U.S. DEPARTMENT OF ENERGY

OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT

OFFICE OF QUALITY ASSURANCE

AUDIT REPORT OF

LOS ALAMOS NATIONAL LABORATORY

LOS ALAMOS, NEW MEXICO

AUDIT NO. YMP-92-19

JULY 7 THROUGH 10, 1992

PROGRAM ELEMENTS EVALUATED:

1.0	Organization
2.0	Quality Assurance Program
3.0	Scientific Control and Design Control (Specific to Control of Software EQ 3/6)
8.0	Identification and Control of Samples and Data (Specific to Control of Data)
13.0	Handling, Shipping, and Storage
15.0	Control of Nonconformances
16.0	Corrective Action
18.0	Audits

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EXECUTIVE SUMMARY

This report contains the results of the U.S. Department of Energy (DOE) Office of Civilian Radioactive Waste Management (OCRWM) Audit YMP-92-19 of Los Alamos National Laboratory (Los Alamos) that was conducted in Los Alamos, New Mexico, on July 7 through 10, 1992. This external audit was performed by a team of auditors from the Yucca Mountain Quality Assurance Division (YMQAD) of the Office of Quality Assurance (OQA) and evaluated the implementation of eight Quality Assurance (QA) Program Elements described in the Los Alamos Quality Assurance Program Plan (QAPP), Revision 5. This was done by verifying implementation and effectiveness of the system in place, as well as verifying compliance with requirements.

Overall, for the QA Program Elements audited, Los Alamos is satisfactorily implementing an effective QA program in accordance with the Los Alamos QAPP and implementing procedures. Five of eight QA Program Elements audited (QA Program Elements 1.0, 2.0, 15.0, 16.0, and 18.0), are being implemented satisfactorily, and there has been no implementation in the following areas to determine compliance: QA Program Elements 3.0, Control of EQ 3/6 Software; 8.0, for Submittal of Data; and 13.0.

The audit team identified three deficiencies during the course of the audit that required the issuance of OCRWM Corrective Action Requests (CARs). Two were considered to be additional examples of a deficiency previously identified in CAR No. YM-91-041 dealing with inconsistencies between the Los Alamos QAPP and implementing procedures. The new CAR involves the performance of work without an appropriate QA grading report.

In addition, four deficiencies were identified and corrected by Los Alamos as a result of the audit. Details of issued OCRWM CARs and corrected deficient conditions are found in Sections 6.1 and 6.2 of this Audit Report.

In addition to the above, it should be mentioned that the YMQAD Audit Team appreciated the cooperativeness and professional attitude exhibited by Los Alamos staff during the conduct of this audit.

1.0 INTRODUCTION

This report contains the results of the DOE OCRWM OQA QA Audit No. YMP-92-019 of Los Alamos conducted at Los Alamos, New Mexico on July 7 through 10, 1992. This audit was performed in accordance with the approved audit plan (Reference: Correspondence OQA:MRD-4084, dated June 24, 1992).

2.0 AUDIT SCOPE

This audit, evaluated the effectiveness of the Los Alamos QA Program in meeting the requirements and commitments imposed by OCRWM. This was done by verifying implementation of QA requirements delineated in the Los Alamos QAPP and implementing procedures.

Los Alamos activities associated with following QA Program Elements were audited:

Program Elements

1.0 Organization
2.0 Quality Assurance Program
3.0 Scientific Control and Design Control (Specific to control of software EQ 3/6)
8.0 Identification and Control of Samples and Data (Specific to control of data)
13.0 Handling, Shipping, and Storage
15.0 Control of Nonconformances
16.0 Corrective Action
18.0 Audits

The following QA Program Element was not audited since Los Alamos has no activity to which this element applies:

11.0 Testing

The objective evidence of each QA Program Element reviewed during the audit, is detailed in Enclosure 4.

3.0 AUDIT TEAM AND OBSERVERS

The list of audit team members, the program elements or technical activity they evaluated, and observers can be found in Enclosure 1.

4.0 AUDIT MEETINGS AND PERSONNEL CONTACTED

The pre-audit conference was held at Los Alamos Technical Associates (LATA) facilities in Los Alamos, New Mexico, on July 7, 1992. Daily coordination meetings were held with Los Alamos management and staff, and daily audit team/observer meetings were held to discuss issues and potential deficiencies. The audit was concluded with a post-audit conference at the LATA facilities in Los Alamos, New Mexico, on July 10, 1992. A list of auditors, observers, and personnel contacted during the audit is included in Enclosure 2. The list includes an indication of those who attended the pre- and post-audit conferences.

5.0 SUMMARY OF AUDIT RESULTS

5.1 Program Effectiveness

Overall, Los Alamos is satisfactorily implementing an effective QA program in accordance with the Los Alamos QAPP and implementing procedures. Five of eight QA Program elements audited, QA Program Element 1.0, "Organization," 2.0, "Quality Assurance Program," 15.0, "Control of Nonconformances," 16.0, "Corrective Action," and 18.0, "Audits," are being implemented satisfactorily. The effectiveness of implementation of QA Program Element 3.0, "Scientific Control and Design Control," (specific to EQ 3/6 software), 8.0, "Identification and Control of Samples and Data," (specific to data), and 13.0, "Handling, Shipping and Storage" could not be determined due to a lack of activity in the areas cited.

5.2 Programmatic Audit Activities

Details of programmatic audit activities are included as Enclosure 3 of this report.

5.3 Summary of Deficiencies

The audit team identified a total of seven deficient conditions during the course of the audit. Four of these conditions were considered isolated in nature requiring only remedial actions and were corrected by Los Alamos as a result of the audit. One deficiency resulted in the issuance of a CAR and the other two deficiencies were added to pre-existing CAR, No. YM-91-041. A synopsis of the issued deficiencies and the deficiencies corrected are included in Sections 6.1 and 6.2 of this Audit Report.

6.0 SYNOPSIS OF DEFICIENCIES

6.1 Corrective Action Requests

The OCRWM CAR listed below was issued as a result of the audit. An information copy of the CAR is provided as Enclosure 5 of this report.

YM-92-057 Contrary to the requirements of the Los Alamos QAPP, Revision 5, and Administrative Procedure (AP)-5.28Q, Revision 2, "Quality Assurance Grading," an appropriate grading report has not been generated for the scoping work being performed in the area of Ground Water Chemistry Modeling associated with Work Breakdown Structure (WBS) No. 1.2.3.4.1.1.

CAR YM-91-041 was issued as a result of audit YMP-91-03 and corrective action is pending on the issuance of the new Quality Assurance Requirements Document. CAR YM-91-041 deals with the fact that QAPP requirements are not appropriately transcribed into Los Alamos Quality Procedures (QPs). During the audit additional examples of QAPP requirements not being appropriately transcribed into implementing procedures were identified and are as follows:

1) Procedures do not reflect reporting relationships or the organization as established within the Los Alamos QAPP. Examples include: LANL-YMP-QP-16.3, Revision 1, which provides a position of Deficiency Report (DR) coordinator and LANL-YMP-QP-17.5, Revision 0, which provides for a Resident File Custodian (RFC) without defining the reporting relationships within the procedures.

2) Los Alamos QAPP requires that for DRs dispositioned "use as is" or "repair" that Los Alamos will obtain approval by the appropriate "Yucca Mountain Project Branch Chief" and the "Project Quality Assurance Manager" prior to implementation. In addition, if continuance is required the continuance shall be approved by the Technical Project Manager, QA Project Leader, Project QA Manager, and the YMP Branch Chief. In review of Los Alamos-YMP-QP-15.2, Revision 1, these requirements have not been included in Los Alamos procedures.

These deficiencies will be added to CAR YM-91-041 and Los Alamos is requested to take appropriate action to resolve the additional deficiencies and be prepared to discuss the action(s) taken during YMQAD follow-up verification of this CAR.

6.2 Deficiencies Corrected During the Audit

Conditions adverse to quality that are considered isolated in nature and requiring only remedial action can be corrected during the audit without issuance of a CAR. The following conditions adverse to quality were identified and corrected during the audit:

1. LANL-YMP-QP-2.5, Revision 1, requires that the employee sign and date their Personnel Qualification Evaluation (PQE) form. During the audit, 18 PQEs were examined and of these, one PQE was found which had not been signed and dated by the employee as required (Reference PQE for E. Nuttall). Upon identification of this deficiency the PQE in question was signed and dated by the appropriate employee.

2. LANL-YMP-QP-2.5, Revision 1, requires the generation of a Position Description (PD) for each employee. In review of PDs it was noted that one PD was not available within the training file (reference training file for G. Treadwell). The supervisor of the individual in question was contacted and the PD was produced. In interviews with the supervisor it appears that the original PD was transmitted to the training department to be placed in the training file. However, the original PD had apparently been lost or misplaced. A copy of the PD which had been retained by the supervisor was placed by Los Alamos in the training file for future reference.

3. In addition to the above, one Research Technician and an Associate Investigator (reference training files for E. Kluk and G. Guthrie respectively) did not have their PQEs in their files. Another Research Technician (reference training file for C. Montoya) did not have either the PD or the PQE. In research for these deficiencies, it was noted by Los Alamos that the employees in question all worked for the same supervisor who was on vacation at the time of the audit. As such, a follow-up was made after the exit of the audit to verify if these documents could be located. The supervisor of these individuals, in follow-up, was contacted to verify the status of these documents. The supervisor produced the documents in question and provided copies to the audit team and, as ascertained through telecommunications, to the training files. The deficiencies as noted, are considered isolated to this one supervisor based upon the review of 18 personnel files, and as such, it was determined that only remedial action was necessary at this time.

4. TWS-QAS-QP-18.3, Revision 2, requires that an annual evaluation be performed for lead auditors to assure that proficiency has been maintained in accordance with procedural guidelines. In review of lead auditor qualifications, one lead auditor (J. Day) was found to have not had his annual evaluation performed within the required time frame. In discussion with the Los Alamos Quality Assurance Project Leader (QAPL), it was noted that he had performed this evaluation within the required time frame; however, no objective evidence could be produced. In resolution to this deficiency a proficiency evaluation was performed by the Los Alamos QAPL. Review of the evaluation and the subject Lead Auditor maintenance qualification was found to be satisfactory.

7.0 RECOMMENDATIONS

During the audit, several areas were identified within the Los Alamos QA Program where there were opportunities for improvement. The following recommendations are offered for Los Alamos management consideration:

1. Readiness reviews which are to be conducted for quality-affecting activities which are considered major in nature are performed in accordance with TWS-QAS-QP-02.3. In discussions with cognizant Los Alamos personnel it was found that at present time no readiness reviews had been accomplished nor are any planned in the immediate future. It is recommended that Los Alamos evaluate what is considered as major, and further define this within their procedure.

2. During the course of the audit, a review was performed by the audit team of the results of the Los Alamos Management Assessment which was performed in May, 1992. In discussion with Los Alamos management and in review of the procedure for management assessments TWS-QAS-QP-02.4, there appeared to be some confusion as to what is required in follow-up by management relative to the report. Follow-up is still considered to be in process; however, it is recommended that Los Alamos review the management assessment procedure and revise it as necessary concerning the tracking and resolution of recommendations which were provided by the assessment team. It also recommended that management evaluate and close the assessment teams recommendations in a timely manner.

8.0 LIST OF ENCLOSURES

Enclosure 1: Audit Team Members and Observers
Enclosure 2: Personnel Contacted During the Audit
Enclosure 3: Audit Details
Enclosure 4: Objective Evidence Reviewed During the Audit
Enclosure 5: Information Copy of Corrective Action Request

ENCLOSURE 1

AUDIT TEAM MEMBERS AND OBSERVERS

AUDIT TEAM:

Name	Title/Organization	QA Program/Area Assignment
John S. Martin	Audit Team Leader, Science Applications International Corporation (SAIC)/YMQAD	13.0 and 18.0
Sandra Bates	Auditor, SAIC/YMQAD	1.0, 15.0 and 16.0
Mario Diaz	Auditor, DOE/YMQAD	2.0 and 8.0
Richard L. Maudlin	Auditor, MAC Technical Services (MACTEC)/SAIC	3.0

OBSERVERS:

Donald G. Horton, DOE, Director, Office of Quality Assurance

ENCLOSURE 2

PERSONNEL CONTACTED DURING THE AUDIT

Name	Organization/Title	Pre-Audit	Contacted During Audit	Post-Audit
Bates, S.	SAIC/YMQAD Auditor	X	X	X
Birdsell, K.	Los Alamos Principal Investigator (PI)		X	
Bolivar, S.	Los Alamos QA Project Leader	X	X	X
Brackhahn, K.	Los Alamos Administration Spec.	X		
Broxton, D.	Los Alamos Technical Coordinator		X	
Canepa, J.	Los Alamos Technical Project Officer	X	X	X
Chavez, P.	LATA Training Coordinator	X	X	X
Clevenger, M.	Los Alamos QA Liaison	X	X	
Crook, E.	Los Alamos RFC	X	X	
Day, J.	LATA QA Verif. Coordinator	X	X	X
Diaz, M.	DOE/YMQAD Auditor	X	X	X
Ebinger, M.	LATA PI		X	
Espinosa, M.	Los Alamos	X		X
Gainer, G.	LATA QA Engineer	X	X	
Gillespie, P.	LATA QA Engineer	X	X	X
Horton, D.	DOE, Director, OQA	X	X	
Levy, S.	Los Alamos PI		X	
Lopez, L.	Los Alamos Data Coordinator	X	X	X
Martin, J.	SAIC/YMQAD Lead Auditor	X	X	X
Martinez, S.	LATA Records Assistant	X	X	X
Maudlin, R.	MACTEC/SAIC Auditor	X	X	
Mitchell, A.	Los Alamos Research Technician	X	X	
Morley, R.	Los Alamos Asso. Investigator		X	
Morgan, T.	Los Alamos QA Liaison	X	X	X
Muller, M.	Los Alamos Summer Student	X		
Nuttall, E.	Los Alamos/UNM Univ. Professor		X	
Pratt, A.	Los Alamos Project Leader	X		X
Romero, B.	LATA Document Control Center	X	X	X
Springer, E.	Los Alamos PI	X	X	
Vaniman, D.	Los Alamos PI		X	
Williams, D.	LATA QA Engineer	X	X	X

ENCLOSURE 3

AUDIT DETAILS

A list of objective evidence reviewed is contained in Enclosure 4 including the full document identification number, revision number, and title for plans and procedures identified below.

Element 1.0, Organization

The evaluation of organization was conducted to determine compliance to Section 1 of the Los Alamos QAPP and QP-01.1. The evaluation included questioning eight key Los Alamos personnel assigned to YMP to determine their degree of awareness and understanding of the organizational structure, lines of communication, authority, duties, and responsibilities. It was found that personnel had a clear understanding of both the requirements for the Los Alamos YMP organization and how those requirements are being implemented.

Additionally the QAPP and 31 quality implementing procedures were reviewed to establish that key reporting relationships are identified in the QAPP. The review identified two positions as lacking upper-tier reporting relationships. These deficiencies were added to pre-existing CAR YM-91-041 and specific details are provided in Section 6.1 of the Audit Report. With the exception of the deficiencies as noted, Element 1.0 was found to be satisfactory.

Element 2.0, Quality Assurance Program

Evaluation of this program element was based on the examination of objective evidence to determine compliance with selected requirements taken from implementing procedures dealing with Readiness Reviews, Management Assessments and Orientation/Indoctrination and Training of Personnel performing quality-affecting activities.

The Los Alamos QAPP requires Readiness Reviews to be accomplished prior to major scheduled and/or planned activities. QP-02.3 establishes that a readiness review will be performed when requested by the Los Alamos Technical Project Officer. No Readiness Reviews have been performed to date, therefore this activity was is considered as no implementation.

The Los Alamos QAPP requires that a Management Assessment be performed at least annually. A Management Assessment was issued on June 11, 1992, for the calendar year 1991. As noted in Audit Report YMP-91-03 Los Alamos has identified that Management Assessments were not performed on annual bases (reference open Los Alamos DR No. LANL-0132). A review of the Management Assessment to QP-o2.4 was performed and found to meet procedural requirements. Implementation of follow-up actions as a result of the Management Assessment, have yet to accomplished at the time of the audit and are considered in process at this time.

QPs TWS-QAS-QP-02.5, TWS-QAS-QP-02.6, TWS-QAS-QP-02.7, and TWS-QAS-QP-02.9, were utilized to verify compliance by Los Alamos relative to the implementation of PDs, Personnel Qualification Evaluations, Indoctrination, Training and annual personnel evaluations of individuals performing quality activities. With the exception of the deficiencies as noted in Section 6.2, QA Program Element 2.0 was found to be satisfactory.

Element 3.0, Scientific Control and Design Control (specific to control of software EQ 3/6)

The Software QA Program is described in the LANL Software Quality Assurance Plan (SQAP), Revision 0. During this audit, the only software that was evaluated for compliance with the SQAP was EQ 3/6. This software was provided to LANL by the Lawrence Livermore National Laboratory (LLNL) on December 7, 1990. In interviews with Dr. Michael Ebinger it was learned that to date, the only application of EQ 3/6 has been for non-quality affecting work related to WBS 1.2.3.4.1.1 (Groundwater Chemistry Modeling). During the evaluation of the application of EQ 3/6, a copy of the QA Grading Report was requested for WBS 1.2.3.4.1.1. It was found that no grading report had been prepared for this activity as required by LANL's QAPP, Revision 5. Due to the absence of an approved grading report, CAR YM-92-057 was issued to document this condition.

In addition to the application of EQ 3/6 by Dr. Ebinger, the use of EQ 3/6 by Dr. Eric Nuttel of the University of New Mexico (UNM) was investigated based on documentation from LLNL, dated July 18, 1991. In discussion with the responsible PI for who Dr. Nuttall was contracted at the time the software was provided to the UNM by LLNL, it was pointed out that EQ 3/6 was not applicable to the Colloid Transport work that was assigned to Dr. Nuttall. In discussion with Dr. Nuttall, he pointed out that EQ 3/6 was provided to the UNM for use by a UNM student in his class. No conditions adverse to quality were found related to the EQ 3/6 software maintained by the UNM.

The results of the evaluation in this area disclosed that implementation of the software QA controls applied to EQ 3/6, are considered as no implementation due to lack of use related to quality-affecting activities. It should be noted that EQ 3/6 has not been entered into the Configuration Management Program by the Configuration Control Board. Also, it was observed that Dr. Ebinger was using software acquired from the U.S. Geological Survey. The software was identified as "PHREEQE."

Element 8.0, Identification and Control of Samples and Data (specific to the control of data)

Within this QA Program Element, the control and transfer of technical data was specifically audited. Deficiencies identified by Los Alamos and documented in DR No. LANL-0167, indicated that a revised version of implementing procedure QP-08.2 was required (current LANL procedure

did not coincide with requirements as set forth in APs). Los Alamos has decided to write a new procedure (LANL-YMP-QP-08.3) to include the requirements of DOE procedures AP-5.1Q, AP-5.2Q and AP-5.3Q. Said procedure was in the process of being generated during the audit. No implementation has occurred in this area in order to determine compliance.

Element 13.0, Handling, Shipping and Storage

This element was audited as follow-up to audits YMP-92-01 and YMP-92-12 which determined that Element 13.0 was indeterminate due to a lack of activity. The results of the evaluation are as follows: Implementation of TWS-QAS-QP 13.1, Revision 2, was discussed with both the QA Project Leader and the QA Verification Coordinator, and as noted in both the audit reports referenced above, Los Alamos is not implementing this procedure due to the type and scope of work they are presently involved in and it may be deleted in the near future. Therefore, no implementation has occurred in this area in order to determine compliance.

Program Quality Elements 15 and 16:

Los Alamos combines the Control of Nonconforming items and corrective action program elements into one procedure. Presently, Los Alamos works to QP-16.3; however, QP-15.2 is still in existence until all DRs generated under QP-15.2 are closed. Los Alamos documents all conditions adverse to quality on one form, the DR. To verify compliance, the DR logs, Data Base DR Files, and 18 DRs were reviewed for procedural compliance and found to be satisfactory.

Trending is performed in accordance with QP-16.2. The baseline Trending Report, dated January 1990 - December 1991, contains the results of implementation. A thorough review of the Trending Report was performed and the report was found to meet all procedural requirements.

Stop Work control is implemented by Los Alamos through QP-01.2. The Stop Work Order (SWO) Log and four SWOs were reviewed, two in process and two closed. The SWO Log and the SWOs were examined to verify compliance to procedural prerequisites for the point in time in which they existed. The results of this review were found to be acceptable.

Overall, the Los Alamos implementation of Program Elements 15.0 and 16.0 requirements is satisfactory.

Element 18.0, Audits

The evaluation of audits included a review of documentation for six audit reports of audits conducted in 1992. Specifically, the evaluation included review of audit schedules, audit plans, audit reports, findings, observations, responses to findings, closeout, and record keeping for compliance to QP-18.1. In addition, two surveillance reports were reviewed to determine

compliance to QP-18.2. This review included scheduling of activities, planning, documentation of results, deficiency reporting and follow-up, and records keeping. No deficiencies were found as a result of the review.

An evaluation of lead auditor personnel qualifications was also performed to QP-18.3. The evaluation included a review of lead auditor qualification records of four lead auditors. With the exception of the deficiency identified by the audit team, regarding one lead auditor qualification re-evaluation which was corrected during the audit, compliance to QP-18.3 was found to be acceptable.

Overall, the Los Alamos implementation of Program Element 18.0 requirements is satisfactory.

ENCLOSURE 4

OBJECTIVE EVIDENCE REVIEWED DURING THE AUDIT

The following is a list of supporting material evaluated for compliance with procedures:

Element 1, Organization

Personnel interviewed for organizational understanding to QAPP, Revision 5 and TWS-QAS-QP-01.1:

Julie Canepa	Technical Project Officer
Stephen Bolivar	Quality Assurance Project Leader
Everett Springer	Acting Project Leader
Michael Clevenger	Quality Assurance Liaison
David Broxton	Technical Coordinator
Alan Mitchell	Acting Technical Coordinator
Schon Levy	Principal Investigator
David Vaniman	Principal Investigator

Implementing procedures reviewed against QAPP for reporting relationships:

TWS-QAS-QP-01.1, R2, Procedure for Interface Control
LANL-YMP-QP-01.2, R1, Stop Work Control
LANL-YMP-QP-1.3, R1, Conflict Resolution
TWS-QAS-QP-02.3, R1, Procedure for Readiness Review
TWS-QAS-QP-2.4, R0, Procedure for Management Assessment
LANL-YMP-02.5, R1, Selection of Personnel
TWS-QAS-QP-02.6, R1, Personnel Orientation and Indoctrination
TWS-QAS-QP-02.7, R1, Personnel Training
TWS-QAS-QP-02.9, R0, Personnel Proficiency Evaluations
TWS-QAS-QP-03.5, R0, Procedure for Documenting Scientific Investigations
TWS-QAS-QP-03.7, R0, Procedure for Peer Review
TWS-QAS-QP-03.14, R1, Procedure for Submittal of Design Input for the Exploratory Shaft Facility
TWS-QAS-QP-03.15, R1, Los Alamos Test Manager's Design and Interface Control
TWS-QAS-QP-03.16, R0, Procedure for TMO Review of Design Information
LANL-YMP-QP-03.23, R,0, Preparation and Review of Technical Information Product and Study Plans
LANL-YMP-QP-04.4, R1, Procurement of Commercial-Grade Items and Services
LANL-YMP-QP-04.5, R2, Procurement of Noncommercial-Grade Items and Services
LANL-YMP-QP-06.2, R4, Document Control

LANL-YMP-QP-06.2, R1, Preparation, Review and Approval of Quality Administrative Procedures
LANL-YMP-QP-06.3, R0, Preparation, Review, and Approval of Detailed Technical Procedures
LANL-YMP-QP-08.1, R2, Identification and Control of Samples
TWS-QAS-QP-08.2, R0, Procedure for Control of Data
LANL-YMP-QP-12.1, R6, Control of Measuring and Test Equipment
TWS-QAS-QP-13.1, R2, Procedure for Handling, Storage, and Shipping Equipment
TWS-QAS-QP-15.2, R1, Deficiency Reporting
LANL-YMP-QP-16.2, R1, Trending
LANL-YMP-QP-16.3, R1, Deficiency Reports
LANL-YMP-QP-17.4, R0, Records Preparation
LANL-YMP-QP-17.5, R0, Records Processing
TWS-QAS-QP-18.1, R4, Audits
TWS-QAS-QP-18.2, R2, Surveys
TWS-QAS-QP-18.3, R2, Auditor Qualification and Certification

Element 2.0, Quality Assurance Program

Procedures and Plans utilized:

TWS-QAS-QP-02.3, R1
TWS-QAS-QP-02.4, R0
LANL-YMP-QP-02.5, R1
TWS-QAS-QP-02.6, R1
TWS-QAS-QP-02.7, R1
TWS-QAS-QP-02.9, R0

Other Documents Reviewed:

Management Assessment, dated June 11, 1992

Records examined for the following personnel (PD Descriptions, Personnel Qualification Evaluations, Indoctrination/Orientations, and Initial Training):

M. Ebinger*	W. Murphy	E. Nuttal
B. Crowe*	S. Wightman	N. Elkins*
I. Triay*	S. Reneau	M. Clevenger
K. Birdsell*	C. Overly	P. Rogers
C. Montoya	G. Treadwell	E. Kluk
L. Lopez	J. Geissman	G. Guthrie

Annual evaluation performed for those individuals with (*)

The following personnel were checked for training received to specific procedures:

Name	Procedure	Work Performed On	Training Dated
M. Clevenger	QP-17.4	7-2-92	3-9-92
I. Triay	QP-03.5	6-29-92	3-14-89
"	QP-12.1	6-29-92	5-15-92
"	QP-04.4	2-19-92	12-10-91
B. Crowe	QP-17.4	6-3-92	3-6-92
"	QP-03.23	6-3-92	3-19-92
A. Mitchell	QP-03.5	6-29-92	3-14-89
"	QP-04.4	2-19-92	12-10-91
J. Fabryka Martin	QP-04.4	3-23-92	11-18-91
P. Rogers	QP-04.4	3-30-92	12-11-91
S. Martinez	QP-17.4	4-22-92	3-2-92
J. Day	QP-18.2	7-6-92	5-30-90
G. Gainer	QP-17.4	4-8-92	3-9-92
A. Meijer	QP-04.4	10-30-91	1-28-91
M. Ott	QP-04.4	4-17-92	12-10-91
B. Romero	QP-17.4	6-22-92	3-2-92
T. Morgan	QP-17.4	5-29-92	3-4-92
"	QP-04.4	11-27-91	11-18-91
G. Casedy	QP-12.1	3-29-92	3-2-90
"	TWS-EES-13-DP-601	12-18-91	9-27-89

Element 3.0, Scientific Control and Design Control (specific to control of software EQ 3/6)

Procedures and Plans utilized:

Software Quality Assurance Plan, Revision 0
LANL QAPP, Revision 5

Other Documents reviewed:

Scientific Notebook (Dr. Michael Ebinger)
April LANL Monthly Progress Report
Quality Assurance Grading Report for WBS 1.2.3.4

Element 8.0, Identification and Control of Samples and Data (specific to the control of data)

Procedures and Plans utilized:

TWS-QAS-QP-08.2, R0
AP-5.1, R2, Control and Transfer of Technical Data on the Yucca Mountain Site Characterization Project

Other documents reviewed:

DR No. LANL-0167

Element 13.0, Handling, Shipping, and Storage

Procedures and Plans utilized:

TWS-QAS-QP-13.1, R2

Elements 15.0 and 16.0, Control of Nonconformances and Corrective Action

Procedures and Plans utilized:

TWS-QAS-QP-15.2, R1
LANL-YMP-QP-16.2, R1
LANL-YMP-QP-16.3, R1
LANL-YMP-QP-01.2, R1

Other documents reviewed:

DRs 0155, 0158, 0160, 0164, 0171, 0174, 0176, 0183, and 0186 initiated under QP-15.2

DRs 0194, 0195, 0196, 0197, 0198, 0199, 0200, 0201, and 0202 initiated under QP-16.3

DR Logs

Data Base Deficiency Report Files

Trending Report for 1/90 - 12/91

Stop Work Log

SWOs: SWO-LA-02 (closed), SWO-LA-07 (closed), SWO-LA-03 (in process), SWO-LA-006 (in process)

Element 18.0 Audits

Procedures and Plans utilized:

LANL-YMP-QP-18.1, R4
TWS-QAS-QP-18.2, R2
TWS-QAS-QP-18.3, R2

Other documents reviewed:

Audit Schedule, dated 1-24-92, Letter No. TWS-EES-13-01-92-044

Audit Reports: LANL-AR-001, LANL-AR-002, LANL-AR-003, LANL-AR-004, LANL-AR-005, and LANL-AR-016

Survey Reports: LANL-SR-92-001 and LANL-SR-002

Qualification Files: J. Day, G. Gainer, R. Shay, and P. Gellespie

ENCLOSURE 5

INFORMATION COPY OF CORRECTIVE ACTION REQUEST

ORIGINAL
THIS IS A RED STAMP

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

8 CAR NO.: YM-92-057
DATE: 7-14-92
SHEET: 1 OF 1
QA

CORRECTIVE ACTION REQUEST

1 Controlling Document	2 Related Report No.
LANL QAPP, Rev. 5 and AP 5.28Q, Rev. 2	YMP-92-19

3 Responsible Organization	4 Discussed With
LANL	J. Canepa/S. Bolivar

5 Requirement:

Los Alamos National Laboratory, Quality Assurance Program Plan, Revision 5, Section 2.2, states in part: "LANL YMP activities will be graded in accordance with Project Office guidance, and the resulting grading reports will be submitted to the Project Office for review and approval."

Administrative Procedure (AP)-5.28Q, Revision 2, Quality Assurance Grading, paragraph 2.0, states: This procedure applies to all Yucca Mountain (Project) Participants and personnel of involved in preparation, review, approval, and acceptance of Quality Assurance Grading (QAG) Reports (Attachment 1). It is a prerequisite to performance of work related to an item or activity listed on the Q-List, the Quality Activities List, or the PR list.

6 Adverse Condition:

Contrary to the above, no grading report has been generated for scoping work performed in the area of Ground Water Chemistry Modeling WBS 1.2.3.4.1.1.

Discussion:

In discussions with cognizant LANL personnel it was found that a grading report has been issued for WBS 1.2.3.4 to cover Geochemistry. In review of this report, it was noted that LANL is to apply the full 18 criteria to any work performed under the scope of this WBS. However, during these discussion, it was found that LANL was performing non quality scoping work for WBS 1.2.3.4.1.1 for which they would not apply the full 18 criteria. If it is the intent to proceed with work which would not be performed in accordance with an approved upper tier Grading Report then a new Grading Report must be generated delineating the criteria which would apply.

9 Does a significant condition adverse to quality exist? Yes___ No X_ If Yes, Circle One: A B C	10 Does a stop work condition exist? Yes___ No X_; If Yes - Attach copy of SWO If Yes, Circle One: A B C D	11 Response Due Date: 20 days from issuance

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

13 Recommended Actions:

1) Generate necessary Grading Report or evaluate condition based on current grading requirements.

2) Determine extent of like deficiencies and provide results.

3) Determine actions necessary to preclude recurrence.

7 Initiator	14 Issuance Approved by:
R. Maudlin/J. Martin Date 7/15/92	QADD Date 7/22/92
15 Response Accepted	16 Response Accepted
QAR Date	QADD Date
17 Amended Response Accepted	18 Amended Response Accepted
QAR Date	QADD Date
19 Corrective Actions Verified	20 Closure Approved by:
QAR Date	QADD Date

REV. 08/91