



Department of Energy
Carlsbad Field Office
P. O. Box 3090
Carlsbad, New Mexico 88221
OCT 26 2011

ENTERED



Mr. John Kieling, Acting Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Bldg. 1
Santa Fe, New Mexico 87505-6303

Subject: Final Audit Report A-11-20, Argonne National Laboratory Central
Characterization Project for Remote-Handled Waste Characterization

Dear Mr. Kieling:

This letter transmits the subject audit report for the processes performed to characterize and certify waste as required by the Waste Isolation Pilot Plant (WIPP) Hazardous Waste Facility Permit. The report contains the results of the audit of remote-handled Summary Category Group S5000 debris waste, performed August 2-4, 2011.

I certify under penalty of law that this document and all enclosures were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

If you have any questions concerning this report, please contact Mr. Randy Unger, Director of the Office of Quality Assurance, at (575) 234-7065.

Sincerely,


Edward Ziemianski
Interim Manager

Enclosures

Mr. John Kieling

-2-

OCT 26 2011

cc: w/Report Narrative

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M. Eagle, EPA	ED
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*ED denotes electronic distribution

cc: w/Report Narrative and enclosures
WIPP Operating Record, MS: 452-09
CTAC QA File
CBFO M&RC

U.S. DEPARTMENT OF ENERGY
CARLSBAD FIELD OFFICE

FINAL AUDIT REPORT

OF THE

ARGONNE NATIONAL LABORATORY (ANL)
CENTRAL CHARACTERIZATION PROJECT (CCP)

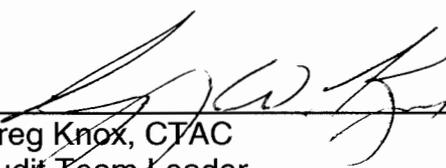
CARLSBAD, NM, AND ARGONNE, IL

AUDIT NUMBER A-11-20
August 2 – 4, 2011

TRU WASTE CHARACTERIZATION AND CERTIFICATION



Prepared by:


Greg Knox, CTAC
Audit Team Leader

Date: 6 OCT 2011

Approved by:


for Randy Unger, CBFO
Director, Office of Quality Assurance

Date: 24 Oct 2011

1.0 EXECUTIVE SUMMARY

Carlsbad Field Office (CBFO) Recertification Audit A-11-20 was conducted to evaluate the continued adequacy, implementation, and effectiveness of Argonne National Laboratory (ANL) transuranic (TRU) waste characterization activities performed for ANL by the Washington TRU Solutions LLC (WTS) Central Characterization Project (ANL/CCP). Remote-handled (RH) Summary Category Group (SCG) S5000 debris waste characterization and certification activities were reviewed and evaluated for compliance to applicable program requirements. The activities are performed consistent with the requirements described in the Waste Isolation Pilot Plant (WIPP) Hazardous Waste Facility Permit (HWFP), the *Remote-Handled TRU Waste Characterization Program Implementation Plan (WCPIP)*, the *CBFO Quality Assurance Program Document (QAPD)*, and the *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant (WAC)*.

The audit was conducted simultaneously in Carlsbad, NM, and Argonne, IL, August 2 – 4, 2011. The audit team concluded that overall, the ANL/CCP technical procedures are adequate relative to the flow-down of requirements from the HWFP, the WCPIP, the CBFO QAPD, and the WAC. Additionally, the ANL/CCP technical areas evaluated are satisfactorily implemented and effective.

The audit team concluded that the established quality assurance (QA) program as related to the activities evaluated was adequate for compliance with the CCP *Transuranic Waste Quality Assurance Characterization Project Plan (QAPjP)*, and that the associated implementing procedures were satisfactorily implemented and effective.

The audit team identified two concerns during the audit as discussed in the Interim Audit Report issued September 1, 2011. No HWFP-related Conditions Adverse to Quality (CAQs) were identified. The audit team offered one Recommendation to CCP Management.

2.0 SCOPE

The audit team evaluated the continued adequacy, implementation, and effectiveness of the ANL/CCP RH TRU waste characterization and certification activities for RH SCG S5000 debris wastes. The following elements were evaluated.

General Activities

The following general areas from Attachment C6, Section C6-3 of the HWFP were audited.

- Results of previous audits
- Changes in programs or operations
- New programs or activities being implemented
- Changes in key personnel

Technical Activities

Acceptable Knowledge (AK)
Project-level Data Validation and Verification (V&V)
Visual Examination (VE)
Headspace Gas (HSG)
WIPP Waste Information System (WWIS)/Waste Data System (WDS)

Quality Assurance Activities

The following QA elements were evaluated only to the extent needed to support the technical elements listed above.

Control of Nonconforming Items
Personnel Qualification and Training
Quality Assurance Records

The evaluation of ANL/CCP RH TRU waste activities and documents was based on current revisions of the following documents:

- *CBFO Quality Assurance Program Document, DOE/CBFO-94-1012*
- *Waste Isolation Pilot Plant Hazardous Waste Facility Permit NM4890139088-TSDF*
- *Remote-Handled TRU Waste Characterization Program Implementation Plan, DOE/WIPP-02-3214*
- *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant, DOE/WIPP-02-3122*
- *CCP Transuranic Waste Characterization Quality Assurance Project Plan, CCP-PO-001*
- *CCP Transuranic Waste Certification Plan, CCP-PO-002*
- *CCP/ANL RH-TRU Waste Interface Document, CCP-PO-500*
- *Related technical and QA implementing procedures*

3.0 AUDIT TEAM, MANAGEMENT REPRESENTATIVES, AND OBSERVERS

Dennis Miehl	CBFO QA Management Representative
Greg Knox	Audit Team Leader (ATL), CBFO Technical Assistance Contractor (CTAC)
Cindi Castillo	ATL-in-Training, CTAC
Porf Martinez	Auditor, CTAC
Rick Castillo	Auditor, CTAC
Katie Martin	Auditor, CTAC
Dick Blauvelt	Technical Specialist, CTAC
Rhett Bradford	Technical Specialist, CTAC
Paul Gomez	Technical Specialist, CTAC

OBSERVERS

Tom Morgan	CBFO National TRU Program (NTP)
Ricardo Maestas	New Mexico Environment Department (NMED)
Steve Holmes	(NMED)
Connie Walker	(NMED)

4.0 AUDIT PARTICIPANTS

The ANL/CCP individuals contacted during the audit process are identified in Attachment 1. A pre-audit meeting was held by teleconference in Argonne, IL, and Carlsbad, NM, on August 2, 2011. Discussions were conducted with ANL/CCP management and staff to keep them apprised of the audit activities. The audit concluded with a post-audit meeting held by teleconference in Argonne, IL, and Carlsbad, NM, on August 4, 2011.

5.0 SUMMARY OF AUDIT RESULTS

5.1 Program Adequacy and Implementation

This audit was performed to assess the capability of the ANL/CCP to characterize and certify RH SCG S5000 debris waste for compliance with the requirements specified in the HWFP Waste Analysis Plan (WAP). The characterization methods assessed were AK, HSG sampling, and RTR. Other processes evaluated were project-level data V&V, data quality objective (DQO) reconciliation, preparation of Waste Stream Profile Forms (WSPFs), and WWIS/WDS data entry.

The audit team concluded that overall, the applicable ANL/CCP TRU waste characterization activities for RH SCG S5000 debris waste as described in the implementing procedures are adequate, satisfactorily implemented, and effective for compliance with the requirements of the HWFP.

Personnel contacted during the audit by area are listed in Attachment 2. Attachment 3 contains the objective evidence reviewed during the audit. Audit activities, including associated objective evidence reviewed, are described below and in the attached C6 checklists. The C6 checklists identify the ANL/CCP documents and procedures demonstrating compliance with the HWFP. Attachment 4 is a table of audited documents for the applicable Table C6-1 through C6-6 WAP requirements. Attachment 5 identifies the list of processes and equipment reviewed during the audit. Attachment 6 is the Procedure Revision Matrix, which identifies and briefly describes revisions to the implementing procedures that have occurred since the last ANL/CCP recertification audit (CBFO Audit A-10-23).

5.2 General Activities

5.2.1 Results of Previous Audits

Corrective actions from CBFO Corrective Action Report (CAR) 10-049, generated during Audit A-10-23, were evaluated. The audit team verified that sustained corrective action implementation has been maintained.

5.2.2 Changes in Programs and Operations

Interviews with the ANL/CCP management team indicated there were no significant changes in Programs or Operations since Audit A-10-23.

5.2.3 New Programs or Activities Being Implemented

Interviews with the ANL/CCP management team indicated there were no new programs or activities being implemented since Audit A-10-23.

5.2.4 Changes in Key Personnel

Interviews with the ANL/CCP management team indicated there were no significant changes in key personnel since Audit A-10-23.

5.3 Technical Activities

Each technical area audited is discussed in detail in the following sections. The method used to select objective evidence is discussed, the objective evidence used to assess compliance with the HWFP is cited briefly, and the result of the assessment is provided.

5.3.1 Acceptable Knowledge

The audit team addressed the WAP requirements listed on the C6-3 checklist, along with portions of the C6-1 checklist. Objective evidence was reviewed and compiled to demonstrate compliance with the applicable requirements on these checklists. The audit team also reviewed the AK record in relation to specific and relevant requirements of the WCPIP, Rev. 2. The waste stream evaluated, designated as AERHDM, originally

consisted of forty-four 30-gallon drums for which ANL/CCP reviewed the VE videotapes of packaging done by ANL staff. Subsequently, the stream was expanded with the packaging of additional debris drums and fuel examination waste (FEW) from the Alpha Gamma Hot Cell Facility (AGHCF), which ANL/CCP personnel have characterized under a certified VE process. In addition, debris waste from the K Wing hot cells has been characterized during packaging and has been added to waste stream AERHDM. The audit team reviewed the projected waste volume for this stream contained in AK Source Document Summary C2025.

The audit team reviewed the latest revision to the AK Summary Report for this waste stream and a copy of the WSPF and attachments. The team also examined numerous AK source documents to establish support for the conclusions noted in the AK Summary Report, particularly with respect to support for the waste stream chemicals and hazardous waste numbers listed in CCP-AK-ANLE-500, Table 5, for operations in both the AGHCF and K Wing hot cells. The audit team also examined the Acceptable Knowledge Documentation Checklist, CCP-TP-005, Attachment 1; the Acceptable Knowledge Source Document Reference List, CCP-TP-005, Attachment 4; the Hazardous Constituents Form, CCP-TP-005, Attachment 5; the Waste Form, Waste Material Parameters, Prohibited Items, and Packaging Form, CCP-TP-005, Attachment 6, along with the applicable justification memo for waste material parameter weight estimates; and the Waste Containers List, CCP-TP-005, Attachment 8. Examples of the resolution of AK discrepancies in the AK record, a WAP-compliant AK Accuracy Report, and the most recent internal surveillance were also collected and examined, along with screenshots from the item description code database and a copy of the AK Tracking Spreadsheet.

Requisite training records for AK experts (AKEs) and site project managers (SPMs) were examined. The WAP-required traceability exercise was performed for five drums from the population of those that have been completely through the characterization and certification process, including three drums from three distinct HSG sampling lots. In addition to the HSG batch data reports (BDRs), the audit team reviewed the relevant VE BDRs. The estimated waste material parameter weights for this stream and supporting documentation were reviewed. The reconciliation of characterization data with the AK record, including a review of the AK Characterization Checklists, was completed and deemed acceptable.

The audit team also examined the AK record and compiled objective evidence that demonstrates compliance with the requirements of the WCPIP, as noted above. Documents reviewed included the WCPIP-compliant AK Accuracy Report and the Characterization Reconciliation Reports, along with the examination of relevant AK source documents.

The audit team offered one WAP-related Recommendation regarding the submission of the WAP Compliance Tracking Table for new AK WAP requirements, completed and agreed upon during the audit (see section 7.2).

The procedure reviews, field observations, and document reviews provided evidence that the applicable requirements for Acceptable Knowledge are adequately established for compliance with upper-tier requirements, satisfactory in the implementation of these requirements, and effective in achieving the desired results.

5.3.2 Project-Level Data Validation and Verification

Project level data V&V reviews were performed to assess the data collected as a result of the applicable waste characterization implementing procedures. The ability of the ANL/CCP to characterize RH SCG S5000 debris waste was evaluated. The flow of data from the point of generation to inclusion in the WSPF for each characterization technique was reviewed to ensure that all applicable requirements were captured in the site operating procedures. The material in this section is also addressed in more detail in the applicable C6 checklists questions, where the specific procedures audited and the objective evidence reviewed is identified. Objective evidence was reviewed as part of this assessment and utilized in the completion of the WAP Checklist. The objective evidence included BDRs completed through the CCP SPM review for VE, and HSG sampling and analysis. In addition, procedures were reviewed to ensure that ANL/CCP could adequately perform data reconciliation and properly prepare a WSPF.

Objective evidence was reviewed to make a determination of the adequacy of the SPM V&V procedures. The objective evidence provided included BDRs from each of the waste characterization activities.

Compliance with the characterization requirements was demonstrated through documentation and by demonstration of characterization activities. The project level data V&V process was evaluated by reviewing the following BDRs.

VE

RHANLVE110002

RHANLVE110007

ANLRHVE11008

HSG Sampling and Analysis

ANHSGS100003

ECL10033G

ECL10033M

Objective evidence was reviewed to ensure project-level activities were adequately performed to support waste characterization. The audit team reviewed ANL/CCP quarterly data (from all quarters since previous audit) for VE and HSG characterization processes.

The WSPF/characterization information summary (CIS) for the waste stream identified as AERHDM (SCG S5000) was reviewed and found to be properly completed. The HSG random selection of containers for this waste stream was found to be properly completed. Various HSG lots were reviewed, including the most recent, HSG lot number 4.

The ANL/CCP project-level V&V process for VE was evaluated to determine the effectiveness of VE as a characterization method. VE BDRs RHANLVE110002, RHANLVE110007, and ANLRHVE11008 were assessed by the audit team.

ANL/CCP performs HSG sampling using SUMMA[®] canisters. HSG Sampling BDR ANHSGS100003 for SCG S5000 debris waste was examined, and BDRs for HSG analysis (ECL10033G and ECL10033M) were evaluated and verified. Drum age criteria (DAC), sample chain-of-custody (COC), and shipment to the analytical laboratory were reviewed and determined to be compliant. The HSG analysis of the SUMMA[®] samples was reviewed by the team, as well as the training and qualification of ANL/CCP V&V personnel. The analysis and reporting of the Field Reference Standard was completed by the SPM. Sample disposition was found to be adequately performed and documented.

The procedure reviews, field observations, and document reviews provided evidence that the applicable requirements for Project-level Data Validation and Verification are adequately established for compliance with upper-tier requirements, satisfactory in the implementation of these requirements, and effective in achieving the desired results.

5.3.3 Visual Examination

The audit team evaluated the adequacy, implementation, and effectiveness of the ANL/CCP VE characterization process for RH SCG S5000 debris waste.

The audit team reviewed procedures CCP-TP-500, Rev. 11, *CCP Remote-Handled Waste Visual Examination*, and CCP-QP-002, Rev. 29, *CCP Training and Qualification Plan*, to determine their adequacy in addressing upper-tier requirements. The review determined that the procedures adequately address upper-tier requirements. Though ANL/CCP has not performed VE of records since the last audit, A-10-23, procedure CCP-TP-163, Rev. 2, *CCP Evaluation of Waste Packaging Records for Visual Examination of Records*, was also evaluated. The review determined that the procedure adequately addresses upper-tier documents.

ANL/CCP uses the two-operator method when performing VE characterization of newly generated waste. VE is performed by two qualified operators where the waste is visually examined and placed into containers. The audit team evaluated VE operations in the K Wing Hot Cell in building 205. The audit team observed VE operations for container RW48261, containing waste from RH SCG S5000 debris waste stream AERHDM. The audit team interviewed VE operators and VE experts (VEEs). The audit team also examined VE operational logbook RH-ANLE-VE-009 and verified logbook entries were logged correctly and reviewed by the vendor project manager (VPM), as required. At the time of the audit, VE operations were not being performed in the Alpha-Gamma Hot Cell Facility (AGHCF) in building 212.

The audit team examined the following RH VE BDRs generated from operations performed in the K Wing Hot Cell in building 205 and the AGHCF in building 212, to

verify implementation and compliance with the requirements for documenting VE activities, as stipulated in CCP-TP-500:

RHANLVE100009
RHANLVE110003

RHANLVE100013
RHANLVE110007

RHANLVE100016
ANLRHVE11009

The audit team examined training records for seven VE operators/Independent Technical Reviewers, and two SPMs and confirmed the appointment of two ANL/CCP VEEs. The audit team verified that VE operators, Independent Technical Reviewers, and SPMs were appropriately qualified as required.

The audit team evaluated corrective actions from CBFO CAR 10-049 identified during the previous ANL/CCP recertification audit, A-10-23, and verified continued corrective action implementation.

The procedure reviews, field observations, and document reviews provided evidence that the applicable requirements for characterizing RH SCG S5000 debris waste using the Visual Examination process is adequately established for compliance with upper-tier requirements, satisfactory in the implementation of these requirements, and effective in achieving the desired results.

5.3.4 Headspace Gas Sampling

HGS sampling was not being performed during the A-11-20 audit. As HSG sampling is performed sporadically due to the small volume of containers generated at this site, facilities for HSG sampling are not maintained on a permanent basis. BDR ANHSGS100003, which documents the only HSG sampling performed since audit A-10-23, was examined by the team during this audit. This BDR of RH samples from SCG S5000 waste drums included COC, calculation of DAC, temperature equilibration documentation, and sampling BDR preparation, review, and storage activities performed by ANL/CCP.

Overall, the audit team concluded that the Headspace Gas Sampling activities were adequately established for compliance with upper-tier requirements, satisfactory in the implementation of these requirements, and effective in achieving the desired results.

5.4 Quality Assurance Activities

The audit team evaluated the QA elements for personnel qualification and training, quality assurance records, and control of nonconformances to applicable upper-tier requirements. The methods used to select objective evidence are discussed, the objective evidence used to assess compliance with the HWFP is cited briefly (and in detail on the checklists), and the results of the assessment are provided. The evaluation results for each area audited are described below.

5.4.1 Control of Nonconforming Items

The audit team interviewed the resident quality assurance engineer and selected all seven ANL nonconformance reports (NCRs) generated since Audit A-10-23, to confirm that deficiencies are being appropriately documented and tracked through resolution as required. The following NCRs were reviewed during the audit:

- NCR-RHANL-0501-10
- NCR-RHANL-0502-10
- NCR-RHANL-0503-10
- NCR-RHANL-0504-10
- NCR-RHANL-0400-11
- NCR-RHANL-2343-11
- NCR-RHANL-2254-11
- NCR-RHANL-2255-11

The audit team confirmed that at the time of the audit, there were no NCRs that required reporting to the Permittee within the 7-day reporting requirement. All NCRs were verified as being managed and tracked in the CCP data center and on the 2010-2011 CCP NCR Logs. Further evaluations included review of the RHANL NCR Log Reconciliation Reports for 2010.

The procedures reviewed and objective evidence assembled and evaluated during the audit provided evidence that the applicable requirements for Control of Nonconforming Items are adequately established for compliance with upper-tier requirements, satisfactory in the implementation of these requirements, and effective in achieving the desired results.

5.4.2 Personnel Qualification and Training

The audit team conducted interviews with responsible personnel and reviewed implementing procedure CCP-QP-002, Rev. 31, *CCP Training and Qualification Plan*, to determine the degree to which the procedure adequately addresses upper-tier requirements. Personnel training records associated with VE, AK, and site project management were examined to verify implementation of associated requirements and to verify that personnel performing characterization activities are appropriately qualified. Record reviews included qualification cards, appointment letters, and other associated qualification documentation, including attendance sheets for required briefings on AK waste stream summary training for VE operators.

The procedures reviewed and objective evidence assembled and evaluated during the audit provided evidence that the applicable requirements for personnel training and qualification are adequately established for compliance with upper-tier requirements, satisfactory in the implementation of these requirements, and effective in achieving the desired results.

5.4.3 Quality Assurance Records

The audit team conducted interviews and reviewed implementing procedures relative to the control and administration of QA records to determine the degree to which the procedures address upper-tier requirements. The procedure review included CCP-PO-001, Rev. 20, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*; CCP-QP-008, Rev. 18, *CCP Records Management*; and CCP-QP-028, Rev. 12, *CCP Records Filing, Inventorying, Scheduling, and Dispositioning*. Control of QA records was verified through review of the CCP RH (All Sites) Records Inventory and Disposition Schedule (RIDS) dated 2/21/11. No concerns were identified.

Additional ANL/CCP records retrieved and reviewed during the audit included completed lessons learned required readings and the Lot 4 HSG Data Summary Report for Waste Stream AERDNM.

The procedures reviewed and objective evidence assembled and evaluated during the audit provided evidence that the applicable requirements for Quality Assurance Records are adequately established for compliance with upper-tier requirements, satisfactory in the implementation of these requirements, and effective in achieving the desired results.

6.0 SUMMARY OF DEFICIENCIES

6.1 Corrective Action Reports

During the audit, the audit team may identify conditions adverse to quality and document such conditions on CARs.

Condition Adverse to Quality (CAQ) – Term used in reference to failures, malfunctions, deficiencies, defective items, and nonconformances.

Significant Condition Adverse to Quality – A condition which, if uncorrected, could have a serious effect on safety, operability, waste confinement, TRU waste site certification, compliance demonstration, or the effective implementation of the QA program.

No HWFP-related CAQs were identified during Audit A-11-20.

6.2 Deficiencies Corrected During the Audit

During the audit, the audit team may identify CAQs. The audit team members and the audit team leader (ATL) evaluate the CAQs to determine if they are significant. Once a determination is made that the CAQ is not significant, the audit team member, in conjunction with the ATL, determines if the CAQ is an isolated case requiring only remedial action and therefore can be corrected during the audit (CDA).

Upon determination that the CAQ is isolated, the audit team member, in conjunction with the ATL, evaluates/verifies any objective evidence/actions submitted or taken by the audited organization and determines if the condition was corrected in an acceptable manner. Once it has been determined that the CAQ has been corrected, the ATL categorizes the condition as a CDA according to the following definition:

CDAs – Isolated deficiencies that do not require a root cause determination or actions to preclude recurrence. Correction of the deficiency can be verified prior to the end of the audit. Examples include one or two minor changes required to correct a procedure (isolated), one or two forms not signed or not dated (isolated), and one or two individuals that have not completed a reading assignment.

No HWFP-related CDAs were identified during Audit A-11-11.

7.0 SUMMARY OF OBSERVATIONS AND RECOMMENDATIONS

During the audit, the audit team may identify potential problems or suggestions for improvement that should be communicated to the audited organization. The audit team member, in conjunction with the ATL, evaluates these conditions and classifies them as Observations or Recommendations using the following definitions.

Observation – A condition that, if not controlled, could result in a CAQ.

Recommendations – Suggestions that are directed toward identifying opportunities for improvement and enhancing methods of implementing requirements.

Once a determination is made, the audit team member, in conjunction with the ATL, categorizes the condition appropriately.

7.1 Observations

No observations were provided to ANL/CCP management as a result of the audit.

7.2 Recommendations

The audit team offers the following recommendation to ANL/CCP, which addresses recent permit modifications.

Recommendation

It is recommended that freeze file changes as applicable be made to the AK Summary CCP-AK-ANLE-500 R6 for the RH waste stream AERHDM examined during this audit to address the permit modifications enacted on 12/30/10 dealing with Acceptable Knowledge. These changes are noted on the NMED WAP Compliance Matrix and will be attached to the AK Summary submitted with the final report to the State of New

Mexico, consistent with the agreement made between NMED and CBFO. The changes were discussed with and concurred by the audit participants.

8.0 LIST OF ATTACHMENTS

- Attachment 1: Personnel Contacted During the Audit
- Attachment 2: Personnel Contacted During the Audit by Area
- Attachment 3: Objective Evidence
- Attachment 4: Listing of Audited Documents
- Attachment 5: List of Processes and Equipment Reviewed
- Attachment 6: Procedure Revision Matrix

PERSONNEL CONTACTED DURING AUDIT A-11-20

NAME	TITLE/ORG	PRE-AUDIT MEETING	CONTACTED DURING AUDIT	POST-AUDIT MEETING
Billett, M.	Training Coordinator/CCP		X	
Bond, E.	VEO/CCP		X	
Callahan, L.	Project Specialist/FMS/NOD		X	
Dietzel, D.	FPD/DOE ASO	X		X
Doherty, M.	AKE/CCP		X	
Fisher, A.J.	Sr. Tech. Adv. Training/CCP			X
Gomez, C.	QA Specialist/CCP	X	X	
Hodge, D.	205, K-Wing CAM/ANL	X		
Kirkes, C.	WCA/WCO/CCP		X	
Martin, R.	Record Analyst/CCP		X	
Nelson, L.	RH SPM/CCP	X	X	
Pancake, D.	Proj. Mgr./ANL	X	X	
Patee, S.	VEE/CCP		X	X
Pearcy, S.	Records Mgr./CCP	X	X	
Peters, K.	AKE/CCP		X	
Quintana, I.	PM/CCP	X	X	X
Ray, W.	Project Specialist/ANL		X	
Redman, G.	VEO/CCP		X	
Rock, C.	Nuc. Ops./ANL	X		
Root, W.	VPM/CCP	X	X	
Wade, L.	QA/CCP	X	X	
Watson, L.	AKE/CCP		X	

PERSONNEL CONTACTED DURING THE AUDIT BY AREA

Acceptable Knowledge	Doherty, M. Peters, K. Watson, L.
Nonconformances	Gomez, C.
Records	Pearcy, S.
Training	Billett, M. Martin, R.
Visual Examination	Bond, E. Callahan, L. Nelson, L. Pancake, D. Patee, S. Redman, G. Root, W. Wade, L.
Waste Certification/Project-level Data Validation & Verification	Quintana, I.
WIPP Waste Information System (WWIS Data Entry)	Kirkes, C.

Objective Evidence Reviewed During the Audit

The objective evidence supporting Audit A-11-20 is included in the box(es) submitted with this report. Included in the box(es) is a "Content Map" describing the location (using color coding) and identity of all required objective evidence supporting the performance of the audit.

LISTING OF AUDITED DOCUMENTS

No.	Procedure Number	Rev.	DOCUMENT TITLE
1.	CCP-AK-ANLE-500	6	ANL Summary Report for AERHDM
2.	CCP-AK-ANLE-501	5	RH TRU Rad Char Tech Report for AERHDM
3.	CCP-AK-ANLE-502	3	Certification Plan for AERHDM
4.	CCP-AK-ANL-505C	0	Fuel Examination Waste Confirmation Test for AERHDM
5.	CCP-PO-001	20	CCP TRU Waste Characterization QAPJP
6.	CCP-PO-002	25	CCP Transuranic Waste Certification Plan
7.	CCP-PO-005	22	CCP Conduct of Operations
8.	CCP-PO-006	3	CCP Conduct of Operations Matrix
9.	CCP-PO-008	9	CCP Quality Assurance Interface With WTS QA Program
10.	CCP-PO-500	1	CCP/ANL RH TRU Waste Interface Document
11.	CCP-PO-505	0	CCP Remote-Handled Transuranic Waste Authorized Methods For Payload Control
12.	CCP-QP-001	6	CCP Graded Approach
13.	CCP-QP-002	31	CCP Training and Qualification Plan
14.	CCP-QP-004	10	CCP Corrective Action Management
15.	CCP-QP-005	20	CCP TRU Nonconforming Item Reporting and Control
16.	CCP-QP-006	9	CCP Corrective Action Reporting and Control
17.	CCP-QP-008	18	CCP Records Management
18.	CCP-QP-010	22	CCP Document Preparation, Approval, and Control
19.	CCP-QP-014	4	CCP Trend Analysis and Reporting
20.	CCP-QP-015	11	CCP Procurement
21.	CCP-QP-016	15	CCP Control of Measuring and Testing Equipment
22.	CCP-QP-017	3	CCP Identification and Control of Items
23.	CCP-QP-018	8	CCP Management Assessment
24.	CCP-QP-019	6	CCP Quality Assurance Reporting to Management
25.	CCP-QP-021	7	CCP Surveillance Program
26.	CCP-QP-022	12	CCP Software Quality Assurance Plan
27.	CCP-QP-023	3	CCP Handling, Storage and Shipping
28.	CCP-QP-026	11	CCP Inspection Control

LISTING OF AUDITED DOCUMENTS

No.	Procedure Number	Rev.	DOCUMENT TITLE
29.	CCP-QP-027	5	CCP Test Control
30.	CCP-QP-028	12	CCP Records Filing, Inventorying, Scheduling, and Dispositioning
31.	CCP-QP-030	8	CCP Written Practice for the Qualification of CCP Helium Leak Detection Personnel
32.	CCP-TP-001	19	CCP Project Level Data Validation and Verification
33.	CCP-TP-002	23	CCP Reconciliation of DQOs and Reporting Characterization Data
34.	CCP-TP-003	18	CCP Data Analysis for S3000, S4000, and S5000 Characterization
35.	CCP-TP-005	22	CCP Acceptable Knowledge Documentation
36.	CCP-TP-055	4	CCP Varian Porta-Test Leak Detector Operations
37.	CCP-TP-082	8	CCP Preparing and Handling Waste Containers for HSGS
38.	CCP-TP-093	15	CCP Sampling of TRU Waste Containers
39.	CCP-TP-106	7	CCP HSGS BDR Preparation
40.	CCP-TP-162	1	CCP Random Selection of Containers for Solids and HSGS and Analysis
41.	CCP-TP-163	2	CCP Evaluation of Waste Packaging Records for VE of Records
42.	CCP-TP-500	11	CCP RH Waste VE
43.	CCP-TP-505	6	CCP Removable Lid Canister Loading
44.	CCP-TP-506	2	CCP Preparation of the RH TRU Waste AK Characterization Reconciliation Report
45.	CCP-TP-509	3	CCP RH TRU Container Tracking
46.	CCP-TP-512	5	CCP RH Waste Sampling
47.	CCP-TP-530	10	CCP RH TRU Waste Certification and WWIS/WDS Data Entry
48.	WP 13-QA.03	18	Q A Independent Assessment Program

PROCESSES AND EQUIPMENT EVALUATED DURING CBFO AUDIT A-11-20

WIPP #	Process/Equipment Description	Applicable to the Following Waste Streams/Groups of Waste Streams	Currently Approved by NMED	Currently Approved by EPA
PREVIOUSLY APPROVED PROCESSES OR EQUIPMENT				
The following were evaluated during CBFO Audit A-11-20				
8RHVE1	Visual Examination CCP-TP-500, Remote-Handled Waste Visual Examination CCP-TP-163, CCP Standard Visual Examination of Records	Debris (S5000)	YES	YES (Records only)
8RHVE2	Visual Examination of Newly Packaged RH Waste Drums CCP-TP-500, Remote-Handled Waste Visual Examination	Debris (S5000)	YES	YES
Not Applicable	Acceptable Knowledge CCP-TP-005, CCP Acceptable Knowledge Documentation	Debris (S5000)	YES	YES
Not Applicable	Headspace Gas Sampling CCP-TP-093, CCP Sampling of TRU Waste Containers	Debris (S5000)	YES	N/A
Not Applicable	Data Verification and Validation CCP-TP-001, CCP Project Level Data Validation and Verification CCP-TP-500, Remote-Handled Waste Visual Examination CCP-TP-504, CCP Dose-to-Curie Survey Procedure	Debris (S5000)	YES	YES
Not Applicable	Quality Assurance	N/A	N/A	YES
Not Applicable	WIPP Waste Information System (WWIS)/Waste Data System (WDS)	N/A	YES	YES

PROCEDURE REVISION MATRIX

No	Procedure Number	Procedure Title	Revision During Last Annual Audit	Revision During Current Annual Audit	Brief Description of Procedure Changes
1	CCP-AK-ANLE-500	ANL Summary Report for AERHDM	5	6	Revised to add TRUCON Code AE 322.
2	CCP-AK-ANLE-501	RH TRU Rad Char Tech Report for AERHDM	2	5	R3-Revised to add Appendix C that addresses Fuel Examination Waste processed in the Alpha Gamma Hot Cell Facility. R4-Revised to add Appendix D that addresses solidified liquid debris waste from the K-Wing Hot Cells. R5-Revised to add Appendix B addressing Fuel Examination Waste K-Wing and Appendix E to address RERTR fuel plates.
3	CCP-AK-ANLE-502	Confirmation Test Plan for AERHDM	1	3	R2-Revised to include debris waste from the 205 K-Wing and fuel examination waste from the Alpha Gamma Hot Cell. R3-Revised to include length and weight measurements and liquid sampling to the radiological characterization strategy.
4	CCP-AK-ANL-505C	Fuel Examination Waste Confirmation Test for AERHDM	0	0	
5	CCP-PO-001	CCP TRU Waste Characterization QAPJP	17	20	R18-Revised to incorporate modifications to the Hazardous Waste Facility Permit. To make editorial changes that are needed and to change the WIPP WWIS to WWIS/WDS. R19-Revised to include changes from Permit Renewal. R-20-Revised to incorporate Class 2 Permit Modification (Transporter Model III and Standard Large Box 2).
6	CCP-PO-002	CCP Transuranic Waste Certification Plan	24	25	Revised to incorporate Revision 7.0 of DOE/WIPP-02-31 and minor editorial changes.
7	CCP-PO-005	CCP Conduct Of Operations	21	22	Revised to add detail to Section 6.0 and Section 7.0, and make minor editorial corrections throughout.
8	CCP-PO-006	CCP Conduct Of Operations Matrix	3	3	
9	CCP-PO-008	CCP Quality Assurance Interface With WTS QA Program	8	9	Minor revision to update references to the <i>Waste Isolation Pilot Plant Hazardous Waste Facility Permit</i> .
10	CCP-PO-500	CCP/ANL RH TRU Waste Interface Document	1	1	
11	CCP-PO-505	CCP Remote Handled Transuranic Authorized Methods For Payload	0	0	

PROCEDURE REVISION MATRIX

No	Procedure Number	Procedure Title	Revision During Last Annual Audit	Revision During Current Annual Audit	Brief Description of Procedure Changes
12	CCP-QP-001	CCP Graded Approach	5	6	Revised to change steps to access database to the new Bellview page and clarify steps in the process; delete Section C of Attachment 1; delete Attachment 3; and, incorporate CBFO comments.
13	CCP-QP-002	CCP Training And Qualification Plan	28	31	R29- Revised to incorporate changes into Attachment 4, CCP Test Drum Data Sheet for Contact-Handled Waste, and minor editorial changes. R30- Revised to bring into compliance with the revision of the <i>Waste Isolation Pilot Plant Hazardous Waste Facility Permit</i> . R31- Revised based on Rev 2 of the DOE/WIPP 02-3214.
14	CCP-QP-004	CCP Corrective Action Management	9	10	Revised to implement the revision of the Permit.
15	CCP-QP-005	CCP TRU Nonconforming Item Reporting And Control	18	20	R19- Revised to: clarify hold tag application; CBFO notification requirements including responsibility, incorporate CCP-SO-054, 1 and CCP-SO-065, 0; revisions to Attachment 1, CCP Nonconformance Report (NCR); and other minor editorial changes. R20- Revised to incorporate relevant steps from CCP-QP-004, <i>CCP Corrective Action Management</i> , and other editorial changes.
16	CCP-QP-006	CCP Corrective Action Reporting And Control	9	9	
17	CCP-QP-008	CCP Records Management	15	18	R16- Revised to clarify and address the submittal of historical source documents R17- Revised to change the submittal process for Acceptance Knowledge (AK) documentation and section on historical source documents. R18- Revised to support corrective action report (CAR)-LANL-0004-10.
18	CCP-QP-010	CCP Document Preparation, Approval, And Control	20	22	R21- Revised to update references to the Permit. R22- Revised to update figure/table formatting and referencing, records requirements, and other editorial changes.
19	CCP-QP-014	CCP Trend Analysis And Reporting	3	4	Revised to improve flow and more closely align with upper tier drivers.

PROCEDURE REVISION MATRIX

No	Procedure Number	Procedure Title	Revision During Last Annual Audit	Revision During Current Annual Audit	Brief Description of Procedure Changes
20	CCP-QP-015	CCP Procurement	10	11	Revised to move Subcontract Technical Representative (STR) from the note to Section 3 and other clarifications and other editorial changes.
21	CCP-QP-016	CCP Control Of Measuring And Testing Equipment	15	15	
22	CCP-QP-017	CCP Identification And Control Of Items	3	3	
23	CCP-QP-018	CCP Management Assessment	8	8	
24	CCP-QP-019	CCP Quality Assurance Reporting To Management	5	6	Revised to clarify administrative protocols on the distribution of the Semiannual Quality Assurance (QA) Report.
25	CCP-QP-021	CCP Surveillance Program	7	7	
26	CCP-QP-022	CCP Software Quality Assurance Plan	11	12	Revised to add steps for the SCMC to issue SCO numbers through the data center. This is in reference to the CAR-CCP-0010-10.
27	CCP-QP-023	CCP Handling, Storage And Shipping	3	3	
28	CCP-QP-026	CCP Inspection Control	9	11	R10- Revised Attachment 2, CCP Random Sampling Plan for Receipt Inspection, deleted reference to ANSI/ASQC Z 1.4, and made changes to better describe sequence activities. R11- Revised to incorporate procedure changes and minor editorial comments.
29	CCP-QP-027	CCP Test Control	4	5	Revised to clarify how CCP-QP-010 is applicable only to the control, not the development, of a test plan.
30	CCP-QP-028	CCP Records Filing, Inventory, Scheduling, And Dispositioning	11	12	Revised to remove examples form and re-number remaining attachments and update Attachment 2.
31	CCP-QP-030	CCP Written Practice For The Qualification Of CCP Helium Leak Detection Personnel	8	8	
32	CCP-TP-001	CCP Project Level Data Validation And Verification	17	19	R18- Revised to address Hazardous Waste Facility Permit modification, and other editorial and freeze file changes. R19- Revised to clarify independent technical reviewer (ITR) Independence and to update references to the Permit.
33	CCP-TP-002	CCP Reconciliation Of DQOs And Reporting Characterization Data	22	23	Revised to implement the revision of the Permit.
34	CCP-TP-003	CCP Data Analysis For S3000, S4000, And S5000 Characterization	17	18	Revised to implement the revision of the Permit.
35	CCP-TP-005	CCP Acceptable Knowledge Documentation	18	22	R19- Revised document to address the WIPP Form WF09-

PROCEDURE REVISION MATRIX

No	Procedure Number	Procedure Title	Revision During Last Annual Audit	Revision During Current Annual Audit	Brief Description of Procedure Changes
					171 from an internal CCP audit and to incorporate minor editorial changes and technical clarifications noted as a result of various Acceptable Knowledge audits. R20- Revised to allow new and updated attachments and source documents to be submitted anytime after the initial submittal. R21- Revised to implement the revision of the Permit. R22- Revised to address changes in Revision 2 of the WCPPI. Incorporated editorial changes and technical clarifications throughout procedure.
36	CCP-TP-055	CCP Varian Porta-Test Leak Detector Operations	4	4	
37	CCP-TP-082	CCP Preparing and Handling Waste Containers for HSGS	7	8	Removed elements no longer required or redundant to host site procedures.
38	CCP-TP-093	CCP Sampling of TRU Waste Containers	13	15	R14- Revised to eliminate the allowance of the procedure to perform Transportation Headspace sampling. Revised the note under step 4.5.6 per CCP-PO-001. Made editorial changes. Clarified the Field Reference Standard process. Eliminated the allowance of compositing samples. Updated the Chain-of-Custody form. Changed the batch data report (BDR) numbering format. Incorporated recommendations from Audit A-10-04. Updated references to the Permit. R15- Revised to update the procedure so the field blank criteria matches the permit, eliminated the VPM from the responsibilities section and clarified the use of Chain-of-Custody.
39	CCP-TP-106	CCP HSGS BDR Preparation	6	7	Revised to clarify ITR independence.
40	CCP-TP-162	CCP Random Selection of Containers for Solids and HSGS and Analysis	0	1	Minor revision to update references to the Permit.
41	CCP-TP-163	CCP Evaluation of Waste Packaging Records for VE of Records	2	2	

PROCEDURE REVISION MATRIX

No	Procedure Number	Procedure Title	Revision During Last Annual Audit	Revision During Current Annual Audit	Brief Description of Procedure Changes
42	CCP-TP-500	CCP RH Waste VE	8	11	R9- Revised to make changes for a two shift operation and two different sets of qualified operators to be able to work on the same RH-VE. Added Table 1, Prohibited Items List, and updated language to reflect the permit modification. R10- Revised to incorporate Permit Modification ITR language. R11- Implement Revision 2 of DOE/WIPP-02-3214.
43	CCP-TP-505	CCP Removable Lid Canister Loading	5	6	Revised to incorporate Gasket Shelf Life criteria and editorial changes.
44	CCP-TP-506	CCP Preparation of the RH TRU Waste AK Characterization Reconciliation Report	2	2	
45	CCP-TP-509	CCP RH TRU Container Tracking	2	3	Revised to include the NDA process.
46	CCP-TP-512	CCP RH Waste Sampling	3	5	R4- Revised to incorporate Permit Mod ITR language. R5- Revised to implement revision 2 of DOE/WIPP-02-3214.
47	CCP-TP-530	CCP RH TRU Waste Certification and WWIS/WDS Data Entry	9	10	Revised Table 1, Data Sources for the RH WDS Master Template, to include a new source for Gross Weight and a new field label and source for RH NDA.
48	WP 13-QA.03	Q A Independent Assessment Program	17	18	Added allowance for the QA Programs manager to extend the time limit for issuance of an audit report.