

OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT

QUALITY ASSURANCE AUDIT REPORT

FOR

AUDIT NUMBER YMP-92-05

OF

LAWRENCE LIVERMORE NATIONAL LABORATORIES

LIVERMORE, CALIFORNIA

DECEMBER 3 THROUGH 5, 1991

Prepared by: Richard L. Maudlin Date: 01-14-92  
Richard L. Maudlin  
Audit Team Leader  
Yucca Mountain Quality Assurance Division

Approved by: D. G. Horton Date: 1/14/92  
Donald G. Horton  
Director  
Office of Quality Assurance

9202040192 920115  
PDR WASTE  
WM-11 PDR

ENCLOSURE

## EXECUTIVE SUMMARY

This report contains the results of the first limited scope audit conducted by the U. S. Department of Energy/Office of Civilian Radioactive Waste Management of Lawrence Livermore National Laboratory (LLNL). Audit No. 92-05 was conducted from December 3 through 5, 1991, at LLNL in Livermore, California. The purpose of the audit was to evaluate the effectiveness of implementation of the LLNL Quality Assurance program as it pertains to Yucca Mountain Site Characterization Project (YMP) activities.

The effectiveness of implementation of the following criteria were evaluated during the audit: 1, Organization; 2, Quality Assurance Program; 11, Test Control; 15, Nonconforming Items; 16, Corrective Action; and 18, Audits. Criteria 1 and 15 were effectively implemented. Criteria 2 and 16 were effectively implemented for the following activities: Quality Procedure QP 2.1, Preparation, Approval and Revision of Procedures, Requirements, Plans and the Quality Assurance Program Description; QP 2.3, Management Assessment; QP 2.9, Indoctrination and Training; QP 2.10, Qualification of Personnel; QP 16.1, Processing of Externally Originated Corrective Action Documents; and QP 16.2, Trend Analysis.

Criterion 11 and the following specific activities within Criteria 2 and 16 were either not implemented or implementation was limited and therefore effectiveness could not be determined: Peer Review (QP 2.2), Acceptance of Data Not Generated Under the Control of the YMP QAPP (QP 2.5), Readiness Review (QP 2.6), and Stop Work Order (QP 2.7) were not implemented, while Corrective Action (QP 16.0) had been implemented to a certain degree.

Criterion 18 is categorized as marginally effective due to the identification of a recurring deficient condition within the audit program as documented by Corrective Action Report (CAR) YM-92-018. However, the audit team noted improvement in this area since the last audit and concludes that recent changes in the audit program should preclude recurrence of this condition.

In addition to the identified CAR, seven additional conditions adverse to quality were identified and corrected during the audit. Corrected conditions adverse to quality were identified in Criteria 2, 16, and 18.

## 1.0 INTRODUCTION

This report contains the results of the U.S. Department of Energy (DOE)/Office of Civilian Radioactive Waste Management (OCRWM) Audit of Lawrence Livermore National Laboratory (LLNL). Audit No. YMP-92-05 was conducted from December 3 through 5, 1991 at LLNL in Livermore, California.

## 2.0 AUDIT SCOPE

The purpose of this limited scope audit was to evaluate the effectiveness of implementation of specific programmatic elements within the LLNL Quality Assurance (QA) program as they pertain to Yucca Mountain Site Characterization Project (YMP) activities. A team from the Yucca Mountain Quality Assurance Division (YMQAD) of the Office of Quality Assurance verified compliance to programmatic requirements and evaluated effectiveness of implementation as imposed by OCRWM.

The following programmatic elements were evaluated during the audit:

- 1.0 Organization
- 2.0 Quality Assurance Program
- 11.0 Test Control
- 15.0 Control of Nonconforming Items
- 16.0 Corrective Action
- 18.0 Audits

## 3.0 AUDIT TEAM PERSONNEL AND OBSERVERS

Audit Team Leader (ATL)	Richard L. Maudlin, MACTEC/YMQAD, Criteria 1 and 2
ATL-in-Training	Richard L. Weeks, SAIC/YMQAD, Criteria 11, 15, and 18
Auditors	Mario R. Diaz, DOE/YMQAD, Criteria 16 and 18
	A. Edward Cocoros, MACTEC/YMQAD, Criteria 1 and 2
Observer	James Conway, U.S. Nuclear Regulatory Commission

## 4.0 AUDIT MEETINGS AND PERSONNEL CONTACTED

### 1. Pre-Audit Meeting

The Pre-Audit Conference was held at 8:30 a.m. on December 3, 1991, at LLNL with the LLNL Technical Project Officer (TPO) and staff. The purpose, scope, and proposed agenda were presented and the audit team members and observer were introduced. The TPO presented the status of site characterization activities for which LLNL is currently responsible. A list of attendees is attached as Enclosure 1.

2. Daily Meetings

Daily meetings were held with the LLNL staff to report on the progress and status of the audit. In addition, daily meetings with the audit team members and the observer were held to report any identified conditions adverse to quality.

3. Post-Audit Meeting

The Post-Audit Conference was held at 10:00 a. m. on December 5, 1991. Results of the audit were presented to LLNL-YMP management. A list of attendees is attached as Enclosure 1.

5.0 SUMMARY OF AUDIT RESULTS

1. Statement of Program Effectiveness

The following effectiveness statements are based on an examination of objective evidence as provided by the auditee and interviews with LLNL personnel.

Criteria 1 and 15 are effectively implemented. Within Criteria 2 and 16 implementation of Quality Procedures (QPs): QP 2.1, Preparation, Approval and Revision of Procedures, Requirements, Plans and the Quality Assurance Program Description; QP 2.3, Management Assessment; QP 2.9, Indoctrination and Training; and QP 2.10, Qualification of Personnel; QP 16.1, Processing of Externally Originated Corrective Action Documents; and QP 16.2, Trend Analysis are considered effective.

Due to lack of implementation of Criterion 11 and the following specific activities within Criterion 2, effectiveness is indeterminant: QP 2.2, Peer Review; QP 2.5, Acceptance of Data Not Generated Under Control of the YMP QAPP; QP 2.6, Readiness Review; and QP 2.7, Stop Work Order.

The effectiveness of QP 16.0, Corrective Action, cannot be determined at this time, due to limited implementation. Revision 3 of 003-YMP-QP 16.0, which was a complete rewrite of the procedure, was issued on October 23, 1991. LLNL Corrective Action Report (CAR) No. 003 was in the process of being issued at the time of the audit, thus sufficient documentation to determine effectiveness of implementation was not available.

Criterion 18 is considered to be marginally effective as a result of the identification of Corrective Action Request (CAR) No. YM-92-018 which is a recurring condition within the audit program and previously identified in CAR YM-91-060. The surveillance program is considered to be effectively implemented.

A total of eight conditions adverse to quality were identified during the audit. Because of LLNL's conscientious efforts during the audit, seven of these conditions were corrected during the audit resulting in only one CAR being issued.

2. Corrective Action Request (CAR)

CAR YM-92-018 - Quality Procedure 033-YMP-QP 18.0, Revision 3, Paragraph 18.0.5.6 requires that for each identified adverse finding, a CAR be identified and processed. Contrary to this, observations were generated during audits for conditions that met the definition of a finding. This is a recurring condition which was previously identified by the YMQAD in CAR No. YM-91-060.

3. Conditions Adverse to Quality Corrected During the Audit

A total of seven adverse conditions were identified and corrected during the audit and are as follows:

1. Criterion 2, Quality Assurance Program

033-YMP-QP 2.10, Revision 2, Paragraph 2.10.4.3.5, requires that the responsible Project supervisor/manager evaluate and compare resume content with the Position Description requirements to ensure that they correspond to each other. Contrary to this requirement, the resumes of two QA personnel did not reflect the minimum amount of years of experience required for the position as required by the Position Description. The resumes were revised to clarify minimum experience levels necessary to meet requirements for the positions and are now a part of the personnel records for the identified individuals.

2. Criterion 16, Corrective Action

033-YMP-R 16, Revision 0, Paragraph 1.1, of the LLNL QAPP requires that "...Upon discovering or receiving notification that a significant condition adverse to quality or an unusual occurrence exists, the LLNL-YMP assures that...Affected managers at all levels are notified of adverse conditions and of lessons learned to improve conditions or avoid similar occurrences." This requirement was not incorporated in the LLNL implementing procedure 033-YMP-QP 16.0, Revision 3. Change Notice (CN) 16.0-3-1 and CN 16.1-2-2 were issued to correct this condition.

033-YMP-QP 16.2, Revision 2, Paragraph 16.2.4.2, requires that the QA Manager issue a report of Trend Analysis activities at least annually. The audit team interpreted this to mean that the report would be issued every 12 months. However, the Trend Analysis Report (TAR) for 1990 was issued 14 months after its predecessor. Revision 3 to QP 16.2 which became effective on December 5, 1991, was issued to establish a specific deadline for issuing this report.

3. Criterion 18, Audits

The Fiscal Year (FY) 1992 Audit Schedule was issued as FY-91. This was a typographical error and corrected with the issuance of a corrected Audit Schedule, dated December 4, 1991. (See record LLYMP9110196.)

033-YMP-QP 18.0, Revision 3, Exhibit B, requires that the Lead Auditor sign the Audit Report. Contrary to this, Audit Report 91-010 was not signed by the Lead Auditor. The condition was corrected when the Lead Auditor signed the report and the corrected document was resubmitted to the Local Records Center (LRC).

033-YMP-QP 18.1, Revision 3, Paragraph 18.1.5.3, requires that the surveillance number be assigned to each surveillance when the Surveillance Schedule is first issued. Contrary to this requirement, surveillance schedules for FY-91 and FY-92 did not include surveillance numbers. The affected surveillance schedules were corrected and resubmitted to the LRC. Note: Revision 2 of 033-YMP-QP 18.1 included this same requirement.

033-YMP-QP 18.0, Revision 3, Paragraph 18.0.5.1.2, requires that for internal audits, the audit schedule identify those organizations to be audited. Contrary to this, audit schedules for FY-92 did not identify the organizations to be audited. This condition was corrected by issuance of CN 18.0-3-1 which requires that the organization or activity to be audited be specified on the audit schedule.

4. Audit Details

For details of the activities and records examined, refer to Enclosure 2.

6.0 ENCLOSURES

Enclosure 1 - Personnel Contacted During Audit

Enclosure 2 - Audit Details

Enclosure 3 - Objective Evidence Reviewed During Audit

Enclosure 4 - Corrective Action Request

ENCLOSURE 1

PERSONNEL CONTACTED DURING THE AUDIT

NAME	ORGANIZATION/ LOCATION	PRE-AUDIT MEETING	CONTACTED DURING AUDIT	POST-AUDIT MEETING
B. Alegre	LLNL/Livermore		X	
K. Baumgarten	Kaiser/Livermore			X
J. Blink	LLNL/Las Vegas	X		X
B. Bryan	LLNL/Livermore	X		X
E. Campbell	LLNL/Livermore	X		
J. Clark	LLNL/Livermore	X		X
W. Clarke	LLNL/Livermore	X	X	X
D. Good	LLNL/Livermore		X	
W. Halsey	LLNL/Livermore		X	
R. Hamati	Kaiser/Livermore	X	X	X
R. Monks	Kaiser/Livermore	X	X	X
J. Podobnik	LLNL/Livermore	X		X
D. Ruffner	LLNL/Livermore			X
R. Schwartz	LLNL/Livermore	X	X	X
R. Stout	LLNL/Livermore	X		X
D. Wilder	LLNL/Livermore	X		

ENCLOSURE 2

## AUDIT DETAILS

The following is a detailed description of programmatic activities evaluated during the audit. A list of objective evidence reviewed during the audit is shown in Enclosure 3. LLNL staff that were interviewed during the Audit are listed in Enclosure 1. The full document identification, revision status, and title for documents referenced below can be found in Enclosure 3.

### 1.0 Organization

This criteria was evaluated to determine compliance to LLNL Quality Assurance Program Plan 033-YMP-R 1, Revision 1 and Quality Procedure 033-YMP-QP 1.0, Revision 1. This evaluation was conducted by questioning key personnel to determine their awareness and understanding of the following program items and their role in implementing the requirements of the Quality Assurance Program:

- o Organizational structure
- o Authority and assigned functional responsibilities of persons performing activities effecting quality
- o Lines of communication within LLNL and between LLNL and outside contractors and the YMPO
- o Resolution of disputes and conflicts relative to quality assurance (QA) items.
- o Definitions of procedures and requirements necessary to assure achievement of quality objectives
- o Identification and reporting of quality related issues and problems.

It was determined that personnel interviewed have a clear understanding of both the requirements for the LLNL YMP organization and how these requirements are being implemented. Based on this audit, except for one adverse condition dealing with the "full time dedication" of the QA Manager, which was addressed in Corrective Action Request (CAR) LLNL-003, the implementation of the requirements of Criterion 1 are considered effective.

### 2.0 Quality Assurance Program

1. The evaluation of this program was conducted by reviewing objective evidence and interviewing LLNL personnel relative to the following requirement documents.
  1. 033-YMP-QP 2.1, Revision 3 - Preparation, Approval and Revision of Procedures, Requirements, Plans and Quality Assurance Program Description

The audit evaluated the updating of documents to conform to changes to the requirements of the Quality Assurance Requirements Document (QARD). It was found that a matrix which had been developed to assure that changes to the QARD were incorporated into the LLNL QAPP, and subsequently to the QA procedures, was not being kept up-to-date. LLNL QA issued Corrective Action Report 091-056 on June 7, 1991 to document this condition. The corrective action to resolve this condition is being delayed until the newly created OCRWM Requirements Document "DOE/RW-QARD, R0" is issued.

2. 033-YMP-QP 2.3, Revision 0 - Management Assessment

The Management Assessment procedure was evaluated by reviewing the annual Management Assessment Report, dated June 28, 1991 which described the management assessment conducted during the period of April 19, 1991 through May 31, 1991, and by interviewing J. Blink (Deputy TPO) and R. Monks (LLNL YMP QA Manager).

3. 033-YMP-QP 2.9, Revision 2 - Indoctrination and Training

The evaluation of Indoctrination and Training of personnel was performed by reviewing personnel records of persons who joined LLNL since the last audit, YMP-90-01 (6/3-7/91), and training records of training related to changes to QA procedures during this period. A total of 10 LLNL and other contractor's personnel files were reviewed.

4. 033-YMP-QP 2.10, Revision 2 - Qualification of Personnel

The evaluation of the qualification of personnel was performed by reviewing personnel records for compliance with the requirements of the above procedure. Six LLNL and other contractor's personnel files were reviewed and it was found that the resumes of 2 persons were not complete. The incomplete resumes did not indicate the years of QA experience, thus it was impossible to determine if individuals met minimum experience requirements for their respective positions. The resumes were revised to indicate years of QA experience. Verification of this corrective action was completed during the audit.

2. The implementation of the following procedures was considered indeterminate since these procedures have not been utilized to date:

033-YMP-QP 2.2, Revision 0 - Peer Review

033-YMP-QP 2.5, Revision 0 - Acceptance of Data Not Generated Under the Control of the YMP QAPP.

033-YMP-QP 2.6, Revision 1 - Readiness Review

033-YMP-QP 2.7, Revision 1 - Stop Work Order

#### 11.0 Test Control

An evaluation of this criterion was made to determine compliance with 033-YMP-R 11, Revision 0. Interviews with LLNL personnel indicated that this criterion has never been implemented as of the date of this audit and that there is no intention to implement it for scientific studies. Discussions with LLNL staff indicated that this criterion will be implemented during the construction phase of the Project.

#### 15.0 Control of Nonconforming Items

There have been no NCRs issued since the last audit (YMP-91-01) and as indicated by a review of the QA Action Item List all NCRs are closed.

Five completed NCR record packages were examined to determine compliance to 033-YMP-QP 15.0, Revision 2 and all requirements were met.

Monthly status reports to indicate the status of NCRs were examined for the period from 12/90 to 11/91 and found to meet requirements. The last NCRs to be closed were in 1/91.

#### 16.0 Corrective Action

Implementation of 033-YMP-QP 16.0, Revision 3 was limited due to its recent issuance on 10/23/91. CAR LLNL-003 was in the process of being issued during the audit however, sufficient documentation was not yet available for examination and therefore, effectiveness could not be determined.

Evaluation of the implementation of 033-YMP-QP 16.1, Revision 2, "Processing of Externally Originated Corrective Action Documents," was found to be adequate based on their resolution of YMQAD CARs YMP-91-055 through -062. Five Weekly QA Action Item Lists were reviewed and the status of each examined CAR listed above was found to be on this list. Two Monthly Status Reports were examined and found to be acceptable.

Evaluation of the implementation of 033-YMP-QP 16.2, Revision 2 was found to be adequate. The Trend Analysis Report (TAR) for 1990 was examined and found to contain all required information. Revision 3 to QP 16.2 was issued to establish a deadline for the issuance of the TAR.

#### 18.0 Audits

Criteria 18 was evaluated to determine compliance to 033-YMP-QP 18.0, Revision 3. The FY92 Audit Schedule was examined and found to be adequate except for the typo discussed in Section 5.0. Documentation for 10 internal audit reports were examined and found to cover all applicable QAPP and technical activities for FY 91. Five external audits, which evaluated the activities of all subcontractors working for LLNL, were examined and found to meet procedural requirements. Several conditions adverse to quality were identified and corrected during the

audit and are discussed in detail in Section 5.0. CAR YM-92-018 was issued to identify a significant condition adverse to quality. This is a recurring condition and was previously identified in CAR YM-91-060.

One surveillance, S91-01, was conducted during FY91 and found to meet procedural requirements. LLNL staff indicated that this surveillance was of a non-quality activity. When LLNL staff was questioned about the low number of surveillances, they indicated that budget reductions have reduced the level of activity to such a degree that what work is being done is evaluated during the audits.

ENCLOSURE 3

## OBJECTIVE EVIDENCE REVIEWED DURING THE AUDIT

### QUALITY ASSURANCE PROGRAM PLAN

LLNL-YMP Quality Assurance Program Plan, No. C (Revision 16 of Table of Contents)

### QUALITY ASSURANCE PROCEDURES

033-YMP-QP 1.0, Revision 1 - Organization

- CN 1.0-1-4
- CN 1.0-1-3
- CN 1.0-1-2
- CN 1.0-1-1

033-YMP-QP 2.1, Revision 3 - Preparation, Approval and Revision of Procedures, Requirements, Plans and the Quality Assurance Program Description.

- CN 2.1-3-1

033-YMP-QP 2.3, Revision 0 - Management Assessment

- CN 2.3-0-2
- CN 2.3-0-1

033-YMP-QP 2.9, Revision 2 - Indoctrination and Training

- CN 2.9-2-4
- CN 2.9-2-3
- CN 2.9-2-2
- CN 2.9-2-1

033-YMP-QP 2.10, Revision 2 - Qualification of Personnel

- CN 2.10-2-1

033-YMP-QP 15.0, Revision 2 - Nonconforming Items

- CN 15.0-2-2
- CN 15.0-2-1

033-YMP-QP 16.0, Revision 3 - Corrective Action

033-YMP-QP 16.1, Revision 2 - Processing of Externally Originated Corrective Action Documents

- CN 16.1-2-1

033-YMP-QP 16.2, Revision 2 - Trend Analysis

- CN 16.2-2-1

033-YMP-QP 18.0, Revision 3 - Audits

033-YMP-QP 18.1, Revision 3 - Surveillances

033-YMP-QP 18.2, Revision 1- Qualification of Quality Assurance Audit Personnel

CN 18.2-1-4

CN 18.2-1-3

CN 18.2-1-2

CN 18.2-1-1

NONCONFORMANCE REPORTS

NCR-031

NCR-032

NCR-033

NCR-039

NCR-055

MONTHLY STATUS REPORT FOR NCRs

Examined reports for period: 12/90 through 11/91

WEEKLY QA ACTION ITEM LISTS:

All lists examined for time period: 1/18/91 to 11/29/91

CORRECTIVE ACTION REPORTS:

CAR LLNL-003

CORRECTIVE ACTION REQUESTS:

YMP-91-055 through YMP-91-062

TREND ANALYSIS REPORTS (TAR)

Report for 1990, issued 4/2/91

ANNUAL AUDIT SCHEDULES:

FY91 Revision 0 - LLYMP9010145

FY91 Revision 1 - LLYMP9103070

FY91 Revision 2 - LLYMP9107158

FY91 Revision 3 - LLYMP9110032

FY92 Revision 0 - LLYMP9110196 (corrected version)

AUDITS:

Internal Audits 91-01 through 91-10  
External Audits 91-11 through 91-15

SURVEILLANCE REPORT:

S91-01

AUDITOR QUALIFICATION RECORDS

R. Hamati  
R. Monks

MISCELLANEOUS RECORDS

Qualification files for LLNL and contract personnel.

S. Larsen, LLNL  
B. McKinley, LLNL  
R. Monks, Kaiser

L. Morgan, LLNL  
J. Nielsen, LLNL  
R. Schwartz, LLNL

Indoctrination/training records of 10 LLNL and contract personnel.

J. Blink, LLNL  
L. Campbell, LLNL  
W. Clarke, LLNL  
R. Hamati, Kaiser  
S. Larsen, LLNL

B. McKinley, LLNL  
R. Monks, Kaiser  
L. Morgan, LLNL  
J. Nielsen, LLNL  
R. Schwartz, LLNL

LLNL letter LLYMP91120115, Subject: LLNL-YMP Quality Assurance Manager, dated 12/4/91.  
Note: This clarifies the relationship of the LLNL Energy Program Issuance Manager and the LLNL QA Manager.

LLNL memorandum, dated 9/3/91, Subject: Changes in the Yucca Mountain Project, from Bob Schock to Distribution.

LLYMP9109140, Subject: Yucca Mountain Status Report, August 1991 to YMPO Project Manager.  
LLYM9110034, Subject: Yucca Mountain Status Report, September 1991 to YMPO Project Manager.

LLYMP9112008, Subject: Weekly Action Item List from Joanne Clark to Distribution, dated 12/2/91.

LLYMP9112006, Subject: Summary of Evaluation and Corrective Actions for LLNL-YMP, November 1991, from R. E. Schwartz to Distribution, dated 12/2/91.

Announcements related to weekly YMP LLNL TPO staff meetings of 11/18/91, 11/25/91, and 12/02/91.

LLNL letter LLYMP9109037, Subject: LLNL-YMP Quality Assurance Manager, dated 9/5/91, from W. L. Clarke to D. G. Horton.

LLNL-YMP Action Item List, dated 12/2/91.

LLNL letter LLYMP9105105, Subject: Counterfeit Components, from DOE-YMP Project Manager to YMP Participant TPOs, dated 5/8/91.

LLNL letter YMP9106058, Subject: Counterfeit Components, from LLNL Project TPO to DOE-YMP Project Manager.

LLNL Document LLYMP9108050, Subject: Yucca Mountain Project Management Assessment 91-01, from Robert Schock to Les Jardine, dated 9/9/91.

Internal Memorandum, Subject: YMP FY91 Management Assessment, from Bob Schock to Les Jardine, dated 4/1/91.

**ENCLOSURE 4**

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

8 CAR NO.: YM-92-018  
DATE: 12-10-91  
SHEET: 1 OF 2  
QA

**CORRECTIVE ACTION REQUEST**

1 Controlling Document 033-YMP-QP No. C, Revision 2 and 033-YMP-QP 18.0, Revision 3	2 Related Report No. Audit Report YMP-92-05
--	--

3 Responsible Organization LLNL	4 Discussed With R. Monks
------------------------------------	------------------------------

5 Requirement:

No. C, Terms and Definition, states in part, "Adverse Finding: 3) a violation of an established policy, procedure, instruction, or drawing requirement."

Paragraph 18.0.5.6 states in part, "Each Adverse Finding is further identified and processed using a Corrective Action Report (CAR)..."

6 Adverse Condition:

Contrary to the requirement above, LLNL issued Audit Reports for Audits 91-02, 91-010, 91-14 and 91-15 which identified conditions that, as defined by LLNL Terms and Definitions, are Adverse Findings however, the Adverse Finding conditions were documented as Observations, Recommendations or Comments.

This condition is recurrent and was documented in CAR YM-91-060.

9 Does a significant condition adverse to quality exist? Yes <u>X</u> No ___ If Yes, Circle One: (A) B C	10 Does a stop work condition exist? Yes ___ No <u>X</u> ; if Yes - Attach copy of SWO If Yes, Circle One: A B C D	11 Response Due Date: 10 days from issuance
---	---	--

12 Required Actions:  Remedial  Extent of Deficiency  Preclude Recurrence  Root Cause Determination

13 Recommended Actions:

Since this is a recurring condition an expedited response is requested of LLNL.

Complete and document remedial actions taken to correct specific deficiencies.

Investigate identified deficient documentation to determine extent of condition.

7 Initiator M. Diaz 12-10-91 Date	14 Issuance Approved by: QADD <i>R.C. Prince</i> Date 12/10/91
15 Response Accepted QAR <i>Richard A. Weeks</i> Date 12/31/91	16 Response Accepted QADD <i>R.C. Prince</i> Date 1/2/92
17 Amended Response Accepted QAR Date	18 Amended Response Accepted QADD Date
19 Corrective Actions Verified QAR Date	20 Closure Approved by: QADD Date

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

8 CAR NO.: YM-92-018  
DATE: 12-10-91  
SHEET: 2 OF 2  
QA

**CORRECTIVE ACTION REQUEST (Continuation Page)**

13 Recommended Action(s) (continued)

Determine root cause of condition.

Document corrective actions taken to prevent recurrence of condition.