YUCCA MOUNTAIN PROJECT OFFICE

QUALITY ASSURANCE SURVEILLANCE REPORT

OF LOS ALAMOS NATIONAL LABORATORY

SURVEILLANCE NUMBER

YMP-SR-88-018

CONDUCTED SEPTEMBER 14 AND 15, 1988

Los Alamos Activities Surveilled:

Verified implementation of corrective actions necessary to close the deficiencies identified by the June 8, 1987, NRC Mini-Audit of Los Alamos National Laboratory.

Prepared by: E. P. Ripley/T. W. Noland Date: 2/24/89

Approved by: Branch Manager - Surveillances Date: 2/24/89

Approved by: Wendell B. Marcel For Yucca Mountain Project Quality Manager Date: 02/24/89

Received w/Ltr Dated 4/13/89

8904210207 890413
PDR WASTE
WM-11 PDC

ENCLOSURE

1.0 INTRODUCTION

This surveillance was conducted to verify the results of Los Alamos National Laboratory (Los Alamos) implementation of corrective actions necessary to close the deficiencies identified in the June 8, 1987, U.S. Nuclear Regulatory Commission (NRC) Mini-Audit of Los Alamos. The surveillance was performed at the Los Alamos offices in Los Alamos, New Mexico, on September 14 and 15, 1988, in accordance with Quality Management Procedure (QMP)-18-02, Rev. 1, "Surveillance."

2.0 SURVEILLANCE PERSONNEL

This surveillance was performed by:

Edward Ripley - Surveillance Branch Manager - SAIC, Las Vegas, NV

Terry Noland - Quality Assurance Engineer (QAE) - T&MSS, Las Vegas, NV

Wendell Mansel - QAE - Yucca Mountain Project Office, Las Vegas, NV

Catherine Hampton - Quality Assurance Specialist (QAS) - Yucca Mountain Project Office, Las Vegas, NV

3.0 SUMMARY OF SURVEILLANCE RESULTS

Los Alamos issued seventeen internal Corrective Action Reports (CARs No. 024 through 040) to establish appropriate corrective actions to resolve the NRC Mini-Audit deficiencies and findings. The NRC-identified deficiency or finding is stated in each CAR on page 1 of the "Response" under the heading "Description of Finding" (see Enclosure A). Only CARs that have been revised since the previous surveillance (YMP-SR-88-014) are in Enclosure A.

The Los Alamos Quality Assurance Project Leader advised the surveillance team that Los Alamos has instructed their Quality Support Contractor to place all procedure work and procedure training work on hold till further notice. It is possible that this instruction will further delay scheduled implementation of corrective actions necessary to resolve the deficiencies identified during the NRC Mini-Audit over a year ago.

All items were verified as closed for CARs 029, 036, 037, 038, and 039. The remaining CARs have open corrective action items to be implemented and verified prior to closure. Refer to Section 4.0, "Status of Corrective Actions," for specifics.

4.0 STATUS OF CORRECTIVE ACTIONS

Both the NRC deficiencies and Los Alamos corrective actions to resolve the deficiencies are stated in the Los Alamos CARs. This information is not repeated here due to the length, but is provided in the CARs included in Attachment A of this report and the previous report (YMP-88-014).

This section gives the status of the implementation and verification of each Los Alamos CAR by identifying those "items verified as closed during this surveillance" and listing the remaining "open items." Each item is part of the corrective action Los Alamos identified to resolve each NRC deficiency or finding. To correlate references between the Los Alamos CAR number and the NRC deficiency or finding, the CAR number is followed by the respective page number as contained in the NRC Audit Report. Enclosure B contains the documentation reviewed by the surveillance team during this surveillance to verify the item as closed. Each of these documents has been assigned a reference number for easy reference.

1. CAR No. 024, Rev. 1 - NRC Audit Report Finding, Page B-1

   Items Verified as Closed During this Surveillance

   a. No corrective action items of this CAR were ready to be verified as closed during this surveillance.

   Open Items

   a. Preparation and issuance of a stop work procedure in the Los Alamos Quality Assurance Manual. Scheduled completion date - September 30, 1988.

2. CAR No. 025, Rev. 1 - NRC Audit Report Finding, Page B-3

   Items Verified as Closed During this Surveillance

   a. No corrective action items of this CAR were ready to be verified as closed during this surveillance.

   Open Items

   a. Sample verification of annual certifications of personnel. Scheduled completion date - September 30, 1988.

   b. A Los Alamos survey will be conducted to ascertain the effectiveness of training to the revised QAPP, Rev. 2, using the recertification results of 1988. Necessary changes to the training guide and QP-02.1 identified as a result of the survey will be completed by November 30, 1988.

3. CAR No. 026, Rev. 1 - NRC Audit Report Finding, Page B-4

Items Verified as Closed During this Surveillance

a. No corrective action items of this CAR were ready to be verified as closed during this surveillance.

Open Items

a. QP-02.1, Rev. 1, will be revised to include requirements for the review of each Yucca Mountain Project employee and the procedures that affect them. Scheduled completion date - November 30, 1988.

b. Additional training needs for all personnel will be evaluated and documented annually.

c. Preparation of an administrative procedure to address the Project Office Training Management Plan directive. Scheduled completion date - November 30, 1988.

d. Training of all responsible managers and principal investigators on the Training Management Plan requirements and documentation. Scheduled completion date - November 30, 1988.

e. Preparation of an index matching Project employees and the procedures that affect them. Scheduled completion date - September 30, 1988.

4. CAR No. 027, Rev. 1 - NRC Audit Report Deficiency, Page B-5

Items Verified as Closed During this Surveillance

a. No corrective action items of this CAR were ready to be verified as closed during this surveillance.

Open Items

a. Complete training on QP-04.3, CR-044, and CR-045. Scheduled completion date - September 2, 1988.

NOTE: Los Alamos missed their scheduled completion date of September 2, 1988. On September 15, they requested an extension to the completion of training (refer to Enclosure A1 for Rev. 2 to CAR 27).

5. CAR No. 028, Rev. 1 - NRC Audit Report Deficiency, Page B-6

Items Verified as Closed During this Surveillance

a. No corrective action items of this CAR were ready to be verified as closed during this surveillance.

Open Items

a. Establish a list of procedures that need revision to include accept/reject criteria. Scheduled completion date - September 9, 1988.

NOTE: This activity is in progress, but is not complete. No extension has been requested.

b. Complete training on DP-05.2. Scheduled completion date - September 30, 1988.

6. CAR No. 029, Rev. 1 - NRC Audit Report Deficiency, Page B-7

Items Verified as Closed During this Surveillance

a. Verification of closeout of this CAR was completed on September 14, 1988. See Enclosure A2.

7. CAR No. 030, Rev. 1 - NRC Audit Report Deficiency, Page B-8

Items Verified as Closed During this Surveillance

c. A directive memo has been issued to direct personnel to perform technical reviews of all DPs. This memo was issued September 13, 1988; refer to Enclosure B1.

Open Items

a. Completion of technical reviews on all DPs. Scheduled completion date - February 28, 1989.

b. Completion of training on QP-05.2, including the requirements of Change Request No. 051. Scheduled completion date - September 30, 1988.

8. CAR No. 031, Rev. 1 - NRC Audit Report Deficiency, Page B-9

Items Verified as Closed During this Surveillance

NOTE: The revised CAR No. 031, Rev. 1, was received and is Enclosure A3.

a. An evaluation of the acceptability of the data from Case Reserve University, the University of New Mexico, and the University of California, Riverside has been completed, and Los Alamos has determined the data to be acceptable. Documentation supporting closure of this item will be forwarded when microfilmable copies are made available.

Open Items

a. Complete training on purchasing procedures (QP-04.1, QP-04.2, and QP-04.3). Scheduled completion date - September 15, 1988.

NOTE: This activity is not complete and no extension has been requested.

9. CAR No. 032, Rev. 1 - NRC Audit Report Deficiency, Page B-10

Items Verified as Closed During this Surveillance

NOTE: The revised CAR No. 032, Rev. 1, was received and is Enclosure A4.

a. An evaluation of the acceptability of the data from the University of New Mexico has been completed, and Los Alamos has determined the data to be acceptable. Documentation supporting closure of this item will be forwarded when microfilmable copies are made available.

Open Items

a. Complete training on purchasing procedures (QP-04.1, QP-04.2, and QP-04.3). Scheduled completion date - September 15, 1988.

NOTE: This activity is not complete and no extension has been requested.

10. CAR No. 033, Rev. 1 - NRC Audit Report Deficiency, Page B-11

Items Verified as Closed During this Surveillance

a. No corrective action items of this CAR were ready to be verified as closed during this surveillance.

Open Items

a. Complete training to QP-04.3, including Change Request No. 047. Scheduled completion date - September 2, 1988.

NOTE: This activity is not complete and no extension has been requested.

11. CAR No. 034, Rev. 1 - NRC Audit Report Deficiency, Page B-12

Items Verified as Closed During this Surveillance

a. No corrective action items of this CAR were ready to be verified as closed during this surveillance.

Open Items

a. Complete training on Change Request No. 046. Scheduled completion date - September 2, 1988.

NOTE: Los Alamos missed their scheduled completion date of September 2, 1988. On September 15, they requested an extension to the completion of training (refer to Enclosure A1 for Rev. 2 to CAR 34).

12. CAR No. 035, Rev. 1 - NRC Audit Report Deficiency, Page B-13

Items Verified as Closed During this Surveillance

a. No corrective action items of this CAR were ready to be verified as closed during this surveillance.

Open Items

a. Complete training on QP-04.2. Scheduled completion date - September 30, 1988.

b. Issue memorandum to NRC audit file covering review of procurement documents. Scheduled completion date - September 2, 1988.

NOTE: Documentation supporting closure of this item will be forwarded when microfilmable copies are made available.

13. CAR No. 036, Rev. 1 - NRC Audit Report Deficiency, Page B-15

Items Verified as Closed During this Surveillance

a. Verification of closeout of this CAR was completed on September 14, 1988. See Enclosure A5.

14. CAR No. 037, Rev. 1 - NRC Audit Report Deficiency, Page B-16

Items Verified as Closed During this Surveillance

a. Verification of closeout of this CAR was completed on September 14, 1988. See Enclosure A6.

15. CAR No. 038, Rev. 1 - NRC Audit Report Deficiency, Page B-17

Items Verified as Closed During this Surveillance

a. Verification of closeout of this CAR was completed on September 14, 1988. See Enclosure A7.

16. CAR No. 039, Rev. 1 - NRC Audit Report Deficiency, Page B-18

Items Verified as Closed During this Surveillance

a. Verification of closeout of this CAR was completed on September 14, 1988. See Enclosure A8.

17. CAR No. 040, Rev. 1 - NRC Audit Report Deficiency, Page B-19

Items Verified as Closed During this Surveillance

a. No corrective action items of this CAR were ready to be verified as closed during this surveillance.

Open Items

a. Issue a training memo to the Principal Investigators (PIs) to alert them to the necessity for an immediate review of the DPs for compliance. Scheduled completion date - September 26, 1988.

b. Complete the review of the DPs. Scheduled completion date - November 30, 1988.

5.0 PERSONNEL CONTACTED

The following persons were contacted during the surveillance:

L. W. Maassen - Los Alamos/Quality Assurance Liaison
H. P. Nunes - Los Alamos/Quality Assurance Project Leader
D. T. Oakley - Los Alamos/Technical Project Officer
A. M. Pendergrass- Los Alamos Technical Associates/Quality Assurance Support
K. L. Foster - Los Alamos Technical Associates/Quality Assurance Support
J. J. George - Los Alamos Technical Associates/Quality Assurance Support

6.0 SYNOPSIS OF STANDARD DEFICIENCY REPORTS (SDRs)/OBSERVATIONS

There were no SDRs or Observations written as a result of this surveillance.

7.0 REQUIRED ACTIONS

Additional surveillances will be performed to verify closeout of the remaining CAR open items.

ENCLOSURE INDEX

FOR

YMP-SR-88-018

Enclosure A1 - Pages 1 - 4

Enclosure A2 - Pages 5 - 6

Enclosure A3 - Pages 7 - 9

Enclosure A4 - Pages 10 - 12

Enclosure A5 - Pages 13 - 15

Enclosure A6 - Pages 16 - 17

Enclosure A7 - Pages 18 - 19

Enclosure A8 - Pages 20 - 21

ENCLOSURE 2

Enclosure #1

Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

September 15, 1988

TWS-N5/09-88-039

Mr. James Blaylock
Yucca Mountain Project Office
U.S. Department of Energy
P.O. Box 98518
Las Vegas, NV 89193-8518

Dear Mr. Blaylock:

SUBJECT: LANL REVISED RESPONSES TO CARS 027 and 034 FROM NRC MINIAUDIT OF JUNE 8, 1987.

Reference: Letter, C. P. Gertz to D. T. Oakley, dated November 25, 1987.
Letter, H. P. Nunes to J. Blaylock, dated August 4, 1988, TWS-N5/08-88-88.
Letter, H. P. Nunes to J. Blaylock, dated August 30, 1988, TWS-N5/08-88-72.

The LANL responses to CARs 027 and 034 have been revised as shown on the attached copies. The responses are now noted as Revision 2. For both CARs the required change requests, CRs 044 and 045 for CAR 027 and CR 046 for CAR 034, were sent out by the stipulated date, August 26, 1988. However, because of the requirements for further changes in the procurement quality procedures and because of other commitments, training to the CRs could not be completed by September 2, 1988. The revised responses commit to completed training to CRs 044, 045, and 046 by September 30, 1988.

If you have any questions, please contact me at (FTS) 843-8039.

Sincerely,

H P Nunes

H. P. Nunes

Attachments: a/s

AMP/kkk

Cy: D. T. Oakley, N5, MS J521
E. Ripley, SAIC
W. Mansel, DOE-NVO
RPC (3), MS J521
CRM-4 (2), w/o enc., MS A150
QAS file, MS M321

An Equal Opportunity Employer/Operated by the University of California

RESPONSE TO CAR NO. 027, Rev. 2

REQUIREMENT

LANL-NNWSI-QAPP - Section 4.0 Procurement Document Control Subsection 4.2.2 Procurement Document Review:

"A review of the procurement documents and changes to those shall be made to ensure that documents transmitted to the prospective supplier(s) include appropriate provisions to ensure that items or services will meet the specified requirements. To review shall include, as a minimum, the cognizant technical organization and QAL.

The reviews by the QAL will assure that the following requirements are met:

* QA requirements are correctly stated
* there are adequate acceptance and rejection criteria, and
* procurements documents have been prepared, reviewed, and approved."

DESCRIPTION OF DEFICIENCY

The audit team examined the procurement quality assurance (QA) files at both the Earth and Space Sciences (ESS-1) Group and at the Los Alamos Technical Associates (LATA) office. The method used to record the review results and the subsequent requisition concurrence action by the Quality Assurance Liaison (QAL) is not identified to addressed in the procedure, QP-06 "NNWSI Procurement Procedures."

LANL CORRECTIVE ACTION TAKEN

1. Specific Deficiency Corrective Action

   To reflect the revised requirements of WMPO NVO-196-17, two administrative procedures, QP-04.1, and QP-04.3, were issued to specifically direct procurement activities for the Project. QP-04.1 is directed at the procurement of services and other than engineered items used extensively in research and development. QP-04.3 is directed at the procurement of engineered items through use of an approved vendors listing. These procedures direct the method used to document the review results and the concurrence by the QAL. In addition Change Requests (CRs) have been prepared to specifically address the requirements of QAPP, R2, 4.2.2 as stated above.

2. Root Cause Determination

   Previous procedures involving procurement failed to identify the necessary requirements for documentation.

3. Steps to Prevent Recurrence

   Training will be conducted for each of the above quality procedures to ensure that all NNWSI personnel associated with procurement are aware of Project requirements for documentation.

4. Schedule for Completion

CR 044, which modifies QP-04.1, and CR 045, which modifies QP-04.3, will be issued by August 26, 1988. Training to QP-04.1 has been completed as indicated. Training to QP-04.3, CR 044 and CR 045 will be completed by September 30, 1988.

RESPONSE TO CAR NO. 034, Rev. 2

REQUIREMENT

LANL-NNWSI-QAPP - Section 7.0 Control or Purchased Material, Equipment and Services Subsection 7.2.5, Control of Documents Generated by Suppliers

"Documentation generated by suppliers shall be controlled, handled, and approved in accordance with LANL implementation procedures."

DESCRIPTION OF DEFICIENCY

The audit team examined the implementing Quality Assurance Procedures (QPs) to determine if this requirement was addressed and implemented. Apparently this requirement has not been addressed in the quality assurance (QA) procedural system to date.

LANL CORRECTIVE ACTION

1. Specific Deficiency Corrective Action

   LANL has recently revised all of the procurement procedures. The revised QP-04.1, R0, specifically addresses the need to specify the form, content, and submission of reports, if required, in the procurement documentation. A change request (CR 046) has been issued to clarify the ways in which documents generated by a supplier are controlled as YMPO Project records. Review of Project resident files and notebooks has shown that supplier-generated documents are being controlled and there are no adverse impacts to the Project.

2. Root Cause Determination

   Change Request CR 046 has been issued to clarify control of documents generated by suppliers.

3. Steps to Prevent Recurrence

   CR 046, which addresses the documentation generated by suppliers, has been prepared. Training to this CR 046 will be held by September 30, 1988.

4. Schedule

   CR 046 will be issued by August 26, 1988. Training for this CR will be held by September 30, 1988.

Enclosure #2

Los Alamos NNWSI Project
CORRECTIVE ACTION REPORT

Initiator: Signature/Organization/Phone H. P. Nunes, N-5, X7-8039	**CAR No:** [redacted] **Initiation Date:** 26 August 1988 **QA Level:** 1

Title of Work to which CAR Applies:
NRC Audit of LANL, June 8, 1987, Appendix B, Page B-7

Condition Requiring Corrective Action:

See attached, Page 1 of 1.

Corresponding Documentation: NRC Mini-Audit Report

Assigned To: H. P. Nunes	**Date:** 26 August 1988

Cause and Recommended Corrective Action:

See attached response, Page 1 of 1.

QAPL Concurrence: **DOE ORDER 5000.3, UOR REQUIRED** ☐ YES ☒ NO	**Date:** 8/26/88
Corrective Action Completed: Patricia M Tillery	**Date:** 9/14/88
Implementation Verified By: Patricia M Tillery	**Date:** 9/14/88
CAR Closeout:	**Date:** 9/14/88

August 22, 1988 7:13 P
17 FR CAR LS06583

RESPONSE TO CAR NO. 029, Rev. 1

REQUIREMENT

LANL-NNWSI-QAPP - Section 5.0 Instructions, Procedures and Drawings

LANL Quality Procedure TWS-MSTQA-QP-14, R1, Research and Development (Experimental) Procedure, Section 3.1.1

"Laboratory notebook entries shall clearly delineate the following:

One time entries for each research and development activity or subset experiments....

- Equipment and materials to be used....

Daily entries--these entries are to be made daily or as important ideas, observations, date, etc., develop....

- Sample (core specimen, section or thin section) identification and history while in experimentor's possession."

DESCRIPTION OF DEFICIENCY

Laboratory notebook TWS-ESS1-12/84-7 was examined and compared to the requirements of QP-14. The audit team found that the requirement for the identification of equipment and materials to be used does not specify what information should be recorded. With respect to the requirement for recording the sample history, the auditors and principal investigators (PIs) did not fully understand the meaning of this requirement. The audit team recommends that QP-14 be revised to clarify these two items.

LANL CORRECTIVE ACTION

1. Specific Deficiency Corrective Action

   A Change Request (CR) 043, has been prepared to clarify the requirements regarding the documentation of equipment and materials used during the conduct of research activities.

2. Root Cause Determination

   The root cause was determined to be inadequate procedural direction given for identification of equipment.

3. Steps to Prevent Recurrence

   Change Request 043 have been prepared as indicated above. A training memo will be prepared and distributed to alert personnel to the exact requirements as indicated by CR 043.

4. Schedule for Completion

   CR 043 and the training memo will be issued August 26, 1988.

Enclosure #3

7

Los Alamos NNWSI Project
CORRECTIVE ACTION REPORT

Initiator: Signature/Organization/Phone	CAR No: 032, Rev. 1
H. P. Nunes, N-5, X7-8039	Initiation Date: 29 August 1988 QA Level: 1

Title of Work to which CAR Applies:
NRC Audit of LANL, June 8, 1987, Appendix B, Page B-10

Condition Requiring Corrective Action:

See attached, Page 1 of 2.

Corresponding Documentation: NRC Mini-Audit Report

Assigned To: A. M. Pendergrass	Date: 29 August 1988

Cause and Recommended Corrective Action:

See attached response, Pages 1 and 2 of 2.

QAPL Concurrence: DOE ORDER 5000.3, UOR REQUIRED ☐ YES ☒ NO	Date:
Corrective Action Completed:	Date:
Implementation Verified By:	Date:
CAR Closeout:	Date:

RESPONSE TO CAR NO. 032, R1

REQUIREMENT

LANL-NNWSI-QAPP - Section 7.0 Control or Purchased Material, Equipment and Services Subsection 7.2.2 Source Evaluation and Selection

"Measures for evaluation and selection of procurement sources, and the results thereof, shall be documented and shall include one or more of the following items:

- suppliers technical and quality capability as determined by a direct evaluation of his facilities and personnel and the implementation of his QA program."

LANL Quality Procedure TWS-QAS-QP-22, R0, NNWSI supplier Qualification Section 4.4

"The survey team leader shall furnish the QAS, QAIM and the QAL/Requestor with a summary report of the supplier qualifications and/or pre-award survey results, including actions pending and recommendations relative to qualifications of the supplier. A copy of all related subsequent correspondence shall be furnished to the QAS, QAIM and the QAL/Requestor."

DESCRIPTION OF DEFICIENCY

The audit team examined the quality assurance (QA) procurement file for the University of New Mexico (Purchase Order U9012, dated 10/1/84). A survey was performed by the Quality Assurance Support (QAS) (lead) and the Quality Assurance Liaison (QAL) on January 28, 1987. The Earth and Space Sciences (ESS-1) Resident File or the Los Alamos Technical Associates (LATA) QA file did not contain a summary report of the results of the survey or any subsequent correspondence regarding this supplier.

LANL CORRECTIVE ACTION

1. Specific Deficiency Corrective Action

   The ESS QAL prepared a memorandum (TWS-ESS-1/87-22, January 29, 1987), which reported the results of the survey, and submitted it to the file. A copy of the results was sent to all indicated parties. No survey report was issued on the University of New Mexico procurement. (Refer to CAR No. 31, R1, for details.)

2. Root Cause Determination

   An initial qualification survey was never performed, and the subsequent actual survey performed was never properly documented as a survey. This procedural violation was an isolated case and resulted from an inadequate understanding of the procurement procedure, QP-22, which was in place during the survey.

3. Steps to Prevent Recurrence

   Detailed training to the now revised procurement procedures, QP-04.1, QP-04.2, and QP-04.3, will be given and will address specific responsibilities for supplier program acceptance in the attendant documentation.

4. Schedule for Completion

The training will be completed by September, 15, 1988.

Enclosure A4

Los Alamos NNWSI Project
CORRECTIVE ACTION REPORT

Initiator: Signature/Organization/Phone	CAR No: 031, Rev. 1
H. P. Nunes, N-5, X7-8039	Initiation Date: 29 August 1988
	QA Level: 1

Title of Work to which CAR Applies:

NRC Audit of LANL, June 8, 1987, Appendix B, Page B-9

Condition Requiring Corrective Action:

See attached, Page 1 of 2.

Corresponding Documentation: NRC Mini-Audit Report

Assigned To: A. M. Pendergrass	Date: 29 August 1988

Cause and Recommended Corrective Action:

See attached response, Pages 1 and 2 of 2.

QAPL Concurrence: DOE ORDER 5000.3, UOR REQUIRED ☐ YES ☒ NO	Date:
Corrective Action Completed:	Date:
Implementation Verified By:	Date:
CAR Closeout:	Date:

August 30, 1988 11:22 AM
19 FR/CAR LS06503 IC0

RESPONSE TO CAR NO. 031, Rev. 1

REQUIREMENT

LANL-NNWSI-QAPP - Section 7.0 Control or Purchased Material, Equipment and Services Subsection 7.2.2 Source Evaluation and Selection

"The selection of suppliers shall be based on evaluation of their capability to provide items or services in accordance with the requirements of the procurement documents before awarding of the contract. ... Measures for evaluation and selection of procurement sources, and the results thereof, shall be documented and shall include one or more of the following items:

- suppliers technical and quality capability as determined by a direct evaluation of his facilities and personnel and the implementation of his QA program."

LANL Quality Procedure TWS-MSTQA-QP-06, R2, NNWSI Procurement Procedures Section 4.13

"QA Program Requirements - Procurement documents shall require that the supplier have a documented QA program that implements either portions or all of the requirements of the NNWSI quality assurance program."

DESCRIPTION OF DEFICIENCY

The audit team examined two Earth and Space Sciences (ESS-1) Quality Level I requisitions for services from Case Western and the University of California-Riverside, and one Quality Level II requisition from the University of New Mexico. The audit team performed a review of the three supplier quality assurance (QA) documents and determined that the subject quality assurance programs were not adequate or appropriate for the services being procured.

LANL CORRECTIVE ACTION

1. Specific Deficiency Corrective Action

   No prior evaluation of Case Western or the University of New Mexico was performed to verify acceptability of their QA programs. A subsequent evaluation by LANL found their programs to be acceptable. No data were compromised as a result of the programmatic violation. The University of California-Riverside program was reviewed for completeness at LANL and was found to be satisfactory for use on the NNWSI Project. This is permitted under LANL procurement procedures. Detailed information is attached to this CAR and has been placed in each respective PR file.

2. Root Cause Determination

   Personnel have not been adequately trained to the NNWSI procurement requirements.

3. Steps to Prevent Recurrence

Detailed training will be conducted for all three administrative procedures involving purchasing—QP-04.1, QP-04.2, and QP-04.3.

4. Schedule for Completion

This training will be completed by September 15, 1988.

Enclosure A5

13

Los Alamos NNWSI Project
CORRECTIVE ACTION REPORT

Initiator: Signature/Organization/Phone	CAR No. [redacted]
H. P. Nunes, N-5, X7-8039	Initiation Date: 26 August 1988
	QA Level: 1

Title of Work to which CAR Applies:
NRC Audit of LANL, June 8, 1987, Appendix B, Page B-15

Condition Requiring Corrective Action:

See attached, Page 1 of 4.

Corresponding Documentation: NRC Mini-Audit Report

Assigned To: H. P. Nunes	Date: 26 August 1988

Cause and Recommended Corrective Action:

See attached response, Pages 1 and 2 of 4.

QAPL Concurrence: H P Nunes DOE ORDER 5000.3, UOR REQUIRED ☐ YES ☒ NO	Date: 8/26/88
Corrective Action Completed: Patricia M Tilley	Date: 9/14/88
Implementation Verified By: Patricia M Tilley	Date: 9/14/88
CAR Closeout: H P Nunes	Date: 9/14/88

RESPONSE TO CAR NO. 036

REQUIREMENTS

LANL-NNWSI-QAPP - Section 10.0 Inspection/Surveillance
Subsection 10.1 Basic Requirements

"Measures for the surveillance of site activities and contracted services shall be established and executed. . . . Surveillance shall be conducted based on the activity's relative impact and/or importance to the LANL NNWSI Project. . ."

LANL-NNWSI-QAPP - Section 18.0 Audits
Subsection 18.1 Basic Requirement

"A system of planned and periodic audits shall be made to verify compliance with all aspects of the LANL NNWSI Project QA program and to determine the effectiveness of the program. . . . The audit program shall be supplemented by random surveillances."

Subsection 18.2 Additional Requirements for QA Level I and II Activities

"Regularly scheduled audits shall be supplemented by additional audits of specific subjects when necessary to provide adequate coverage. . ."

DESCRIPTION OF DEFICIENCY

The audit team examined the Los Alamos audit and surveillance schedule for FY-87. There was only one audit scheduled and performed for the Earth and Space Sciences (ESS-1) Group program area. Based on a comparison of the significance and the number of problems identified in the LANL internal audit (Feb. 18-20, 1987), the Waste Management Project Office (WMPO) audit of LANL (April, 1987), and this audit by NRC, it appears the LANL audit/surveillance program is not adequate. The internal LANL audit did not cover all aspects (Sections of the QAPP) as required by Section 18.1.

It was noted that three surveillances were conducted within ESS-1 to date. These were, however, of minor coverage in the total scope of the LANL-NNWSI-QAPP requirements. In addition, none of the three surveillances performed were of a technical nature (i.e., no surveillances of in-process work or testing).

LANL CORRECTIVE ACTION

1. Specific Deficiency Corrective Action

LANL is dedicated to the concept of conducting audits and surveys to ascertain program effectiveness. The LANL effort is continuously directed at this portion of the program to improve overall program effectiveness. Attached are copies of LANL FY 1988 audit and survey schedules. Each group is audited annually to all applicable requirements of the QAPP which includes all applicable requirements of the QAPP which includes all applicable critieria of 10 CFR 50, Appendix B. This is recorded in the formal audit report. Surveys are conducted for work or experiments in progress, and the Survey Log is also included here to indicate that many surveys and have been conducted in the past eight months.

In addition the auditing procedure was revised to address some requirements that had been not adequately addressed in past implementing procedures, particularly

the documenting of the inclusion of all 18 criteria. Training was conducted to this draft on June 11, 1988. Training record is included. Due to time constraints, this procedure was not issued, but a CR 032 which addressed these issues was approved and issued June 17, 1988.

2. Root Cause Determination

Currently approved audit and survey procedures were found to be inadequate for NNWSI Project needs.

3. Steps to Prevent Recurrence

CR 032 has been issued and auditing personnel were trained to the requirements.

4. Schedule for Completion

CR032 has been completed and was issued on June 6, 1988.

Enclosure A6

16

Los Alamos NNWSI Project
CORRECTIVE ACTION REPORT

Initiator: Signature/Organization/Phone H. P. Nunes, N-5, X7-8039	**CAR No:** [redacted] **Initiation Date:** 26 July 1988 **QA Level:** 1

Title of Work to which CAR Applies:
NRC Audit of LANL, June 8, 1987, Appendix B, Page B-16

Condition Requiring Corrective Action:

See attached, Page 1 of 1.

Corresponding Documentation: NRC Mini-Audit Report

Assigned To: N/A	**Date:** N/A

Cause and Recommended Corrective Action:

See attached response, Page 1 of 1.

QAPL Concurrence: H P Nunes DOE ORDER 5000.3, UOR REQUIRED ☐ YES ☒ NO	**Date:** 7/26/88
Corrective Action Completed: Patricia M Tilley	**Date:** 9/14/88
Implementation Verified By Patricia M Tilley	**Date:** 9/14/88
CAR Closeout: H P Nunes	**Date:** 9/14/88

RESPONSE TO CAR NO. 037

REQUIREMENT

LANL-NNWSI-QAPP - Section 10.0 Inspection/Surveillance

LANL Quality Procedure TWS-MSTQA-QP-11, RI, NNWSI Surveillance Procedure Section 5.3

"The QAIM shall review and sign all surveillance reports for completeness and adequacy of actions taken or recommended."

DESCRIPTION OF DEFICIENCY

Of the three surveillances conducted within the Earth and Space Sciences (ESS-1) Group this fiscal year, two completed surveillance reports were not reviewed and signed by the Quality Assurance Implementation Manager (QAIM) at the time of this audit.

LANL CORRECTIVE ACTION

1. Specific Deficiency Corrective Action

   The survey files have been reviewed, and all completed surveys are now signed by the QAPL. No adverse impacts were found as a result of the procedural noncompliance by the QAPL.

2. Root Cause Determination

   Root cause was determined as an isolated case of procedural noncompliance. No specific root cause can be identified.

3. Steps to Prevent Recurrence

   No steps are required.

4. Schedule for Completion

   Specific actions as stated above have been completed.

Enclosure A7 18

Los Alamos NNWSI Project
CORRECTIVE ACTION REPORT

Initiator: Signature/Organization/Phone	CAR No: [redacted]
H. P. Nunes, N-5, X7-8039	Initiation Date: 26 August 1988
	QA Level: 1

Title of Work to which CAR Applies:
NRC Audit of LANL, June 8, 1987, Appendix B, Page B-17

Condition Requiring Corrective Action:

See attached, Page 1 of 1.

Corresponding Documentation: NRC Mini-Audit Report

Assigned To: H. P. Nunes	Date: August 26, 1988

Cause and Recommended Corrective Action:

See attached response, Page 1 of 1.

QAPL Concurrence: DOE ORDER 5000.3, UOR REQUIRED ☐ YES ☒ NO H P Nunes	Date: 8/26/88
Corrective Action Completed: Patricia M Tilley	Date: 9/14/88
Implementation Verified By: Patricia M Tilley	Date: 9/14/88
CAR Closeout: H P Nunes	Date: 9/14/88

RESPONSE TO CAR NO. 038, Rev. 1

REQUIREMENTS

LANL-NNWSI-QAPP, Section 12.0 Control of Measuring and Test Equipment
Subsection 12.2 Selection

"Each device shall have a unique identification number."

DESCRIPTION OF DEFICIENCY

The NRC audit team examined the Megadigital Thermometer #4273 at Building TA-3 which includes three probes and a digital readout. The audit team found that one of the probes was labeled 4237 instead of 4273. The team recognizes that this inconsistency is an isolated case. However, in tracing the calibration records to MEC-8, the Metrology lab, the team found that although the folder was labeled 4273 it was misfiled under 4237.

LANL CORRECTIVE ACTION

1. Specific Deficiency Corrective Action

   The folder and probe identifications were corrected at the time of the audit. MEC-8 personnel review the identifications to ensure accuracy. No further instances of mislabeling were found by MEC-8.

2. Root Cause Determination

   The root cause was determined as an isolated case.

3. Steps to Prevent Recurrence

   This is always a part of continuing audits and surveys.

4. Schedule of Completion

   All actions have been completed.

Enclosure A8 20

Los Alamos NNWSI Project
CORRECTIVE ACTION REPORT

Initiator: Signature/Organization/Phone	CAR No. [redacted]
H. P. Nunes, N-5, X7-8039	Initiation Date: 26 August 1988
	QA Level: 1

Title of Work to which CAR Applies:
NRC Audit of LANL, June 8, 1987, Appendix B, Page B-18

Condition Requiring Corrective Action:

See attached, Page 1 of 1.

Corresponding Documentation: NRC Mini-Audit Report

Assigned To: P. M. Tillery	Date: 26 August 1988

Cause and Recommended Corrective Action:

See attached response, Page 1 of 1.

QAPL Concurrence: H. P. Nunes DOE ORDER 5000.3, UOR REQUIRED ☐ YES ☒ NO	Date: 8/26/88
Corrective Action Completed: Patricia M Tillery	Date: 9/14/88
Implementation Verified By: Patricia M Tillery	Date: 9/14/88
CAR Closeout: H. P. Nunes	Date: 9/14/88

RESPONSE TO CAR NO. 039, Rev. 1

REQUIREMENTS

LANL-NNWSI-QAPP - Section 12.0 Control of Measuring and Test Equipment.

LANL Quality Procedure TWS-MSTQA-QP-15, R0, Calibration Control
Section 6.3

"A calibration card (see Attachment 1) shall be sent to the QAS by the QAL when an instrument requiring calibration is brought into the system or after an instrument requiring periodic calibration has been calibrated."

DESCRIPTION OF DEFICIENCY

The calibration records for the XRD-LAB Weight Set in Building TA-3 were traced to the Los Alamos Technical Associates (LATA) file. LATA personnel examined the file in the presence of the NRC audit team and discovered that the card was not present. In addition, LATA personnel telephoned LANL personnel and discovered that the calibration procedure for the weights did not require a card to be sent to LATA. Thus, the specific calibration procedure is not in compliance with QP-15 requirements. The calibration information, however, is recorded in the lab notebook for these weights.

LANL CORRECTIVE ACTION

1. Specific Deficiency Corrective Action

   LANL has revised its M&TE procedure, TWS-QAS-QP-12.1, and the "card system" has been eliminated. There is now a calibration form for every piece of calibrated equipment on file in the QAS resident file. The new procedure requires an issuance of a monthly reminder of items to be calibrated during the month, and this system helps to ensure calibration, corresponding activities, and documentation.

2. Root Cause Determination

   Root cause was determined as a failure to properly train Project staff members in the full implementation of M&TE Project requirements.

3. Steps to Prevent Recurrence

   Appropriate LANL NNWSI staff members will be trained to the revised M&TE procedure, QP-12.1 by a training memo.

4. Schedule of Completion

   The training will be issued by August 26, 1988.

ENCLOSURE INDEX

FOR

YMP-SR-88-018

Enclosure B1 - Pages 1 - 2

ENCLOSURE 3

Enclosure B1

1

Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

September 13, 1988

TWS-N5/09-88-037

Multiple Addressees:

SUBJECT: CLARIFICATION OF A LETTER (TWS-N5/08-88-50) FROM H. P. NUNES DATED AUGUST 18, 1988, AND RESPONSE TO CAR NO. 030, REV. 1, TO THE NRC MINIAUDIT

To resolve the deficiency B-8 of the NRC miniaudit, a letter (TWS-N5/08-88-50) directing an independent technical review of all detailed technical procedures was issued by the QAPL to Yucca Mountain Project personnel. This letter was cited as a part of the LANL corrective action in the response to CAR No. 030, Rev. 1, submitted to J. Blaylock on August 30, 1988, with letter TWS-N5/08-88-72. The reference to the letter under Item 4, "Schedule for Completion," incorrectly cited the date of issue. The correct date for directive TWS-N5/08-88-50 is August 18, 1988.

All detailed technical procedures must have documented, independent technical reviews. In cases where the technical review was not independent—that is, an individual reviewed a procedure prepared by his or her supervisor—a new and independent technical review must be performed and documented. In cases where no documentation of the technical review exists, a new technical review must be performed and documented. The response to CAR 030, Rev. 1, commits to having these reviews completed by February 28, 1989.

The QAL for each group is requested to prepare a list of all detailed technical procedures for which the review was not independent and to submit this list to me by September 16, 1988. The QAL for each group is also requested to prepare and to submit to me a list of all detailed technical procedures for which technical review documents

are contained in the group's resident file or have been submitted to the Records Processing Center. Please submit this list by September 16, 1988, as well. If you have questions, please contact me at 667-8039. Thank you for your cooperation.

Sincerely,

H. P. Nunes

AMP/pmf

Multiple addressees:
K. Campbell, A-1, MS F600
S. Dye, INC-7, MS J514
K. G. Eggert, ESS-5, MS F665
E. H. Essington, HSE-12, MS J495
H. R. Fuentes, U of T, El Paso, TX
A. L. Gauler, MEC-8, MS D478
L. E. Hersman, LS-2, MS M890
A. R. Jenkins, MAT-3, MS P274
L. W. Maassen, ESS-1, MS D462
H. Nitsche, LBL, Berkeley, CA
F. Perry, UNM, Albuquerque, NM
B. A. Robinson, ESS-4, MS J981
B. J. Skaggs, HSE-5, MS K494
P. M. Tillery, LATA, MS M321

Cy: D. T. Oakley, N-5, MS J521
CRM-4 (2), w/o att., MS A150
QAS file, MS M321
RPC (3), MS J521