



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

NOV 16 1994

Les E. Shephard
Technical Project Officer
for Yucca Mountain
Site Characterization Project
Sandia National Laboratories
P.O. Box 5800, Mail Stop 1333
Albuquerque, NM 87185

VERIFICATION OF CORRECTIVE ACTION AND CLOSURE OF CORRECTIVE ACTION REQUEST (CAR) YM-94-090 RESULTING FROM YUCCA MOUNTAIN QUALITY ASSURANCE DIVISION (YMQAD) AUDIT YMP-94-09 OF SANDIA NATIONAL LABORATORIES (SCPB: N/A)

The YMQAD staff has verified the corrective action to CAR YM-94-090 and determined the results to be satisfactory. As a result, the CAR is considered closed.

If you have any questions, please contact either Robert B. Constable at (702) 794-7945 or Richard L. Maudlin at (702) 794-7290.

Richard E. Spence, Director
Yucca Mountain Quality Assurance Division

YMQAD:RBC-841

Enclosure:
CAR YM-94-090

cc w/encl:
J. H. Hines, OOD, AL
~~J. G. Spraul~~, NRC, Washington, DC
S. W. Zimmerman, NWPO, Carson City, NV
R. R. Richards, SNL, Albuquerque, NM, M/S 1333
M. C. Brady, SNL, Las Vegas, NV

cc w/o encl:
W. L. Belke, NRC, Las Vegas, NV
D. G. Sult, YMQAD/QATSS, Las Vegas, NV

YMP-5

9411230253 941116
PDR WASTE PDR
WM-11

102.7
WM-11
NHD3

**OFFICE OF CIVILIAN
RADIOACTIVE WASTE MANAGEMENT
U.S. DEPARTMENT OF ENERGY
WASHINGTON, D.C.**

8 CAR NO.: YM-94-090
PAGE: 1 OF 1
QA

CORRECTIVE ACTION REQUEST

1 Controlling Document QAP 16-03, Revision 2		2 Related Report No. YMP-94-09	
3 Responsible Organization SNL		4 Discussed With R. Richards	
5 Requirement: QAP 16-03, Revision 2, Section 5.0, Paragraph 5.1 states in part: "Prepare and submit a QA Program Report at least quarterly to SNL YMP TPO and a copy to the YMP QA Division...."			
6 Adverse Condition: Contrary to the above, (1) Quarterly QA Program Reports for May 1993 through July 1993 and August 1993 through October 1993 do not provide documented evidence of being copied to YMP QA Division, and (2) Quarterly QA Program Report for May 1993 through July 1993 (2nd quarter report) was not issued until 11/10/93 which fell into the 4th quarter period (i.e., 11/93 - 1/94).			
9 Does a Significant Condition Adverse to Quality exist? Yes ___ No <u>X</u> If Yes, Check One: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E		10 Does a stop work condition exist? Yes ___ No <u>X</u> ; If Yes - Attach copy of SWO If Yes, Check One: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C	
13 Response Due Date: 20 Working Days -From Issuance			
11 Required Actions: <input checked="" type="checkbox"/> Remedial <input type="checkbox"/> Extent of Deficiency <input type="checkbox"/> Preclude Recurrence <input type="checkbox"/> Root Cause Determination			
12 Recommended Actions: Take the necessary actions to transmit the copies of the noted QA Program Reports to YMP QA Division. Provide the reason why the 2nd quarter report was not issued until the 4th quarter.			
7 Initiator Richard L. Maudlin <i>R. Maudlin</i> 09/08/94		14 Issuance Approved by: OADD <i>[Signature]</i> for Date 9-12-94	
15 Response Accepted QAR <i>[Signature]</i> Date 11/02/94		16 Response Accepted OADD <i>[Signature]</i> for Date 11-15-94	
17 Amended Response Accepted QAR _____ Date _____		18 Amended Response Accepted OADD _____ Date _____	
19 Corrective Actions Verified QAR <i>[Signature]</i> Date 11/02/94		20 Closure Approved by: OADD <i>[Signature]</i> for Date 11-15-94	

OFFICE OF CIVILIAN
RADIOACTIVE WASTE MANAGEMENT
U.S. DEPARTMENT OF ENERGY
WASHINGTON, D.C.

CAR NO. YM-94-090
PAGE 2 OF
QA

CORRECTIVE ACTION REQUEST (CONTINUATION PAGE)

Corrective Action Response for CAR #YM-94-090

Remedial Actions:

1) Quarterly QA Program reports for May through July, 1993 and August through October, 1993 may not have been transmitted to the YMP QA Division. Copies of these reports are included with this response, correcting this adverse condition. All corrective actions required by this CAR are complete.

Responsible for corrective action: James Voigt, 6319
Proposed completion date: 10/12/94

2) Quarterly QA Program report for May through July 1993 was not issued until 11/10/93 because additional investigations into trends is occasionally requested by the TPO prior to his QAIP 16-3 review and acceptance of the QA Program report. The TPO's concern about timely processing of CARs resulted in his request to investigate in more depth the time required to complete CARs for 1992 and 1993. The May through July, 1993 QA Program report was issued to the QA Manager in August, however it was revised from its original to add results of requested investigations which delayed final publication. All initial issuances of QA Program reports have been and will continue to be issued to the QA Manager and TPO prior to completion of the next quarter and generally within one month of the close of the previous quarter. No corrective actions are required as a result of this condition.

James Voigt
James Voigt, SNL Department 6319

10/6/94
Date

10/13/94 LTR. SHEPARD TO SPENCE

Sandia National Laboratories

Albuquerque, New Mexico 87185

date: November 10, 1993

to: Les E. Shephard, 6302

WBS: 1.2.11.1

QA


from: Robert R. Richards, 6319

subject: QA Program Status Summary August 1993 through October 1993 and
Evaluation of Quality Assurance Trends
Yucca Mountain Site Characterization Project - Department 6302

Purpose: This report fulfills the requirement to provide the Yucca Mountain Site Characterization Project Management and Project staff with a summary of the QA Program status. This report evaluates the quality status through the end of October 1993. In addition, an analysis of potential QA trends was performed for the period May 1993 through October 1993.

QUALITY TRENDS

Seven new CARs were written and assessed during this trend evaluation period. The seven deficiencies were issued as follows: five CARs were issued during the annual YMP-QAD audit; one CAR was issued by the YMP-QAD during a surveillance of SNL site field work, and the last CAR was issued during a walk through of the SNL sample storage area. *After reviewing the results of this quarter's evaluation, it was concluded that no potential adverse trends were impacting the ongoing technical work.*

One CAR during this trending period was documented as a significant condition adverse to quality. It concerned unauthorized use of the samples library storage area as a laboratory area. This item was successfully resolved and no significant conditions adverse to quality are open at this time.

One potential area of concern has been identified which requires further investigation. Several deficiencies for the current trend period have involved the improper handling and completion of QA records; i.e. not submitting completed QA records to the Local Record Center (including Scientific Notebooks, procurement records, and technical review comments), improper storage of QA records, and inadequate completion of subcontractor training records. As noted a broad range of record types are involved, however, management should be aware of the problem now and inform staff of the potential problem.

QA PROGRAM EFFECTIVENESS

The QA Program appears to be effective as implemented. The one significant deficient condition issued during the trend review period is summarized below.

- Use of the samples library as a scientific laboratory work area was unauthorized and left the library unsecured and the integrity of stored samples indeterminate.

Details on deficiency descriptions and corrective actions for open deficiencies are listed in the weekly issue of "Corrective Action Status for Department Managers." On the next few pages are summaries of quality assurance actions.

QA PERFORMANCE INDICATORS

The latest metric to be evaluated as a QA Performance Indicator is the length of time to conduct audits and the amount of time taken to write the reports for those audits. The charts included on the next few pages graphically illustrate the data collected about the timeliness of audits during the last six years.

The first chart shows the number of audits conducted per year has remained fairly constant with the exception of the last two years. The reduction for the last two years in the number of audits can easily be explained. The reason for only five audits in 1992 was because of the minimum amount of quality effecting work being done during that year. Only nine audits have been performed in 1993 but the year is not completed yet and at least one more audit will be completed before the end of the year.

The second chart is a consistently small number of days to perform audits. The one exception is for the year 1993. The elevated number of days to perform audits in 1993 is due to the physical move of the personnel of the Nuclear Waste Management Center to new facilities. This move happened during the conduct of some of the audits which delayed their completion.

The final two charts show the number of days to write the audit reports. Due to increased emphasis on the timely issuance of reports, a downward trend in the time to write audit reports is evident. Prior to June of 1992 the audit reports have taken up to 60 days to write. In the last year, the time taken to write the reports has continually dropped and shows an average of 23 days for 1993 with the last four audit reports written in less than 14 days.

CORRECTIVE ACTION REPORT COMPLETION SUMMARY

May, 1993-July, 1993 Reporting Period

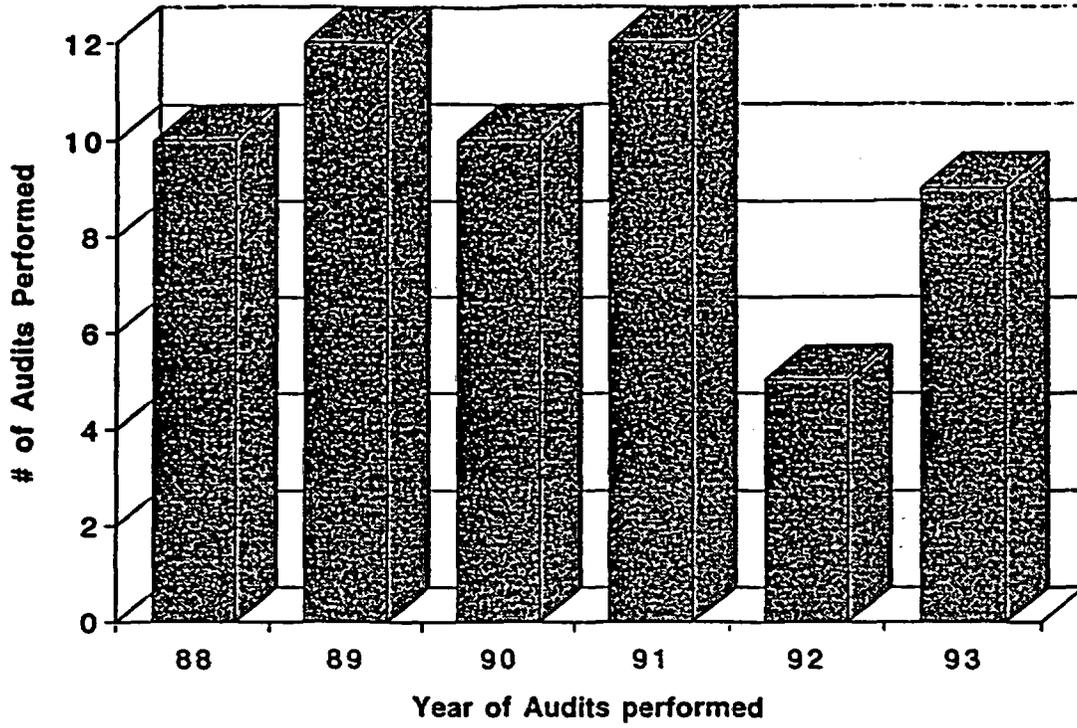
SNL CORRECTIVE ACTION REPORT SUMMARY	#Opened	#Completed	#Open
<u>Internal Audit Reports</u>			
SNL Findings	5	0	5
SNL Observations	8	0	8
<u>Contract Audit Reports</u>			
SNL Findings	6	12	3
SNL Observations	2	4	1
Surveillance related	2	0	2
Activity related	0	0	0
YMPO: CARs	0	1	0
TOTAL	23	17	19

FY1993 AUDIT SUMMARY

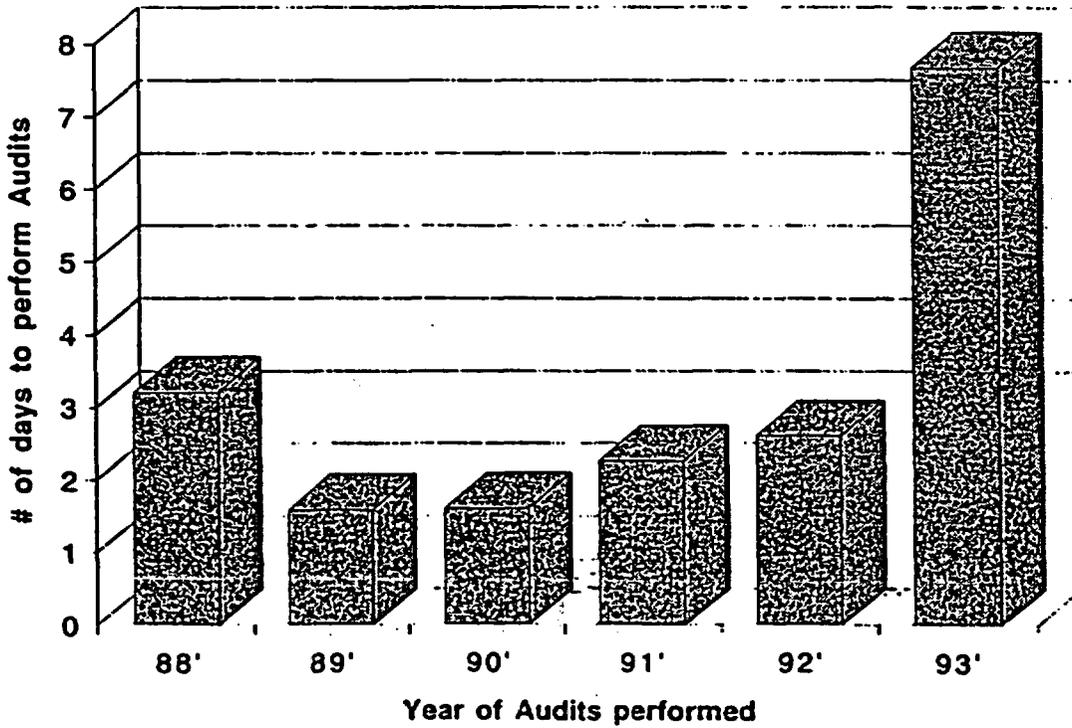
Audit Number	Action Party	Status
YMP 93-21	---	Corrective action verification is complete and the audit closed.
MIT-A93-01	---	Corrective action verification is complete and the audit closed.
NCAR-A93-01	---	Corrective action verification is complete and the audit closed.
ITC-A93-01	ITC	Three deficiencies and one observation were issued. Corrective action responses prepared and accepted, corrective action in process by ITC.
SNL-A93-01	SNL	Five deficiencies and eight observations were issued. Corrective action responses are being prepared.

JVV:6319:fs
Attachment

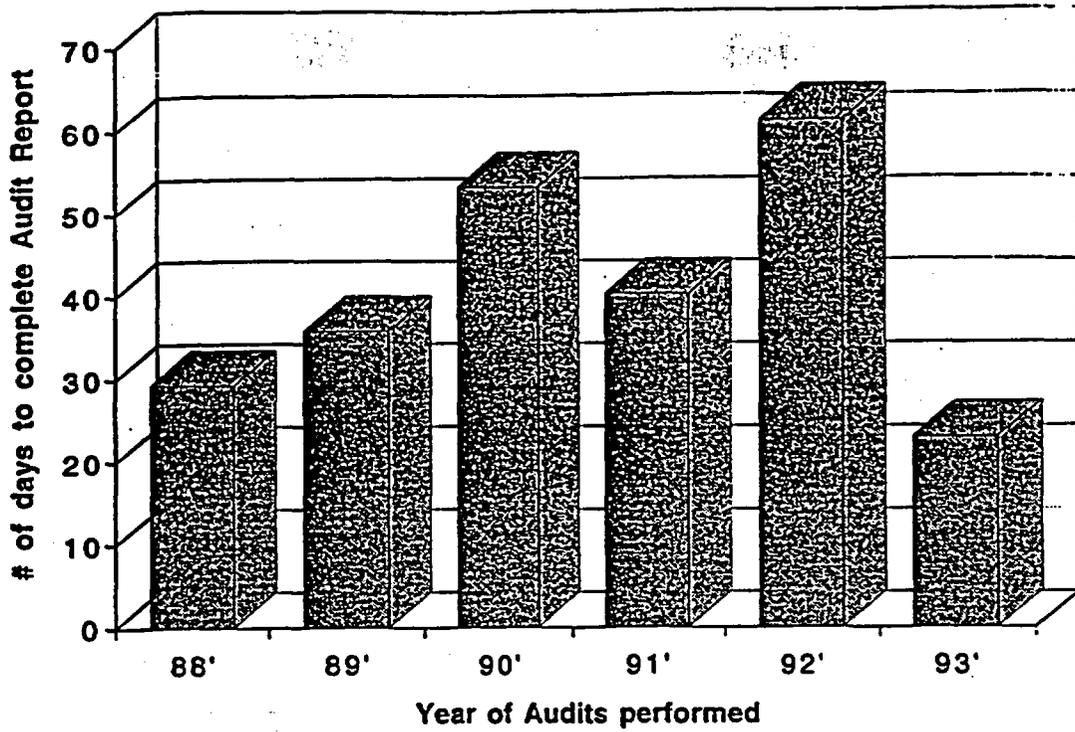
of Audits / Year



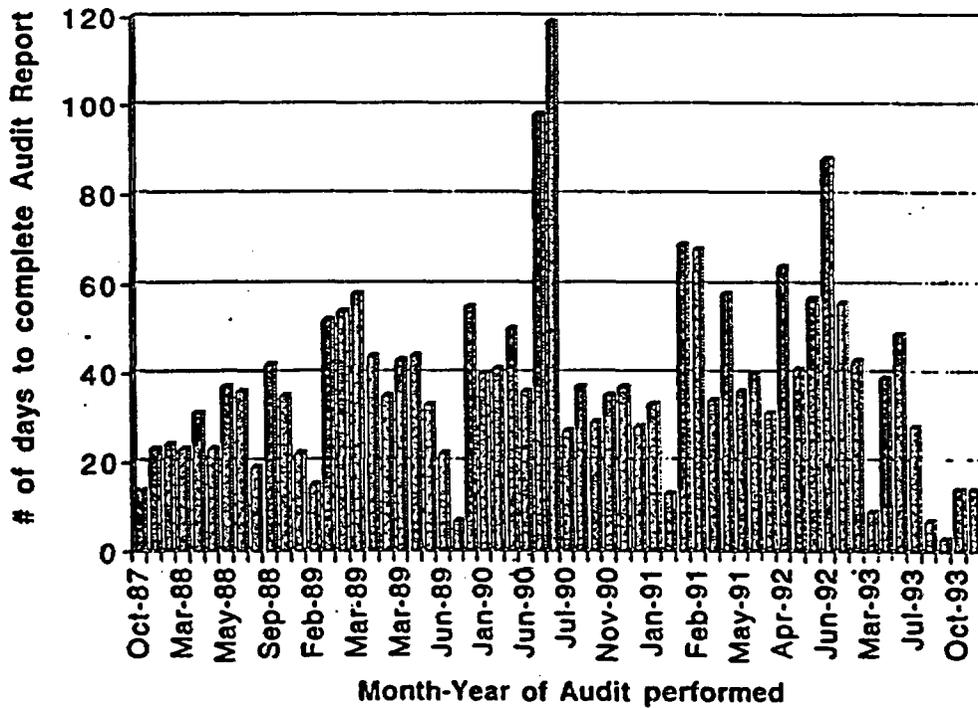
of days to perform Audits



of days to complete Audit Reports



of days to complete Audit Reports



JVV:6319:fs

Copy to:

6115 P. B. Davies
6312 H. A. Dockery
6313 L. S. Costin
6319 R. R. Richards
6319 J. C. Friend
6319 D. R. Hawkinson
6319 J. V. Voigt
6319 D. P. Wrobel
6351 R. E. Thompson
6352 S. E. Sharpton
6302 94/1.2.11.1/VER/1.6/QA
6302 YMP CRF

This QA Program Report has been reviewed and assessed by the SNL Yucca Mountain Site Characterization Technical Project Officer.



Technical Project Manager, Department 6302 11/23/93
Date

Sandia National Laboratories

Albuquerque, New Mexico 87185

date: November 10, 1993

to: Les E. Shephard, 6302

WBS: 1.2.11.1

QA



from: Robert R. Richards, 6319

subject: QA Program Status Summary May 1993 through July 1993 and
Evaluation of Quality Assurance Trends
Yucca Mountain Site Characterization Project - Department 6302

Purpose: This report fulfills the requirement to provide the Yucca Mountain Site Characterization Project Management and Project staff with a summary of the QA Program status. This report evaluates the quality status through the end of July 1993. In addition, an analysis of potential QA trends was performed for the period January 1993 through July 1993.

QUALITY TRENDS

Eighteen CARs were written during this trend evaluation period. Eight were issued as observations defining weaknesses or potential improvements in the QA program implementation. The remaining ten deficiencies were issued as follows: three CARs were issued to ITC during an audit of their facilities; five CARs were issued during the SNL internal audit; and two CARs were issued during a surveillance of SNL work planning documents. *The results of the evaluation concluded that one potential adverse trend may be impacting the ongoing technical work. The area of interest to management that may require more attention is discussed below.*

1) During audit and surveillance interviews, several individuals have stated that the work they do on the Yucca Mountain Project is "non-quality-affecting" and as such the QA program and its related procedures do not apply to the performance or documentation of their work. Although in all such cases this statement is contradictory with what is documented in QA Grading Reports for the subject work, this "belief" has led to lack of implementation of QA Program actions, particularly in the area of Work Agreements and QAGR maintenance. The lack of approved planning documents and QAGRs for much of the on-going technical work is seen as a precursor to other program implementation problems, such as identifying work requirements, documenting the procedures used to perform work, documenting the scientific investigation in a defensible and traceable manner, and placing the records in the records center as they are completed.

QA PROGRAM EFFECTIVENESS

The QA Program appears to be marginally effective as implemented as indicated by the CARs recently issued and identified as 'Significant Conditions Adverse to Quality'. These deficiencies are summarized below.

- Work planning documents were not in place for several scientific investigation activities.
- Response to a CAR identified as a Significant Condition Adverse to Quality was not timely.
- Several Quality Assurance Grading Reports were identified as being out-of-date.
- Scientific notebooks, when completed, are not being forwarded to the Records Center.
- No record was available to indicate that some scientific notebook reviews had been completed.

Details on deficiency descriptions and corrective actions for open deficiencies are listed in the weekly issue of "Corrective Action Status for Department Managers." On the next few pages are summaries of quality assurance actions.

PERFORMANCE INDICATORS

A recent QA study was performed on CARs and DRs issued in the last five years. Two years ago, the issuance of DRs were eliminated from the YMP QA system. Since then, any condition adverse to quality has been reported in a CAR. The details for the last two years are summarized below.

Once a CAR is issued the responsible management has between 10 and 20 working days to respond. This response should document a corrective action plan and the time needed to implement this plan. If the responsible person is unable to meet any of the due dates a time extension must be requested in writing. This request for extension includes the explanation and justification for the additional time needed to complete the CAR. This request for extension must be approved by the QA Department Manager. Any time an action or response is past due and an extension has not been requested compliance to the QA Plan is not being met.

Two charts are shown on Attachment 1 that present a graphical summary of the time required to complete CARs issued in 1992 and 1993. These charts reflect time in calendar days as opposed to working days to allow for better appreciation of the time required to complete CARs. The charts show the time allowed to respond and the additional time requested to complete the CARs.

Any time periods during which SNL is out of compliance is displayed in white. Over the last two years more than 86% of the CARs issued were out-of-compliance for some portion of time. It should be noted that CARs 93-02 through 93-10 took an abnormal amount of time to complete. The reason for the lengthy time to complete these CARs was due to insufficient activity funding. During this time no work was done on that contract. It should also be noted that number of requests for extension per CAR has gradually increased over time.

FY1993 AUDIT SUMMARY

Audit Number	Action Party	Status
YMP 93-21	---	Corrective action verification is complete and the audit closed.
MIT-A93-01	---	Corrective action verification is complete and the audit closed.
NCAR-A93-01	---	Corrective action verification is complete and the audit closed.
ITC-A93-01	---	Three deficiencies and one observation were issued. All corrective actions are complete.
SNL-A93-01	SNL	Five deficiencies and eight observations were issued. One deficiency remains open.
YMP 93-17	SNL	Five deficiencies were issued. Corrective action responses for four were submitted, proposed corrective action for one is being redone.

CORRECTIVE ACTION REPORT COMPLETION SUMMARY

August, 1993-October, 1993 Reporting Period

SNL CORRECTIVE ACTION REPORT SUMMARY	#Opened	#Completed	#Open
<u>Internal Audit Reports</u>			
SNL Findings	0	4	1
SNL Observations	0	8	0
<u>Contract Audit Reports</u>			
SNL Findings	0	3	0
SNL Observations	0	1	0
Surveillance related	0	2	0
Activity related	1	1	0
YMPO: CARs	6	0	6
TOTAL	7	19	7

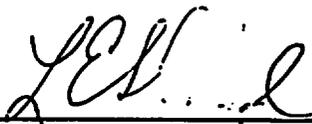
Copy to:

6115 P. B. Davies
6312 H. A. Dockery
6313 L. S. Costin
6319 R. R. Richards
6319 J. C. Friend
6319 D. R. Hawkinson
6319 J. V. Volgt
6319 D. P. Wrobel
6351 R. E. Thompson
6352 S. E. Sharpton
6352 94/1.2.11.1/VER/1.6/QA
6352 YMP CRF

This QA Program Report has been reviewed and assessed by the SNL Yucca Mountain Site Characterization Project Manager.

In the time period since the end of the period covered by this report, several management actions have been taken to address situations documented herein and to generally improve QA Program implementation.

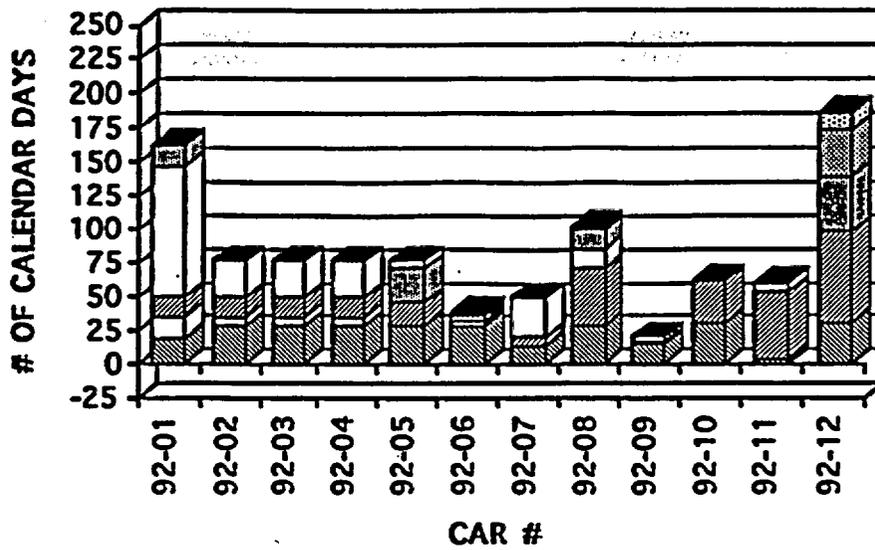
- 1) By means of written direction and direct, face-to-face consultation, I have unambiguously advised managers and task leaders of the importance I place on implementing a well-thought-out graded QA system (documented in QAGRs) for their work, by means of Work Agreements. Understanding of, and utilization of such documents, has markedly improved.
- 2) Similarly, my concern for timely response to Corrective Action Requests has been emphasized to SNL YMP Project personnel.
 - I have established goals of 5 days for CAR response, 40 days for CAR close-out, and no CAR extensions; these goals have been disseminated to all SNL YMP personnel.
 - For each CAR, I have required that information on performance against those metrics is included in the weekly QA Deficiencies Status Report that is provided to all SNL YMP managers. Information in that report is then reviewed and discussed during my biweekly project management meetings.



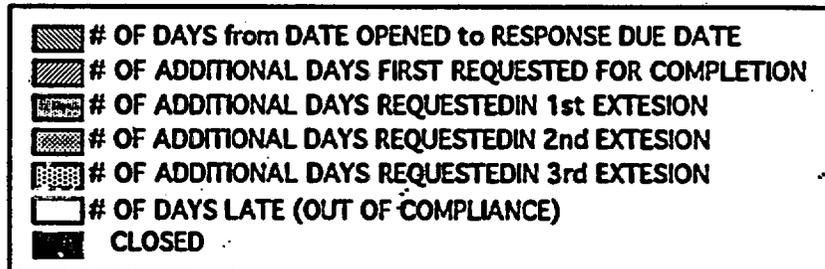
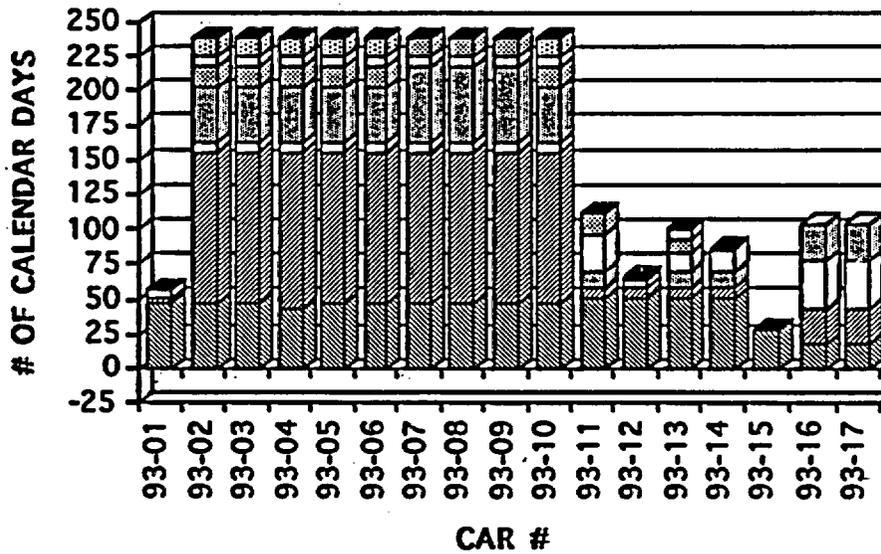
Project Manager, Department 6302

11-30-93
Date

SUMMARY OF TIME REQUIRED TO COMPLETE 1992 CARS



SUMMARY OF TIME REQUIRED TO COMPLETE 1993 CARS



OFFICE OF CIVILIAN
RADIOACTIVE WASTE MANAGEMENT
U.S. DEPARTMENT OF ENERGY
WASHINGTON, D.C.

⁸ CAR NO. YM-94-090
PAGE 1 OF 1
QA

CORRECTIVE ACTION REQUEST (CONTINUATION PAGE)

CAR YM-94-090

VERIFICATION OF CORRECTIVE ACTION:

Based on your response and the attached submittals of the two Trend reports that were not sent to the Division Director of YMQAD, no further action is required. This CAR is considered closed.


R.L. Maudlin

11/08/94
Date