

United States Government


 Department of Energy

memorandum

 Carlsbad Field Office
 Carlsbad, New Mexico 88221

DATE: November 28, 2001

REPLY TO
ATTN OF: CBFO:QA:TJR:KJB 01-1826 UFC 2300

SUBJECT: Report of Carlsbad Field Office Audit A-02-04 of Los Alamos National Laboratory Annual Recertification Audit

TO: James Nunz, LAAO

The Carlsbad Field Office conducted a recertification audit of the Los Alamos National Laboratory (LANL) Transuranic Waste Characterization Program (TWCP) on October 22-26, 2001. Attached is the report for this audit.

Five Corrective Action Reports (CAR 02-007 through CAR 02-011) were identified and forwarded via separate correspondence. Five Observations and ten Recommendations are presented for management action and consideration.

If you have any questions or comments concerning this report, please contact me at (505) 234-7311.

/s/ signature on file
 Thomas J. Reese
 Acting Quality Assurance Manager

Attachment

cc w/attachment:

K. Watson, CBFO	*ED
L. Chism, CBFO	
D. Winters, DNFSB	*ED
S. Zappe, NMED	*ED
S. Monroe, EPA	*ED
M. Eagle, EPA	*ED
B. Walker, EEG	*ED
P. Rogers, LANL	*ED
M. Gavett, LANL	*ED
M. Gerle, WTS Operating Record	
T. Bowden, CTAC	



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**U.S. DEPARTMENT OF ENERGY
CARLSBAD FIELD OFFICE**

AUDIT REPORT

OF THE

LOS ALAMOS NATIONAL LABORATORY

LOS ALAMOS, NEW MEXICO

AUDIT NUMBER A-02-04

October 22 - 26, 2001

**TRU WASTE CHARACTERIZATION AND CERTIFICATION
ANNUAL RECERTIFICATION AUDIT**

Prepared By: _____ */s/ signature on file*
Wayne Ledford
Audit Team Leader

Date: 11-23-01

Approved By: _____ */s/ signature on file*
Thomas J. Reese
Acting Carlsbad Field Office QA Manager

Date: 11-23-01

1.0 EXECUTIVE SUMMARY

Carlsbad Field Office (CBFO) Audit A-02-04 was conducted to evaluate the continued adequacy, implementation, and effectiveness of the Los Alamos National Laboratory (LANL) Transuranic Waste Characterization Program (TWCP), including quality assurance, nondestructive assay, transportation, and Waste Isolation Pilot Plant (WIPP) Waste Analysis Plan (WAP) activities. The U.S. Environmental Protection Agency (EPA) also conducted a concurrent inspection of the LANL quality assurance program and an evaluation of the CBFO audit process.

The audit was conducted at the LANL facility during the period of October 22-26, 2001. The audit team concluded that, overall, the LANL technical and quality assurance procedures continue to be adequate relative to the flow down of requirements from the CBFO Quality Assurance Program Document (QAPD), the Waste Acceptance Criteria (WAC), the TRUPACT-II Authorized Methods for Payload Control (TRAMPAC), and the WAP. The audit team also concluded that overall, with the exception of the on-line headspace gas analysis process, the LANL technical processes were satisfactorily implemented and effective. The LANL gas generation test program was concluded to be indeterminate, due to a limited operational time.

The audit team also concluded that the LANL QA Program continues to be satisfactorily implemented in accordance with the LANL Quality Assurance Management Plan (QAMP), the LANL Quality Assurance Project Plan (QAPjP), and the LANL implementing procedures applicable to the areas being evaluated. The LANL QA Program was, therefore, determined to be effective.

The audit team identified twenty-one conditions adverse to quality that resulted in the issuance of five Corrective Action Reports (CARs) in the areas of Acceptable Knowledge, Headspace Gas Analysis, Real Time Radiography, and the Gas Generation Test Program. The team identified thirteen isolated deficiencies requiring only remedial corrective actions that were Corrected During the Audit (CDA). Five Observations were identified and ten Recommendations were offered for management consideration.

2.0 SCOPE

The scope of the audit was for the audit team to evaluate the continued adequacy, implementation, and the effectiveness of the technical activities and the associated quality assurance program activities related to the LANL TRU waste characterization and certification programs for debris wastes. Compliance with the WIPP Hazardous Waste Facility Permit (HWFP), nondestructive assay (NDA) processes, and the LANL transportation program was also evaluated. The audit team also evaluated the results of previous audits, changes in programs and operations, new programs and activities implemented in the last year, and changes in key personnel.

The following Quality Assurance (QA) elements were evaluated in accordance with the CBFO QAPD and the WAP:

- Organization/QA Program Implementation
- Personnel Qualification and Training
- QA Grading
- Documents and Records
- Procurement
- Control of Measuring and Test Equipment
- Control of Nonconforming Items
- Corrective Action
- Audits/Assessments
- Software Requirements

The following Characterization technical elements were evaluated during the audit:

- Nondestructive Assay – TGS, HENC, IPAN, PC/RANT/FRAM
- Headspace Gas Sampling and Analysis
- Real Time Radioscopy (RTR)
- Visual Examination (VE)
- Generation Level Data Verification & Validation
- Project Level Data Verification & Validation
- Acceptable Knowledge (AK)
- Waste Stream Profile Forms
- WIPP Waste Information System (WWIS)

The following LANL Transportation technical elements were also evaluated:

- Inspection of Packaging
- Payload Certification
- Preparation and Loading
- Shipping
- Packaging Maintenance
- Gas Generation Test Program Activities

The evaluation of LANL TRU Waste Characterization Program (TWCP) documents was based on the current revisions of the following documents:

CBFO Quality Assurance Program Document, CAO-94-1012

WIPP Hazardous Waste Facility Permit

Waste Acceptance Criteria for the Waste Isolation Pilot Plant, DOE/WIPP-069

Safety Analysis Report for TRUPACT-II Shipping Package, Appendix 1.3.7,

TRAMPAC*TRUPACT-II Certification of Compliance, NRC 71-9281*

Related LANL technical and quality assurance implementing procedures

3.0 AUDIT TEAM AND OBSERVERS**AUDITORS/TECHNICAL SPECIALISTS**

Wayne Ledford	Audit Team Leader, CTAC
Steve Calvert	Auditor, CTAC
Amy Arceo	Auditor, CTAC
Pete Rodriguez	Auditor, CTAC
Charlie Riggs	Auditor, CTAC
Steve Davis	Auditor, CTAC
Jim Schuetz	Auditor, CTAC
Dee Scott	Auditor, CTAC
Dick Blauvelt	Technical Specialist, CTAC
Dorothy Gill	Technical Specialist, CTAC
Karen Gaydosh	Technical Specialist, CTAC
Ken Coop	Technical Specialist, CTAC
Joe Willis	Technical Specialist, WTS

OBSERVERS

Mike Eagle	EPA
Steve Zappe	NMED
Steve Holmes	NMED
Will Fetner	NMED
Phillis Stevens	NMED
Raymond Laskey	EPA Contractor
Steve Phillips	NMED/TechLaw
Ben Walker	EEG

4.0 AUDIT PARTICIPANTS

LANL personnel participating in the audit process are identified in Attachment 1. A pre-audit meeting was held in the TA-35 Building 2, Room B125, on October 22, 2001. A daily meeting was held with LANL management and staff to discuss issues and potential deficiencies. The audit was concluded with a post-audit meeting held in TA-35 Building 2, Room B125, on October 26, 2001.

5.0 SUMMARY OF AUDIT RESULTS

5.1 Program Adequacy, Implementation, and Effectiveness

The audit team concluded that, overall, the LANL technical and quality assurance procedures continue to be adequate relative to the flow down of requirements from the CBFO QAPD, the WAC, the TRAMPAC, and the WAP. The audit team also concluded that, with the exception of the on-line headspace gas analysis process, the LANL technical processes were satisfactorily implemented and effective. The AK process implemented in the last year on new waste streams that were not yet approved by the CBFO was determined to be unsatisfactory for implementation and effectiveness. The LANL gas generation test program was concluded to be marginal for adequacy, marginal for implementation, and indeterminate for effectiveness.

The audit team concluded that the defined LANL QA Program continues to be adequate and satisfactorily implemented in accordance with the *LANL Quality Assurance Management Plan (QAMP)*, the *LANL Quality Assurance Project Plan (QAPjP)*, and the LANL implementing procedures for the areas evaluated, and the LANL QA Program was also determined to be effective.

A Summary Table of audit results, providing the audit results for each of the QA Program elements and the technical processes, is provided as Attachment 2. Audit activities, including the specific objective evidence reviewed, are described below and in the CBFO checklists. The CBFO checklists are maintained as QA records. A list of procedures evaluated during the audit is included as Attachment 3.

5.2 Quality Assurance Activities

Details of the objective evidence reviewed in the QA areas are contained in the audit checklists.

Overall, the quality assurance activities evaluated were determined to be adequate, satisfactorily implemented, and effective.

5.3 Technical Activities

Evaluations of applicable LANL technical activities are summarized below.

5.3.1 Gas Generation Test Program

The gas generation test program (GGTP) had limited operational time with only a single Batch Data Report, consisting of three (3) samples, having been generated. The sampling activities take place outside and storage (between the initial and final sampling events) is in an environmentally uncontrolled trailer. Although the GGTP personnel appeared to be well-trained, operational activity did not always reflect the requirements contained within the applicable procedure. Several deficiencies were identified in this area and were documented on CAR 02-011 (See section 6.1.5). The

audit team determined that the GGT Program was marginally adequate, marginally implemented, and the effectiveness was indeterminate, due to the small sample throughput that had been processed prior to the on-site visit.

5.3.2 Nondestructive Assay

During the audit, the operation of three LANL NDA instrument systems, 1) the HENC neutron instrument, 2) the mobile TGS gamma instrument, and 3) two FRAM isotopic gamma instruments were examined. They are all currently located at Technical Area 54. The audit team examined procedures that had undergone changes since the previous LANL audits of the same instruments, the associated documents and Batch Data Reports, and the audit team observed the operation of one FRAM instrument, and the HENC, and the TGS instrument. The audit team determined that the associated and revised procedures were adequate, satisfactorily implemented, and the processes were effective.

5.3.3 Data Validation; Generation Level and Project Level Data Review and Reporting

The data validation process was evaluated by reviewing batch data packages. The evaluation included examination of the data packages to assure that correct data reviews were being performed.

The audit team determined that the written program was adequate, satisfactorily implemented, and the technical validation activities were effective.

5.3.4 Real Time Radiography

The TRU Waste radiography program at the LANL was reviewed. As part of this review, operations were observed during the examination of drum S862290, Batch Data Reports LA01-RTR-033 and LA01-RTR-056, and the associated videotapes. In addition, the training records of the RTR operators were examined. The program documents were determined to be adequate, the program was satisfactorily implemented, and the radiographic process was determined to be effective.

5.3.5 Visual Examination

The LANL visual examination program was evaluated. Observation of operations consisted of a review of Batch Data Reports LA01-VE-033 and LA01-VE-056. The operator and visual examination expert training records were also reviewed. CAR 02-010 was generated during the audit, it concerned the identification of site specific items in test drums (see section 6.1.4). Overall, the program documents were found to be adequate, the program was satisfactorily implemented, and the VE process was determined to be effective.

5.3.6 Acceptable Knowledge

The audit team examined several individual AK source document summaries that were used to compile the AK record and assign the required WAP information for TA-55 combustible mixed and non-mixed waste streams (TA-55-19 and TA-55-20) and also for waste streams TA-55-21 and TA-55-22 which are mixed and non-mixed metal debris waste respectively. The audit team reviewed the AK Summary Documents for these waste streams to determine if the required programmatic and waste stream specific information was identified. The audit team also examined the contents of several of the Process AK Summary Reports for various operations within TA-55 that feed information into the AK record and portions of the "LANL TRU Waste Characterization AK Information Summary"; a huge compilation of individual container characterization information.

The audit team determined that the required information was present and was being verified through confirmatory testing as evidenced by several Batch Data Reports that were reviewed. The audit team also reviewed examples of discrepancy resolution documentation concerning discrepancies between the AK record and confirmatory testing and documentation dealing with the presence of prohibited items.

During the audit, there were some concerns identified with respect to the AK record, including the fact that some supplemental information in the form of RTR and HSG data generated in the pre-WAP period had not been included in the AK record. In addition, it appeared that confirmatory results were being used instead of the existing AK information (CAR 02-008, see section 6.1.2). There was also no documented procedure for resolving discrepancies within the AK record. The audit team observed that a number of drums in a non-mixed waste stream were determined to contain lead by RTR and were assigned to a mixed waste stream. However, they were then assigned additional F codes, but no justification for adding these codes was in the AK record. Furthermore, there had been no action taken on the trend resulting from the series of NCRs that concerned the discovery of lead in containers that were identified as non-mixed waste (CAR 02-007, see section 6.1.1).

For the existing AK supporting waste streams approved by CBFO, this area was found to be adequate, satisfactorily implemented, and effective. The AK process in use during the last year, for waste streams not yet approved by CBFO, was rated as adequate, unsatisfactorily implemented, and ineffective.

5.3.7 Transportation

The audit team evaluated LANL TRUPACT-II personnel training, payload certification, payload assembly, TRUPACT-II operations (TRUPACT-II disassembly, component inspections and cleaning, maintenance, payload loading, TRUPACT-II assembly, leak testing, and procurement and material control). LANL satisfactorily performed a payload assembly, loading and leak testing for the audit team to verify implementation

of procedures. In addition, the audit team observed the development of an abnormal work instruction and the implementation of the special work instruction to align the inner containment vessel and the outer containment vessel for TRUPACT-II Serial Number 130. The audit team concluded that the processes and controls are acceptable for TRUPACT-II personnel training, payload assembly, operations, inspection and cleaning, maintenance, material control, and leak testing. The audit team determined that the written procedures were adequate, satisfactorily implemented, and that the technical processes are effective.

5.3.8 Headspace Gas Sampling and Analysis

The audit team witnessed the sampling and on-line analysis of headspace gas sampling. The audit team also reviewed Batch Data Reports and supporting documentation. Headspace gas operations were well coordinated and the assigned personnel were professional and well trained. However, a total of eight (8) concerns were generated during the audit of the activities (covering both WAP and SW-846 requirements) and adequacy issues associated with operational procedures. The adequacy comments, generated prior to the audit, were generally already addressed in draft procedure revisions when discussed, on-site, with the operators. See CAR 02-009 (section 6.1.3) for details of the deficiencies identified during the audit.

Overall, this area was determined to be inadequate, satisfactorily implemented, but ineffective.

6.0 CORRECTIVE ACTION REPORTS (CARs), CORRECTED DURING THE AUDIT (CDAs) OBSERVATIONS, RECOMMENDATIONS

6.1 Corrective Action Reports (CARs)

The following five Corrective Action Reports were identified during the audit:

6.1.1 CAR 02-007

This CAR identified several issues related to ongoing AK reconciliation activities

1. Several drums containing lead have been discovered during RTR. These drums assigned to a non-mixed waste stream by AK. The drums have been reassigned to a mixed waste stream with several hazardous waste numbers instead of a new waste stream with only a D008 designation.
2. The LANL TRU project has written several NCRs on drums for containing lead (when AK indicated they were non-mixed). LANL has not taken the required actions to address this recurring condition adverse to quality.
3. The AK accuracy report does not reflect the NCRs written due to the discovery of lead in drums that were designated as non-mixed by AK.

6. During the audit the target analyte, Methanol, contained in a standard, was searched against two available libraries (Appendix VIII and MBS75K). Neither library identified the compound as Methanol (the Appendix VIII library identified Methanol as Hydrazine, and the MBS75K library identified it as acetic acid, hydroxyl).
7. Internal standards are injected 30 seconds prior to sample injection.
8. Several adequacy comments to the HSG procedures were identified.

6.1.4 CAR 02-010

LANL TWCP does not require the RTR operators to identify the site/waste-stream-specific items in the requalification test drum. Two test drum requalification videotapes were reviewed during the audit. The test drum contained a fluorescent light fixture with a clearly visible light ballast (a potentially PCB containing item). One operator did not recognize the light ballast. One operator recognized the light ballast on the video but did not record it on the Radiography Data Form that he completed during the requalification exercise.

6.1.5 CAR 02-011

This CAR identified several issues related to the gas generation test program.

1. Drums and canisters are stored in an environmentally uncontrolled trailer. Both drums and canisters are moved outside for loading and unloading. Performing the test in these circumstances results in drums experiencing different temperature profiles (for example, drums processed in the winter versus the summer, and day-time temperatures versus night-time temperatures).
2. Samples are routinely analyzed twice and the average result reported; this practice is not described in procedure TWCP-DTP-1.2-057, Rev. 2. Additionally, there are no limits stipulated for the allowable spread between the two results.
3. The operator routinely changes integration parameters for hydrogen, including those for the QC samples. The procedure does not contain any guidance/instructions for this process.
4. The Field Reference Standard is sampled in the analytical facility and not where the drums are sampled. The reference standard analyzed, therefore, is a laboratory control sample and not the required Field Reference Standard.

6.2 Corrected During the Audit

The following thirteen deficiencies were corrected during the audit. They were determined to be isolated in nature and required only remedial action to correct. The audit team verified that the listed corrective actions were completed by LANL.

6.2.1 CDA 1

TWCP-QP-1.1-022, R4, did not reflect the requirements of DOE/CBFO-01-1005. This procedure was revised and verified by the audit team during the audit.

6.2.2 CDA 2

During the review of lab notebook number 01-TLB-001, the following information required by TWCP-QP-1.1-012 was missing:

- Responsible employee(s)
- Approved instruction/procedure
- Statement of objective or work description
- Table of contents

This information was included in the lab notebook during the audit and this was verified by the audit team.

6.2.3 CDA 3

LANL did not provide limits on their control charts for NDA background measurements and did not have any pass/fail criteria for background measurements. These limits were added to the control charts during the audit and were verified by the audit team.

6.2.4 CDA 4

LANL had revised their procedures to permit the use of the PDP test results to also satisfy the requirement for performing an annual verification of calibration. This is not the intent of Appendix A to the WAC. The procedures were revised and verified by the audit team during the audit to correct this issue.

The annual verification of the calibration for the HENC was not performed within the required one-year interval. Approximately 1 month of data was collected (~July 2001) before a new verification was performed. LANL took credit for the PDP for satisfying this requirement during this period. The audit team verified that LANL issued a NCR during the audit to control the data generated by the HENC during this period.

6.2.5 CDA 5

The replicate (or duplicate) assays were performed as required, but the basis for determining whether they agree was not documented. The acceptance criteria were included in LANL procedures during the audit and were verified by the audit team.

6.2.6 CDA 6

Written NDA procedures did not adequately describe LANL practices for operator actions to set the count time and did not clearly indicate that the AK is not used for isotopics. The procedures were revised during the audit to correct these deficiencies and the audit team verified procedural adequacy.

6.3.7 CDA 7

Installation of "CTEN_FIT did not include a verification and validation of the test of installation of the software on the exact hardware platforms used for operation as required by TWCP-QP-1.1-006, Section 6.4.6. Installation tests were performed and documented during the audit and were verified by the audit team.

6.3.8 CDA 8

There are two historical databases that are used to collect and/or modify information in the AK record and revise the information in the TRU sampling plan. The databases were not referenced in the AK record. Reference to these databases was added to the AK record during the audit and verified by the audit team.

6.3.9 CDA 9

Procedures (DTP-1.2-064 and DTP-1.2-006) required the issuance of Waste Stream Data Packages (WSDPs). WSDPs are no longer used, but the procedures had not been revised. The procedures were revised during the audit and were verified by the audit team.

6.3.10 CDA 10

The FRAM system Batch Data Reports, prepared using the automated data review, were only reviewed by the Technical Supervisor at the data generation level. The batch reports that had been reviewed using the automated system were also reviewed manually during the audit. The procedure was revised to disallow the use of the automated system. This was verified by the audit team.

6.2.11 CDA 11

LANL used a longer than normal count time for PDP measurements of sludge drums during cycle 8. The counting procedure did not specify what criteria were used to extend count times. Therefore, there was no assurance that real sludge waste drums will be counted using the same count times as were used for the PDP, as required. The procedure was revised to specify the criteria for establishing count times for sludge drums. LANL is not currently requesting certification for S3000 waste. The procedural changes were verified by the audit team.

6.2.12 CDA 12

Installation forms did not include a directory print for a specific computer hard drive. The record was submitted with an incorrect directory printout. The record was corrected during the audit and was verified by the audit team.

6.2.13 CDA 13

The "Transportation Certification and Shipping Package" submitted as a record did not include the WWIS Payload Assembly Approval/Rejection Report as required by the procedure. The procedure was revised during the audit to specify the correct documents that must be submitted with the records package and was verified by the audit team.

6.3 Observations

The following five Observations were identified by the audit team as areas of concern that were not yet actual deficient conditions, but which raise the probability of future deficiencies, if not corrected.

6.3.1 Observation 1

During RTR operations LANL uses a test drum as the "image test pattern" to verify the resolution of the system. A more objective standard, such as a lead line pair gauge, should be attached to the test drum for verifying image resolution.

6.3.2 Observation 2

LANL is performing RTR on S3000 (solid waste matrix) drums. Site specific test drums for S3000 waste have not been scanned by the LANL RTR operators and the operators have not been otherwise qualified to radiograph S3000 waste. LANL is not currently requesting certification for S3000 waste, but should qualify their operators for this activity so that the S3000 waste does not have to be RTR'd again for shipment to WIPP.

6.3.3 Observation 3

The automated review system for FRAM only checks to determine if replicate assays were performed within 7 days of the assays in the batch. The requirement is that replicates are performed weekly or once per batch, whichever is more frequent. Using the automated check, a replicate performed on a weekend could cover assays performed during a two-week period.

6.3.4 Observation 4

Quarterly container reviews (repeat of data validation) has not been completed to date. An internal LANL CAR was generated prior to the audit with an approved corrective action plan. Reviews are in progress at the present time. This is an observation and the LANL corrective actions will be reviewed during the next CBFO audit.

6.3.5 Observation 5

LANL trend reports should include an evaluation of deficiencies generated at the Site Project Manager signature release level.

6.4 Recommendations

The following ten recommendations are provided for management consideration.

6.4.1 Recommendation 1

At present, LANL is not required to submit TRUPACT-II procedure changes to Westinghouse TRU Solutions for approval since they have adopted the use of DOE/WIPP 93-1001. However, they could make changes to LANL procedures which are in conflict with DOE/WIPP 93-1001 (e.g., LANL-DTP-1.2-030, *TRUPACT-II Operations and Leak Testing*). Recommend that revisions to procedures that affect TRUPACT-II operations be submitted to WTS for review.

6.4.2 Recommendation 2

Recommend that specific terminology relating to the review of analytical data and AK information for toxicity characteristics be added to the waste stream characterization DQO Review Form.

6.4.3 Recommendation 3

Recommend that an independent source of bromofluorobenzene (BFB) be used to tune the mass spectrometer prior to the analysis performed to recertify the BFB.

6.4.4 Recommendation 4

The torque wrench used to torque newly installed filters is calibrated, however, the torque wrench range is 10-80 ft. lbs. The filters are being torqued to 15-ft. lbs. The range of accuracy of the torque wrench is checked at a minimum of 20-ft. lbs. Recommend that a torque wrench with a midrange nearer to 15-ft. lbs. be used for this operation.

6.4.5 Recommendation 5

One VE operator signed "Form 2A/B: Waste Visual Examination and Packaging Form" as an operator on 9/19/01, BDR LA-01-VE-056. This person was not qualified as a VE operator at that time. The form also contained the signature of a qualified VE operator in the "supervisor" block, this person was conducting the OJT for the trainee. Recommend that when trainees sign data forms as part of their OJT, they note that they are trainees.

6.4.6 Recommendation 6

Recommend that the console operator be identified in the VE logbook. The name should be printed if the signature is not clearly identifiable.

6.4.7 Recommendation 7

The scale checks that take place before VE begins should be included on the video. At least the initial zeroed scale should be recorded prior to the waste examination.

6.4.8 Recommendation 8

The fact that the visual examination expert (VEE) is the person examining the waste with their hands in the glovebox and narrating should be recorded - both on video and on the data form. The signature for the VEE is labeled "Operator/Supervisor". It would be beneficial to have that labeled "VE Expert".

6.4.9 Recommendation 9

When a discrepancy is found between RTR and VE results (waste material parameter weights), recommend that a note be made on the reconciliation report as to the results of the reconciliation.

6.4.10 Recommendation 10

Table B2-1 is used to determine how many drums need to be visually examined for a miscertification rate of 6%. The projected number of drums to go through RTR is 2600 and the table only goes to 2000. It is recommended that the table be expanded to cover the projection.

7.0 LIST OF ATTACHMENTS

- Attachment 1: Personnel Contacted During the Audit
- Attachment 2: Summary Table of Audit Results
- Attachment 3: List of Procedures Audited

PERSONNEL CONTACTED DURING AUDIT A-02-04

NAME	ORG/TITLE	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST AUDIT MEETING
Adams, Andrew	E-ET/Ops Leader	X	X	X
Baker, Michael	NDA/NDA Section Leader	X	X	X
Baker, Shannan	E-ET/Records Management	X	X	X
Baros, Ricky	E-ET/Technician		X	
Bayhurst, Greg	E/TSM	X	X	
Betts, Stephen	LANL/NDA Staff		X	X
Clark, Vicky	LANL/SQA	X	X	X
Doths, Harald	E-ET/TSM		X	
Enter, Janie	E-ET/TSM		X	
Fabryka-Martin, June	EES-6/Deputy SPM	X	X	
Fernandez, Ruby Ann	E-ET/Training Specialist	X		X
Gavett, Marji	E-ET/SPQAO	X	X	X
Gibson, Yvonne	E-ET/QA Specialist	X	X	X
Herrera, Jennifer	E-ET/Records Management	X		
Hollis, Kirk	C-ACT/Analyst		X	
Humphrey, Betty	E-ET/WCO		X	
Kosiewicz, Stan	E-ET/TSM	X	X	
Leonard, Patricia	LANL/QA	X	X	X
Lin, Mavis	E-ET/TSM	X	X	X
Lindahl, Peter	E-ET/TSM	X	X	X
Lopez, Josh	TWCP/Technician		X	

NAME	ORG/TITLE	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST AUDIT MEETING
Lucero, Fabiola	LANL/Records Management		X	
Makaruk, Hanna	E-ET/AK Investigator		X	
Martin, Bev	LANL/Acting Program Manager			X
Martinez, David	C-ACT/Chemical Technician		X	
Martinez, Leon	E-ET/Technician		X	
Martinez, Manuel	E-ET/SQA		X	X
Martinez, Paul	E-ET/NDE Ops Leader	X	X	
Medina, Pat	BUS/Budgets	X		
Miko, David	E-ET/TSM		X	
Mroz, Gene	C-INL/SME		X	
Musgrave, John	C-Inc/TSM		X	
Ortega, Laura	LANL/HGAS	X	X	X
Palomares, Jose	E-ET/Technician		X	
Patton, Patricia	LANL/Document Control		X	
Pickrell, Mark	E-ET/Group Leader	X		
Polley, Mark	E-ET/TCO	X	X	
Poteet, Doris	TWCP/SCMC		X	
Robbins, Scott	E-ET/Training Coordinator	X	X	X
Rogers, Pam	E-ET/SPM	X	X	
Romero, Eric	E-ET/Technician		X	
Romero, Kenneth	E-ET/Technician		X	
Salazar, Willie	E-ET/Technician		X	

NAME	ORG/TITLE	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST AUDIT MEETING
Sanchez, Margaret	E-ET/Transportation Leader	X		X
Saunders, Lori	E-ET/QA	X	X	X
Schneider, Constance	E-ET/TSM		X	
Souza, Larry	TWCP/QA	X	X	X
Tallarico, Antonia	E-ET/Contractor		X	
Trujillo, Barbara	E-ET/WWIS	X	X	
Valdez, Joseph	E-ET/Chemical Technician		X	
Veilleux, John	E-ET/TSM		X	
Vigil, Jack	E-ET/Nuclear Operations Manager		X	
Wander, Sandy	E-ET/WCO		X	

Summary Table of Audit Results

Evaluation Area	Concern Classification				QA Evaluation		Effectiveness
	CARs	CDAs	Obs	Rec	Adequacy	Implementation	
Acceptable Knowledge (existing waste streams)	02-007				A	S	E
Acceptable Knowledge (new waste streams)	02-008	8			A	U	U
Project Level V&V		9	3,4, 5	1,2,9,10	A	S	E
PDP		1, 11, 4			A	S	E
Headspace Gas Sampling and Analysis	02-009			3,4	U	S	U
Gas Generation Test Program	02-011	2			M	M	I
Visual Examination				5,6,7,8, 9, 10	A	S	E
Real-Time-Radiography	02-010		1,2	9	A	S	E
Non Destructive Assay		3,4,5,6,10, 11	3		A	S	E
Software QA		7,12			A	S	E
WWIS					A	S	E
Corrective Actions and Nonconformances			5		A	S	E
Measuring and Test Equipment		4		4	A	S	E
Training					A	S	E
Assessments					A	S	E
Document Control and Records		13			A	S	E
Transportation		13	1	1	A	S	E
Procurement					A	S	E
Grading					A	S	E
TOTALS	5	13	5	10	A	S	E

Definitions

E = Effective
S = Satisfactory
U = Unsatisfactory
I = Indeterminate
A= Adequate
M= Marginal

CDA = Corrected During Audit
CAR = Corrective Action Report
Obs = Observation
Rec = Recommendation

LIST OF PROCEDURES AUDITED (A-02-04)

NUMBER	PROCEDURE NUMBER	REVISION	TITLE
1.	DTP-1.2-001	R11/IC1	Waste Visual Examination and Packaging
2.	DTP-1.2-002	R3/IC1	WCRRF Video System Operations
3.	DTP-1.2-006	R6/IC1	Calculation of UCL90 Values
4.	DTP-1.2-008	R8/IC3	Performing NDT Using the Mobile RTR System
5.	DTP-1.2-009	R7	Waste Assay Using the Passive-Active Neutron Assay System
6.	DTP-1.2-010	R4/IC1	Calibrating the Mobile Passive-Active Neutron Assay System
7.	DTP-1.2-011	R3	Waste Assay Using the TGS
8.	DTP-1.2-015	R4/IC1	Calculation for Determining the Number of Containers for VE
9.	DTP-1.2-016	R2/IC2	Calibrating the TGS System
10.	DTP-1.2-025	R4/IC1	HGAS Analysis Batch Data Reports Preparation
11.	DTP-1.2-029	R7	Determining Isotopic Ratios in Waste Containers Using the RANT PC/FRAM Assay System
12.	DTP-1.2-030	R3/IC1	TRUPACT-II Operations and Leak Testing
13.	DTP-1.2-031	R4/IC1	Varian Porta-Leak Detector Procedure
14.	DTP-1.2-032	R3	ACGLF
15.	DTP-1.2-035	R4/IC1	Payload Container/Assembly Selection and Off-Site Transportation of CH TRU Waste
16.	DTP-1.2-038	R2/IC3	HGAS Filter Removal and Replacement
17.	DTP-1.2-041	R4/IC4	HGAS Sampling and Analysis – Automated Manifold
18.	DTP-1.2-053	R1	Assignment of Waste Matrix Codes
19.	DTP-1.2-056	R5	Gas Generation Test Canister Operations
20.	DTP-1.2-057	R2	GC Determination of H2 in GGT Canisters
21.	DTP-1.2-058	R2/IC1	Gas Generation Calculations for GGTP
22.	DTP-1.2-059	R1	Operating the High Efficiency Neutron Counter (HENC)
23.	DTP-1.2-060	R0/IC3	Calibrating the High Efficiency Neutron Counter (HENC)
24.	DTP-1.2-063	R0/IC1	Preparing and Handling Waste Containers
25.	DTP-1.2-064	R3/IC1	Waste Characterization Data Reconciliation with Acceptable Knowledge
26.	DTP-1.2-066	R0	V&V of NDA Data Using a Manual Review Method
27.	DTP-1.2-067	R0	V&V of NDA Data Using an Automated Review
28.	QP 1.1-002	R.4	Document Control
29.	QP 1.1-003	R.7,IC1	TWCP Training
30.	QP 1.1-004	R8	Records Management
31.	QP 1.1-007	R.8	Nonconformance Reporting and Tracking
32.	QP-1.1-001	R7/IC2	Procedure Preparation, Review, Approval, Revision, and Interim Changes
33.	QP-1.1-005	R6	Procurement
34.	QP-1.1-005	R.6	Procurement
35.	QP-1.1-006	R8/IC2	Software Management
36.	QP-1.1-008	R.6/IC1	Corrective Action Reporting and Tracking
37.	QP-1.1-009	R5	Surveillances
38.	QP-1.1-010	R.11/IC2	Project Level Data Validation and Verification
39.	QP-1.1-012	R5/IC3	Laboratory Notebooks and Logbooks
40.	QP-1.1-017	R5/IC1	Chain of Custody
41.	QP-1.1-018	R6	Measuring and Test Equipment
42.	QP-1.1-020	R6/IC1	Root Cause Analysis
43.	QP-1.1-021	R.5/IC3	Acceptable Knowledge Documentation
44.	QP-1.1-022	R4	PDP Blind Audit Sample Management, Analysis, and Reporting

LIST OF PROCEDURES AUDITED (A-02-04)

NUMBER	PROCEDURE NUMBER	REVISION	TITLE
45.	QP-1.1-024	R5/IC3	Reporting Summarized Characterization Data & Waste Stream Summaries to CAO
46.	QP-1.1-026	R4/IC1	Trend Analysis
47.	QP-1.1-027	R4	Audits
48.	QP-1.1-028	R7/IC1	Reconciliation of VE and Radiography Information
49.	QP-1.1-029	R4	Grading TWCP Activities
50.	QP-1.1-030	R3/IC1	Work Suspension
51.	QP-1.1-032	R3/IC2	Hazardous Material Transportation and Tracking
52.	QP-1.1-033	R4	Management Assessments
53.	QP-1.1-034	R7/IC1	WWIS Data Entry
54.	QP-1.1-035	R2	Written Practice for the Qualification of TWCP NDE Personnel
55.	QP-1.1-039	R0/IC1	Conversion of Waste Volumes to Weights
56.	QP-1.1-040	R1/IC1	Tracking and Reporting of TICs