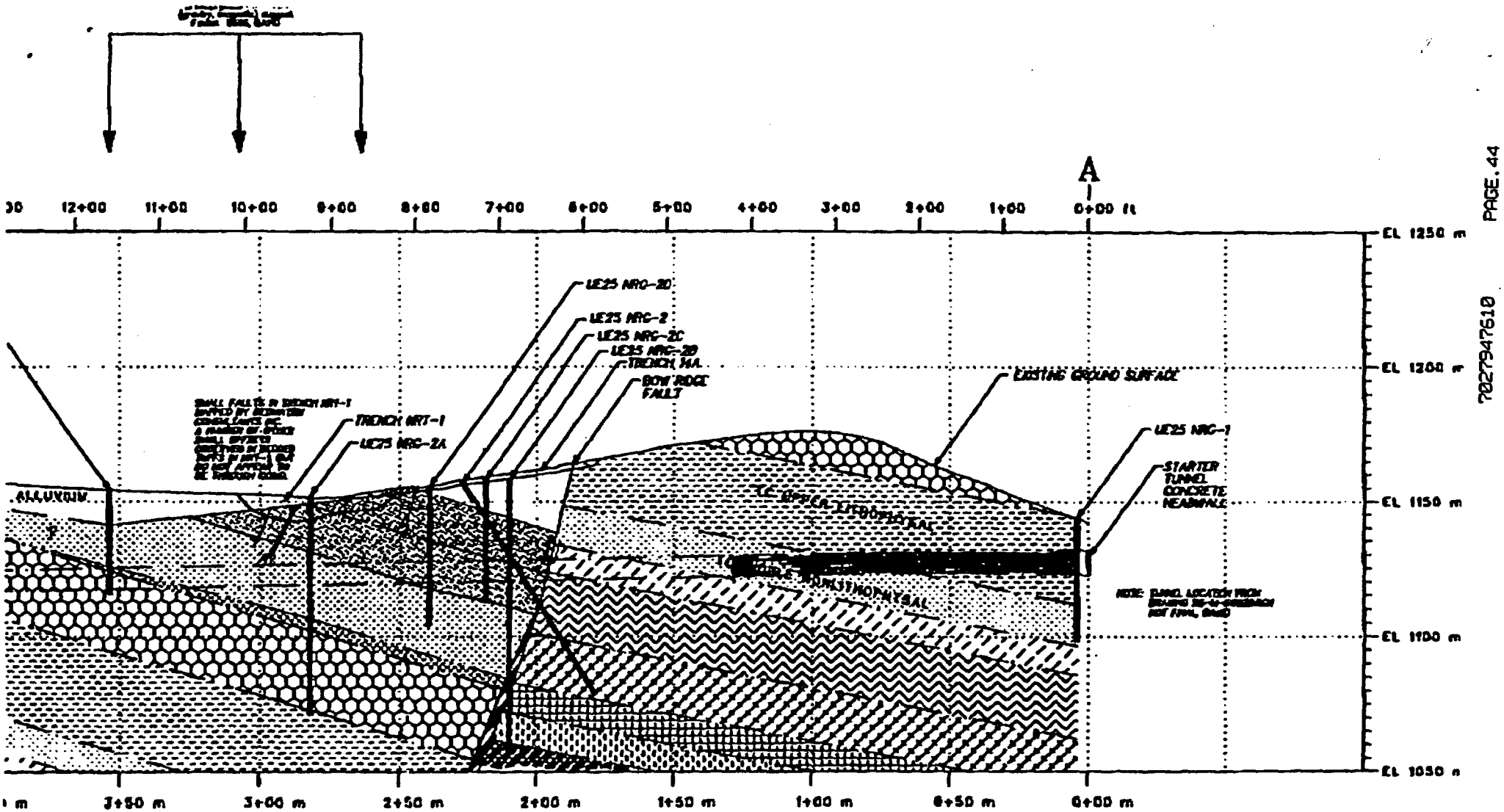
STATUS OF NONCONFORMANCES FY 95 TO DATE

- AFFECTED ORGANIZATIONS HAVE INITIATED 69 NONCONFORMANCE REPORTS IN ACCORDANCE WITH YAP-1510
- 19 NCRs HAVE BEEN INITIATED TO DISPOSITION INTERNAL NONCONFORMING CONDITIONS:
  - K/PB - 7
  - T&MSS - 12
- 50 NCRs HAVE BEEN INITIATED TO DISPOSITION NONCONFORMING CONDITIONS THAT INVOLVE MORE THAN ONE AFFECTED ORGANIZATION

FIELD ACTIVITIES UPDATE

REVIEWS COMPLETED - FY 95 TO DATE

- JOB PACKAGES REVIEWED - 8
- TEST PLANNING PACKAGES REVIEWED - 10



FURTHER DESCRIPTION
NONLITHIFIED, TUFF AND FALLOUT
PYROCLASTIC FLOW AND FALLOUT
NONLITHIFIED, REWORKED PYROCLASTIC FLOW AND FALLOUT

LEGEND

- LITHOLOGIC CONTACT, SOLID LINE WHERE APPROXIMATE, DASHED LINE WHERE INFERRED
- FAULT ZONE
- FAULT, P-ATTITUDE UNCERTAIN
- PROPOSED TUNNEL OUTLINE

CROSS SECTION CONSTRUCTED ALONG RAMP ALIGNMENT – AZIMUTH 299°

0 20 40 60 80 100m

FIELD ACTIVITIES UPDATE

EXPLORATORY STUDIES FACILITY (ESF) UPDATE

- ESF APPROXIMATELY 420 FEET INTO THE MOUNTAIN
- TBM HAS ADVANCED APPROXIMATELY 220 FEET SINCE START-UP

FIELD ACTIVITIES UPDATE

Rick Weeks Raul Hinojosa	John Doyle Raul Hinojosa Kristi Hodges	Rick Weeks Fred Lofftus	John Martin John Doyle Pat Cotter	Fred Lofftus Kristi Hodges Pat Cotter
Rick Weeks Raul Hinojosa	John Doyle Kristi Hodges	Rick Weeks Raul Hinojosa Fred Lofftus	John Doyle Pat Cotter	Fred Lofftus Kristi Hodges

DISCUSSION OF QA PROGRAM CHANGES

QARD REVISION

TOTAL COMMENTS - 248

- **SCOPE OF REVISION**
  - 16 SECTIONS
  - 3 SUPPLEMENTS
  - 3 APPENDICES
- **PRIMARY IMPACTS** (APPROX. 50% OF COMMENTS)
  - SECTIONS 2.0, 3.0 AND 17.0
  - SUPPLEMENTS I AND III
- **PRIMARY COMMENTORS** (APPROX.80% OF COMMENTS)
  - OQA
  - USGS
  - M&O

QARD REVISION (CONT)

DEPTH OF REVISION

- MOST COMMENTS ARE FOR CLARIFICATION ONLY
- POSSIBLY 15 COMMITMENT REDUCTIONS-MOST DUE TO OVER COMMITMENT

TIMING OF REVISION

- SECTON 7.0
  - » INCORPORATES MINOR CHANGES TO ACCOMODATE TRANSITION OF AO VENDOR AUDIT ACTIVITIES TO OQA
- MAJOR REVISION
  - » INTERNAL REVIEW - COMPLETE BY 4/1/95
  - » FORMAL REVEW - COMPLETE BY 6/1/95
  - » ISSUE - 7/1/95

NRC OPEN ISSUES - QARD REV. O

(NRC Letter 3/8/93 and OCRWM Letter 5/24/93)

- **ISSUE (2)**
  - CLARIFY THAT ACQUIRED SOFTWARE MUST MEET REQUIREMENTS OF QARD SUPPLEMENT I, SECTION 1.2.6, PARAGRAPHS A, B, C, AND D
- **RESPONSE**
  - OCRWM WILL INCORPORATE THIS CLARIFICATION
- **ACTION TAKEN**
  - THIS CLARIFICATION HAS BEEN INCORPORATED INTO QARD, REV. 0, SUPPLEMENT I, PARAGRAPH 1.2.5.C

NRC OPEN ISSUES - QARD REV. O

(NRC Letter 3/8/93 and OCRWM Letter 5/24/93)

- **ISSUE (3)**
  - CLARIFY SUPPLEMENT III, SECTION III.2.6.B RELATIVE TO USE OF PEER REVIEW FOR MODEL VALIDATION WHEN DATA CANNOT BE COLLECTED
- **RESPONSE**
  - OCRWM WILL EVALUATE AND COORDINATE WITH NRC STAFF BEFORE MAKING CHANGE.
- **ACTION TAKEN**
  - DISCUSSIONS IN-PROCESS BETWEEN OQA AND NATIONAL LABORATORY PERSONNEL, OCRWM WILL DISCUSS WITH NRC PRIOR TO REVISING QARD, SUPPLEMENT III.

TRANSITION PLAN ACTIVITIES

PHASE I

- **AUDIT FUNCTIONS**
  - M&O - 1/1/95
  - REECo - 3/1/95
  - USGS, LLNL, LANL, SNL - 7/1/95
- **STATUS**
  - CONTRACTUAL ISSUES REVIEWED - NO IMPACTS IDENTIFIED
  - OCRWM PROCEDURE CHANGES
    - » NO CHANGES NEEDED TO SUPPORT INTERNAL AUDITS
    - » CHANGES TO SUPPORT SUPPLIER AUDITS IN-PROCESS
  - M&O PROCEDURE CHANGES - IN-PROCESS
  - OTHER AO AFFECTED PROCEDURES INDENTIFED - PROGRESS NOT YET STATUSED

TRANSITION PLAN ACTIVITIES

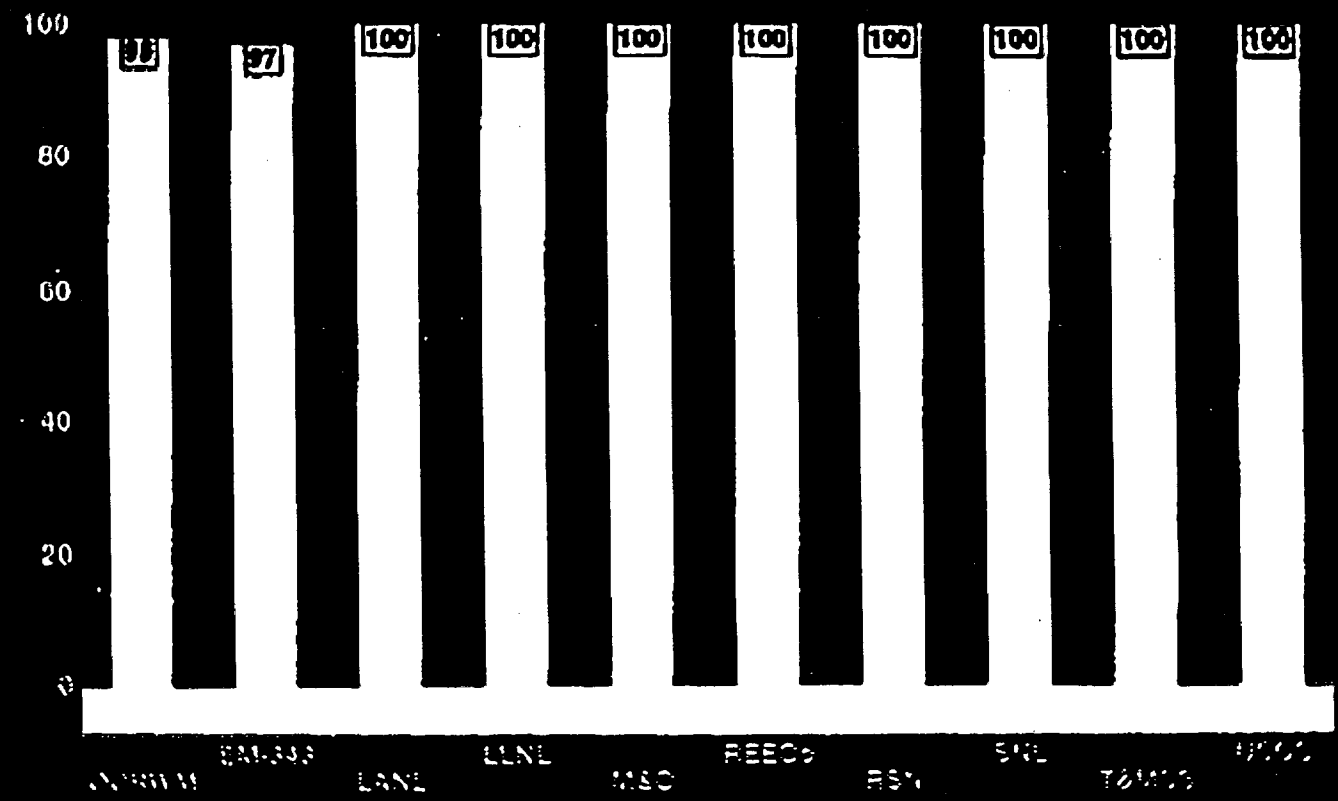
PHASE II

- **CORRECTIVE ACTION FUNCTIONS**
  - ALL AFFECTED ORGANIZATIONS - 7/1/95
- **STATUS**
  - OCRWM PROCEDURES (APs) BEING DRAFTED
  - INTERNAL REVIEW COMPLETE - 4/1/95
  - FORMAL REVIEW COMPLETE - 6/1/95
  - ISSUE - 7/1/95

STATUS OF IMPLEMENTING THE REVISED QARD

QA Program Completion

Requirements Matrix Review Completion



STATUS OF M&O DESIGN PACKAGE AND RELATED CARS

OQA 2C CAR Status

CAR #	CORRECTIVE ACTION COMPLETION DATE	STATUS
● HQ-94-018	1/31/95	OPEN
● HQ-94-019	3/31/95	OPEN
● YM-94-015	2/28/95	OPEN
● YM-94-062	1/31/95	OPEN
● YM-94-063	1/31/95	OPEN
● YM-94-064	12/16/94	CLOSED
● YM-94-065	1/31/95	OPEN

OQA 2C CAR Status

CAR #	CORRECTIVE ACTION COMPLETION DATE	STATUS
● YM-94-066	2/28/95	OPEN
● YM-94-067	12/31/94	OPEN
● YM-94-068	10/31/94	CLOSED
● YM-94-069	9/30/94	CLOSED
● YM-94-070	2/28/95	OPEN
● YM-94-071	1/15/94	OPEN

OQA 2C CAR Status

CAR #	CORRECTIVE ACTION COMPLETION DATE	STATUS
● YM-94-072	10/31/94	OPEN
● YM-94-073	1/2/95	OPEN
● YM-94-074	9/9/94	CLOSED
● YM-94-075	12/31/94	OPEN
● YM-94-076	2/28/95	OPEN
● YM-94-100		OPEN