



**Department of Energy**  
Carlsbad Field Office  
P. O. Box 3090  
Carlsbad, New Mexico 88221

OCT 14 2010



Mr. Steve Zappe, Project Leader  
Hazardous Materials Bureau  
New Mexico Environment Department  
2905 Rodeo Park Drive East, Building 1  
Santa Fe, New Mexico 87505-6303

Subject: Transmittal of Carlsbad Field Office Final Audit Report A-10-23, Argonne National Laboratory Central Characterization Project for Remote Handled Waste Characterization

Dear Mr. Zappe:

This letter transmits the subject audit report for the processes performed to characterize and certify waste as required by Section II.C.2.c of the WIPP Hazardous Waste Facility Permit. The report contains the results of the audit performed for Summary Category Group S5000 debris waste, August 3-5, 2010.

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.

Should you have any questions, please contact Ms. Ava L. Holland, Carlsbad Field Office Director of Quality Assurance, at (575) 234-7423.

Sincerely,

Edward Ziemianski  
Acting Manager

Enclosure



Mr. Steve Zappe

-2-

OCT 14 2010

cc: w/Report Narrative

O. Vincent, CBFO	*ED
A. Holland, CBFO	ED
W. Mackie, CBFO	ED
G. Basabilvazo, CBFO	ED
S. McCauslin, CBFO	ED
J. R. Stroble, CBFO	ED
M. Navarrete, CBFO	ED
D. Miehl, CBFO	ED
K. Joshi, DOE-CH	ED
D. Dietzel, DOE-CH	ED
D. Haar, WTS/CCP	ED
D. Ploetz, WTS/CCP	ED
V. Cannon, WTS/CCP	ED
A. J. Fisher, WTS/CCP	ED
M. Walker, WTS/CCP	ED
Y. Salmon, WTS/CCP	ED
J. Hoff, WTS	ED
M. Mullins, WTS	ED
T. Peake, EPA	ED
M. Eagle, EPA	ED
E. Feltcorn, EPA	ED
R. Joglekar, EPA	ED
S. Ghose, EPA	ED
R. Lee, EPA	ED
J. Bearzi, NMED	ED
J. Kieling, NMED	ED
S. Holmes, NMED	ED
T. Kesterson, DOE OB WIPP NMED	ED
D. Winters, DNFSB	ED
P. Gilbert, LANL-CO	ED
G. Lyshik, LANL-CO	ED
K. Martin, CTAC	ED
P. Hinojos, CTAC	ED
G. Knox, CTAC	ED
WWIS Database Administrators	ED
R. Chavez, WRES	ED
W. Most, WRES	ED
D. Streng, WRES	ED
L. Pastorello, WRES	ED
D. Guevara, WRES	ED

\*ED denotes electronic distribution

cc: w/enclosures

WIPP Operating Record, MS: 452-09

CBFO QA File

CBFO M&RC

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

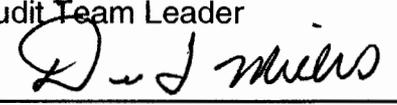
**FINAL  
AUDIT REPORT  
OF THE  
ARGONNE NATIONAL LABORATORY (ANL)  
CENTRAL CHARACTERIZATION PROJECT (CCP)  
FOR REMOTE-HANDLED (RH) WASTE CHARACTERIZATION**

**CARLSBAD, NM, AND ARGONNE, IL  
AUDIT NUMBER A-10-23**

**August 3 – 5, 2010**



Prepared by:  Date: 4 OCT 2010  
Greg Knox, CTAC  
Audit Team Leader

Approved by:  FOR Date: 10-13-10  
Ava L. Holland, CBFO  
Quality Assurance Director

## 1.0 EXECUTIVE SUMMARY

Carlsbad Field Office (CBFO) Recertification Audit A-10-23 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). The activities reviewed were for characterization and certification of remote-handled (RH) Summary Category Group (SCG) S5000 debris waste. Currently, ANL/CCP has only one S5000 debris waste stream, designated as AERHDM, which is generated in the ANL Alpha Gamma Hot Cell Facility (AGHCF) and the K Wing hot cells. The activities are performed consistent with the requirements described in the Waste Isolation Pilot Plant (WIPP) Hazardous Waste Facility Permit (HWFP), 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 3 – 5, 2010. The audit team concluded that overall, the ANL/CCP technical procedures are adequate relative to the flow-down of requirements from the HWFP, the CBFO QAPD, and the WAC. Additionally, the ANL/CCP technical areas evaluated were determined to be satisfactorily implemented and effective.

The audit team concluded that the established quality assurance (QA) program for the related activities was adequate for compliance with the CBFO QAPD and 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 one concern during the audit. A concern in the area of project-level validation resulted in the issuance of accelerated CBFO Corrective Action Report (CAR) 10-048. The team also offered one Recommendation in the area of acceptable knowledge for consideration by ANL/CCP management. The CAR is described in section 6.0 and the Recommendation is described in section 7.0.

## 2.0 SCOPE

The audit team evaluated the adequacy, implementation, and effectiveness of the ANL/CCP RH TRU waste characterization activities. The following elements were evaluated.

### Technical

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

## General

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

## Quality Assurance

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

Personnel Qualification and Training  
QA Records  
Control of Nonconforming Items

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, New Mexico Environment Department
- *Remote-Handled Transuranic Waste Characterization Program Implementation Plan (WCPIP)*, DOE/WIPP-02-3214
- *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant*, DOE/WIPP-02-3211
- *CCP Transuranic Waste Quality Assurance Characterization Project Plan (QAPjP)*, CCP-PO-001
- *CCP Transuranic Waste Certification Plan*, CCP-PO-002
- *ANL/CCP 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, CBFO Technical Assistance Contractor (CTAC)
Porf Martinez	Auditor, CTAC
Tammy Bowden	Auditor, CTAC
Berry Pace	Auditor, CTAC
Rick Castillo	Auditor, CTAC
Harold Washington	Auditor, CTAC
Dick Blauvelt	Technical Specialist, CTAC
Rhett Bradford	Technical Specialist, CTAC

Paul Gomez  
Jim Oliver

Technical Specialist, CTAC  
Technical Specialist, CTAC

#### **OBSERVERS**

Ricardo Maestas  
Tom Morgan

New Mexico Environment Department (NMED)  
CBFO Office of the National TRU Program (NTP)

#### **4.0 AUDIT PARTICIPANTS**

The ANL/CCP individuals contacted during the audit are identified in Attachment 1. A list of the ANL/CCP participants contacted during the audit, by area, is provided in Attachment 2. A pre-audit meeting was held by teleconference in Carlsbad, NM, and Argonne, IL, on August 3, 2010. 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 Carlsbad, NM, and Argonne, IL, on August 5, 2010.

#### **5.0 SUMMARY OF AUDIT RESULTS**

##### **5.1 Program Adequacy and Implementation**

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 were adequate, satisfactorily implemented, and effective. The Permit Attachment B6 checklist questions that were applicable to the audit scope were answered. Those B6 checklist questions that were not applicable to the audit scope are marked "NA" on the B6 checklists. B6-2, Solids and Soils/Gravel Sampling Checklist, and B6-5, Radiography Checklist, are not included in this audit report as these processes are outside the scope of A-10-23. Audit activities, including objective evidence reviewed, are described below.

Attachment 3 contains a copy of the CBFO CAR 10-048 CAR Closure Package. Attachment 4 contains copies of the objective evidence reviewed and evaluated during the audit. Attachment 5 contains a list of ANL/CCP documents audited. Attachment 6 lists the processes and equipment evaluated during the audit. Attachment 7 provides a Revision Matrix of the ANL/CCP procedures reviewed during the audit.

##### **5.2 Technical Activities**

###### **5.2.1 Table B6-1 WAP Checklist**

This audit was performed to assess the ability of ANL/CCP to manage and perform TRU waste characterization and certification activities for RH SCG S5000 debris waste. The B6-1 WAP checklist addresses general program requirements from an overall management perspective. The general requirements checklist addresses both technical requirements and QA programmatic requirements that, when collectively implemented,

ensure effective overall management of TRU waste characterization and certification activities. Requirements are integrated into controlled documents that will ensure the waste characterization strategy as defined in the WAP is accomplished and documented in accordance with controlled processes and procedures.

The audit team evaluated both the QA program aspects of the B6-1 checklist and the technical activities defined in the remaining B6 checklists. The following B6-1 checklist items related to the implementation of the QA program were evaluated by the team.

#### Personnel Qualification and Training

The audit team interviewed personnel and reviewed documentation in relation to B6-1 and B6-3 requirements to verify that ANL/CCP complies with the requirements of QAPD Section 1.2, Personnel Qualification and Training. Training and qualification records, including the RH-ANL List of Qualified Individuals (LOQI), were reviewed for ANL/CCP AK Experts (AKEs), Site Project Managers (SPMs), and VE personnel. Personnel qualification and training activities were conducted by ANL/CCP in accordance with CCP-QP-002, *CCP Training and Qualification Plan*.

The audit team also verified sustained corrective actions for CBFO CAR 09-056, issued during Audit A-09-21, pertaining to SPM Qualification Cards for VE. As a result, since no similar conditions were encountered during this audit, the audit team concluded that the corrective actions taken for CAR 09-056 were suitable in precluding recurrence.

Overall, the audit team concluded that the processes for personnel qualification and training were adequate, satisfactorily implemented, and effective. No concerns were identified.

#### QA Records

The audit team interviewed personnel and reviewed documentation in relation to B6-1 requirements to verify that ANL/CCP complies with the requirements of QAPD Section 1.5, Records. The records examined were properly managed and stored. Records activities were conducted by ANL/CCP in accordance with Procedures CCP-QP-008, *CCP Records Management*, and CCP-QP-028, *CCP Records Filing, Inventorying, Scheduling, and Dispositioning*.

The audit team verified that CCP has established and maintains a Department of Energy (DOE) Records Inventory and Disposition Schedule (RIDS) encompassing all RH sites. The audit team identified no concerns relative to QA records.

Overall, the audit team concluded that the processes for managing and controlling records were adequate, satisfactorily implemented, and effective.

### Control of Nonconforming Items

The audit team interviewed the appropriate personnel and performed a document review of nonconformance reports (NCRs) in relation to B6-1 Items 44 and 45. The team reviewed Procedures CCP-QP-005, Revision 18, *CCP TRU Nonconforming Item Reporting and Control*, and CCP-QP-004, Revision 9, *CCP Corrective Action Management*. Implementation of the noted procedures, where applicable, was verified via document review of the e-mail documentation, NCR Logs, and NCRs noted below:

#### ANL Nonconformance Report Logs:

RHANL NCR LOG 2010  
RHANL NCR LOG 2009  
RHANL NCR LOG 2007

#### Nonconformance Reports:

NCR-RHANL-0500-10, Rev. 0  
NCR-RHANL-0500-07, Rev. 0  
NCR-RHANL-0002-09, Rev. 0  
NCR-RHANL-0001-09, Rev. 0

The audit team verified that there have been no non-administrative, WAP-related NCRs that required CBFO notification within the last year. The audit team reviewed e-mail documentation from the CCP Certification Manager to the WTS QA Engineer, sent 7/26/10, stating that NCR-RHANL-0500-10, Rev. 0, was "Not Reportable."

Per document review, the audit team confirmed NCR Final Disposition Verification, as applicable.

In conclusion, the audit team identified no concerns or issues related to nonconforming items and corrective action. Personnel qualification and training, QA records, and control of nonconforming item activities were determined to be adequate, satisfactorily implemented, and effective.

### WIPP Waste Information System (WWIS)/Waste Data System (WDS)

The audit team evaluated the adequacy of CCP Procedure CCP-TP-530, *CCP RH TRU Waste Certification and WWIS/WDS Data Entry*, with respect to the CBFO QAPD and B6-1 requirements and determined that the procedure contains adequate flow-down of upper-tier requirements applicable to RH operations at the ANL host facility.

The audit team interviewed CCP project-level personnel, witnessed a demonstration of WWIS/WDS data entry, and reviewed the following documents:

Canister AE0044 package, containing Inner Drums 913H, 923H, and 930H

- Removable Lid Canister Loading Form
- Waste Container Data Report from WWIS

Canister AE0045 package, containing Inner Drums 936H, 938H, and 941H

- Removable Lid Canister Loading Form
- Waste Container Data Report from WWIS

Overall, the audit team determined that the WWIS/WDS activities were adequate, satisfactorily implemented, and effective. No concerns were identified.

#### Project Level Validation and Verification

The B6-1 WAP checklist addresses program requirements from an overall management perspective. It documents the verification that the waste characterization strategy as defined in the WAP is implemented by using controlled procedures. This audit was performed to assess the ability of ANL/CCP to characterize a RH SCG S5000 debris waste stream. Objective evidence to evaluate the implementation of the characterization strategy was selected through review of all available batch data reports (BDRs), sampling training documentation for ANL/CCP personnel, and requesting specific documentation from the ANL/CCP Records Center. Each characterization process involves:

- Collection of raw data
- Collection of quality assurance/quality control (QA/QC) samples or information
- Reduction of the data to a usable format, including a standard report
- Review of the report by the data generation facility and the site project office
- Comparison of the data against program data quality objectives
- Reporting the final waste characterization information to WIPP

The flow of data from the point of generation to inclusion in the Waste Stream Profile Form (WSPF) for each characterization technique was reviewed to ensure that all applicable requirements were captured in the site operating procedures. Because the material in this section is also addressed in more detail in the following sections, the specific procedures audited and the objective evidence reviewed are provided in the appropriate sections.

Compliance with the characterization requirements of the WAP was verified through examination of documentation. The project-level data V&V process was evaluated by reviewing the following BDRs:

RHANLVE100001	ANHSGS100001	ANHSGS100002
RHANLVE100005	ECL10012G	ECL10014G
RHANLVE100008	ECL10012M	ECL10014M

Copies of these BDRs are included as objective evidence in Attachment 4.

The audit team determined that the project-level review of the BDRs was adequate, and confirmed that the reports were reviewed by the responsible SPMs for the VE and HSG BDRs. The audit team performed an evaluation on the analysis reports reviewed by the laboratory. Consequently, a concern was issued with regard to the laboratory and field duplicate results. The audit team noted that the SPM had incorrectly answered questions on the SPM checklist for several BDRs. This concern resulted in issuance of accelerated CBFO CAR 10-048 (see section 6).

With the exception of the concern documented in CAR 10-048, the audit team concluded that the project-level activities evaluated were adequate, satisfactorily implemented, and effective.

#### 5.2.2 Table B6-2 Solids and Soils/Gravel Sampling Checklist

This audit was performed to assess ANL/CCP's ability to characterize and certify RH SCG S5000 debris waste. Neither SCG S3000 homogeneous solids waste nor SCG S4000 soils/gravel were within the scope of this audit.

#### 5.2.3 Table B6-3 Acceptable Knowledge Checklist

Evaluations were conducted for the RH TRU mixed waste debris stream, designated as AERHDM, generated in the ANL AGHCF and the K Wing hot cells. The audit team specifically addressed the WAP requirements listed on the B6-3 checklist along with portions of the B6-1 checklist. Objective evidence was reviewed and compiled to evaluate compliance with each of the applicable requirements on the checklists. This waste stream originally consisted of forty-four 30-gallon drums for which CCP reviewed the VE tapes of packaging performed by ANL staff. Subsequently, the waste stream has been expanded with the packaging of additional debris drums in the AGHCF, which CCP personnel have witnessed under a certified VE process. In addition, the AK record for debris waste from the K Wing hot cells has been examined and drums from this location have been added to waste stream AERHDM.

The audit team reviewed the latest revision to the AK Summary Report for this waste stream, a copy of the WSPF and attachments, and numerous AK source documents to establish support for the conclusions noted in the AK Summary, particularly with respect to support for the waste stream chemicals and hazardous waste numbers (HWNs) listed in AK Summary Table 3 for operations in both the AGHCF and K Wing hot cells. The team also examined AK attachments addressing a crosswalk between the AK Source Documents and the WAP requirements, the reference list of AK Source Documents, the hazardous waste constituents list, the waste form, waste material parameters, prohibited items, AK package Attachment 6, and a container inventory listing. The auditors reviewed several discrepancy reports resolving discrepancies in the AK record.

The required traceability exercise was performed for four drums from those that have been completely through the characterization and certification process, including three drums from each of the three HSG sampling lots and a fourth drum selected from the

certified population. In addition to the HSG BDRs, the audit team reviewed the relevant VE BDRs. Project tracking system (PTS) screen-shots for the traceability drums were also compiled. The estimated waste material parameter weights for this stream and supporting documentation were reviewed. An examination of the AK Accuracy Report, AKE and SPM training records, and the reconciliation of the characterization data with the AK record, including a review of the AK Characterization Checklists, completed the AK WAP review process.

Documents reviewed included the WSPF, AK Accuracy Report, and Characterization Reconciliation Report, along with examination of relevant AK Source documents.

The audit team provided one Recommendation for the AK portion of the audit. The team recommended that the list of prohibited items on AK Attachment 6 be reconciled with the language in the AK Summary and the description of the packaging for the waste in this stream be expanded and clarified (see section 7).

Overall, the audit team concluded that AK process was adequate, satisfactorily implemented and effective.

#### 5.2.4 Table B6-4 Headspace Gas Checklist

The audit team evaluated the ANL/CCP Headspace Gas Sampling process utilizing the WAP B6 checklists, primarily checklist B6-4, as a guide for verifying permit compliance for the characterization of RH SCG S5000 debris waste. HSG sampling is performed at ANL, with the HSG analysis of the samples performed at the Idaho National Laboratories (INL) CCP analytical labs, which are evaluated independently of this audit. HSG sampling of the AERHDM waste stream is performed using SUMMA<sup>®</sup> canisters. HSG sampling was not being performed at ANL at the time of the audit; therefore, the evaluation of HSG sampling was based on review of HSG BDRs generated since the previous CBFO Audit (A-09-21).

The audit team determined that the following processes and documentation are compliant: sampling BDRs ANHSGS100001 and ANHSGS100002, Drum Age Criteria (DAC), sample chain-of-custody (COC), canister tags, quality control sample collection, and sample shipment to the analytical laboratory. Additionally, training and qualification of HSG personnel were confirmed to be compliant with the CCP program. Furthermore, associated measuring and test equipment (M&TE) was determined to be correctly labeled and calibrated as required.

Overall, the audit team concluded that the HSG sampling activities were adequate, satisfactorily implemented, and effective. No concerns were identified

#### 5.2.5 Table B6-5 Radiography Checklist

ANL/CCP is not presently performing radiography. If ANL/CCP should elect to perform radiography in the future, a CBFO certification audit will be required.

#### 5.2.6 Table B6-6 Visual Examination Checklist

The audit team evaluated the ANL VE process utilizing the WAP B6 checklists, primarily checklist B6-6, as a guide for verifying permit compliance for characterization. The audit team evaluated the adequacy, implementation, and effectiveness of the ANL/CCP VE characterization process for RH SCG S5000 debris waste.

Currently, ANL/CCP uses the two-operator method when performing VE characterization. VE is performed by two qualified operators as the waste is visually examined and placed into containers.

The audit team reviewed Procedures CCP-TP-500, Rev. 9, *CCP Remote-Handled Waste Visual Examination*, CCP-TP-163, Rev. 2, *CCP Evaluation of Waste Packaging Records for Visual Examination of Records*, 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 requirements.

The audit team examined training records for five VE operators and confirmed the appointment of two ANL/CCP VE Experts (VEEs). The audit team identified a potential concern during the review of the training files. No documentation could be provided to verify that the Independent Technical Reviewer (ITR) for BDR RHANLE100007 had read AK Summary CCP-AK-ANLE-500, Rev. 5, dated 1/14/2010. Upon further investigation it was determined that CCP Standing Order CCP-SO-057, Rev. 0, dated 2/15/2010, clarifies the criteria to determine the significance of an AK Summary revision and directs the appropriate training documentation. CCP-QP-002 was revised on 5/26/2010 to incorporate this standing order. Per Procedure CCP-QP-002, Rev. 28, section 4.2, CCP-AK-ANLE-500, Rev. 5 does not require additional documentation of training as the changes to CCP-AK-ANLE-500, Rev. 5 did "not affect waste generating processes, typical packaging configurations or expected waste material parameters expected to be found in each waste matrix code." The first evidence of work performed to CCP-AK-ANLE-500, Rev. 5, by the ITR in question, was on 6/5/2010. Therefore, there is no requirement for documented training to CCP-AK-ANLE-500, Rev. 5 by the ITR.

The audit team examined the following RH VE BDRs 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 CCP-TP-500 requirements for documenting VE activities.

RHANLVE090003  
RHANLVE100001  
RHANLVE100002  
RHANLVE100003

RHANLVE100004  
RHANLVE100005  
RHANLVE100006  
RHANLVE100007

ANL/CCP has not performed VE utilizing CCP-TP-163, Rev. 2, *CCP Evaluation of Waste Packaging Records for Visual Examination of Records*, since the last audit. VE operations were not being performed in the K Wing hot cell in Building 205 at the time of the audit. The audit team interviewed VE operators and a VEE, and examined VE operational logbooks. The audit team observed VE operations in the Building 212 AGHCF involving placement of RH SCG S5000 debris waste into 7-gallon container number 635.

The audit team also verified sustained corrective actions for CBFO CAR 09-057, issued during Audit A-09-21, pertaining to VEE appointment letters. As a result, since no similar conditions were encountered during this audit, the audit team concluded that the corrective actions taken for CAR 09-057 were suitable for precluding recurrence.

VE characterization activities were determined to be adequate in addressing upper-tier requirements as applicable, satisfactorily implemented, and effective.

### 5.3 General

#### Results of Previous Audits

The results of CBFO certification Audit A-09-21 of ANL/CCP were examined and it was determined that the concerns identified in the audit have been addressed.

#### Changes in Programs or Operations

The HWFP portions of the audit were performed in accordance with the latest applicable B6 checklists, which incorporate all the Class 1, Class 2, and Class 3 modifications to the HWFP.

#### New Programs or Activities Being Implemented

No new programs or activities have been implemented since the previous CBFO recertification audit, A-09-21.

#### Changes in Key Personnel

No changes in ANL/CCP key personnel have occurred since the last certification audit.

## 6.0 SUMMARY OF DEFICIENCIES

### 6.1 Corrective Action Reports

During the audit, the audit team may identify conditions adverse to quality (CAQs) and document such conditions on corrective action reports (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.*

One CBFO CAR, described below, was issued as a result of Audit A-10-23.

#### CBFO CAR 10-048

CCP-TP-001, section 4.2.7 states in part, “Verify that data are within established data assessment criteria and meet all applicable QAOs: Precision, Accuracy, Completeness, Comparability, and Representativeness.” [NOTE] To answer questions regarding specific criteria being met, (i.e., QAOs, QCs), the SPM/Designee must ensure that the information presented in the BDR meets the requirements identified in CCP-PO-001, CCP-PO-002, and CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*.

The Site Manager Checklist form CCP-TP-001, Attachment 11, questions 25, 26, and 27 were answered N/A for required checks based on CCP-PO-001 Tables B1-3 and B3-3 to complete precision, accuracy, completeness, comparability, and representativeness. The SPM evaluation of the laboratory and field duplicates reported in BDRs ECL10012G, ECL10012M, ECL10014G, and ECL10014M, indicated Not Applicable (N/A) instead of indicating “YES”; furthermore, the N/A comment indicated “Only applicable for an on-line system.” This requirement applies to all on-line duplicates and laboratory duplicates.

#### 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.

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 CDA issues were identified and documented during the audit.

## **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 members, in conjunction with the ATL, evaluate these conditions and classify 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.

#### **7.2.1 Recommendations**

##### **Recommendation 1**

- a) The listing of potential prohibited items identified in AK Attachment 6 should be made consistent with the discussion of prohibited items in the AK Summary Report for waste stream AERHDM.
- b) The discussion of container packaging configurations for the AGHCF and K Wing waste in sections 2.0 and 5.5 of the AK Summary Report should be expanded and clarified.

## **8.0 LIST OF ATTACHMENTS**

Attachment 1:	Personnel Contacted During the Audit
Attachment 2:	Personnel Contacted During the Audit by Area
Attachment 3:	CBFO CAR Closure Package
Attachment 4:	Objective Evidence
Attachment 5:	Listing of Audited Documents
Attachment 6:	Processes and Equipment Evaluated During CBFO Audit A-10-23
Attachment 7:	Procedure Revision Matrix

**PERSONNEL CONTACTED DURING THE AUDIT**

<b>PERSONNEL CONTACTED DURING AUDIT A-10-23</b>				
<b>NAME</b>	<b>TITLE/ORG</b>	<b>PRE-AUDIT MEETING</b>	<b>CONTACTED DURING AUDIT</b>	<b>POST-AUDIT MEETING</b>
Beallis, P.	VE/DTC Operator/WMO		X	
Billett, M.	Training Coordinator/CCP		X	
Bond, E.	Sr. Tech./WMO		X	
Campbell, E.	Load Manager/ANL		X	
Cannon, V.	QAM/CCP	X	X	X
Delgodillo, J.	DTC Rigger/ANL		X	
Dietzel, D.	Fed. Proj. Director/DOE-ASO	X		X
Doherty, M.	AKE/CCP	X	X	
Fesmire, C.	TRU Waste Int. Mgr./CBFO	X		
Fisher, A.J.	Sr. Tech Advisor/CCP	X		
Geller, J.	QA Engineer/ANL-FMS	X		
Griffith, M.	DTC LO/CCP	X	X	
Hinojas, F.	Training Manager/CCP		X	
Hlotke, J.	Sr. Tech./FMS-NOD		X	
Hodge, D.	NPTRU PM/ANL-FMS	X		
Hudston, L.	NDA Support/CCP	X		
Jones, L.	QAE/CCP		X	
Kbsawski, K.	DTC OPT/ANL		X	
Kirkes, C.	WCO/CCP		X	
Maestas, R.	Observer/NMED	X		X
Morgan, T.	Observer/CBFO-NTP	X		X
Mueller, T.	QAE/CCP		X	
Nelson, L.	SPM/CCP	X	X	X
Pancake, D.	AGHCF PM/ANL-FMS	X	X	X

**PERSONNEL CONTACTED DURING AUDIT A-10-23**

<b>NAME</b>	<b>TITLE/ORG</b>	<b>PRE-AUDIT MEETING</b>	<b>CONTACTED DURING AUDIT</b>	<b>POST-AUDIT MEETING</b>
Pearcy, M.	SPM/CCP		X	
Pearcy, S.	Records Manager/CCP	X	X	
Peters, K.	AKE/CCP	X	X	
Quintana, I.	SPM/CCP	X	X	X
Ramirez, M.	WCO-SPM/CCP		X	
Ray, W.	PC/NOD		X	
Redman, G.	VEE/ANL		X	
Reed, J.	DTC HPT/ANL		X	
Riley, W.	VEE/ANL		X	
Rock, C.	NOD Manager/ANL-FMS	X		X
Root, W.	VPM,VEE/CCP	X	X	X
Sensibaugh, M.	Projects Manager/CCP	X		
Turpin, G.	DTC Rigger/ANL		X	
Vaughn-Perry, V.	HSGS Chemist/CCP		X	
Walker, M.	QA Coordinator/CCP		X	
Watson, L.	AKE/CCP	X	X	

## PERSONNEL CONTACTED DURING THE AUDIT BY AREA

AREA OF EXPERTISE	NAME
Nonconformance/Corrective Action	Jones, L. Mueller, T.
Personnel Qualification and Training	Billett, M. Hinojas, F.
Records	Percy, S.
Project Level Validation and Verification	Nelson, L. Quintana, I.
Acceptable Knowledge	Doherty, M Nelson, L. Peters, K. Quintana, I. Watson, L.
Visual Examination	Redman, G. Riley, W. Root, W.
Headspace Gas	Nelson, L. Quintana, I. Vaughn-Perry, V.
WWIS	Kirkes, C. Ramirez, M.

## **CBFO CAR Closure Package**

The CBFO CAR closure package supporting Audit A-10-23 are included in the box(s) submitted with this report.

## **Objective Evidence**

The objective evidence supporting Audit A-10-23 is included in the box(s) submitted with this report. Included in the box(s) 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	Revision	DOCUMENT TITLE
1.	CCP-AK-ANLE-500	5	RH Debris Waste Stream: AERHDM
2.	CCP-AK-ANLE-501	3	RH TRU Debris Waste From ANL-E
3.	CCP-AK-ANLE-502	1	RH Waste Stream: AERHDM
4.	CCP-AK-ANL-505C	0	Waste Fuel Examination Confirmation Test
5.	CCP-PO-001	18	CCP TRU Waste QAPjP
6.	CCP-PO-002	24	CCP TRU Waste Cert. Plan
7.	CCP-PO-500	1	CCP/ANL RH-TRU Waste Interface Document
8.	CCP-QP-002	29	CCP Training and Qualification Plan
9.	CCP-QP-005	18	CCP TRU Nonconforming Item Reporting and Control
10.	CCP-QP-008	16	CCP Records Management
11.	CCP-QP-010	20	CCP Document Preparation, Approval and Control
12.	CCP-QP-011	10	CCP Notebooks and Logbooks
13.	CCP-QP-014	3	CCP Notebooks and Logbooks
14.	CCP-QP-016	15	CCP Control Of Measuring, Testing and Data Collection Equip
15.	CCP-QP-017	3	CCP Identification and Control Of Items
16.	CCP-QP-018	8	CCP Management Assessment
17.	CCP-QP-019	5	CCP Quality Assurance Reporting to Management
18.	CCP-QP-021	7	CCP Surveillance Program
19.	CCP-QP-023	3	CCP Handling, Storage and Shipping
20.	CCP-QP-026	9	CCP Inspection Control
21.	CCP-QP-027	4	CCP Test Control
22.	CCP-QP-028	11	CCP Records Filing, Inventorying, Scheduling, and Dispositioning
23.	CCP-TP-001	17	CCP Project Level Data V & V
24.	CCP-TP-002	22	CCP Reconciliation of DQOs and Reporting Characterization Data
25.	CCP-TP-003	17	CCP Data Analysis for S3000, S4000, and S5000 Char.
26.	CCP-TP-005	19	CCP AK Documentation
27.	CCP-TP-082	7	CCP Preparing and Handling Waste Containers for Headspace Gas Sampling
28.	CCP-TP-093	13	Sampling of TRU Waste Containers

No	Procedure Number	Revision	DOCUMENT TITLE
29.	CCP-TP-106	6	CCP HSGS BDR Preparation
30.	CCP-TP-162	0	CCP Random Selection of Containers for Solids and HSGS and Analysis
31.	CCP-TP-163	2	CCP Evaluation of Waste Packaging Records for VE of Records
32.	CCP-TP-500	9	CCP RH Waste VE
33.	CCP-TP-506	2	CCP Preparation of the RH TRU Waste AK Characterization Reconciliation Report
34.	CCP-TP-530	9	CCP RH TRU Waste Certification and WWIS Data Entry
35.	WP 13-QA.03	17	Q A Independent Assessment Program

**PROCESSES AND EQUIPMENT EVALUATED DURING AUDIT A-10-23**

WIPP #	Process/Equipment Description	Applicable to the Following Waste Streams/Groups of Waste Streams	Currently Approved by NMED	Currently Approved by EPA
<b>INITIAL APPROVAL PROCESSES OR EQUIPMENT</b>				
The following were evaluated during CBFO Audit A-10-23 for initial approval				
TBD (Not Assigned)	Gravimetric or Dimensional Measurement CCP-TP-500, Remote-Handled Waste Visual Examination CCP-AK-ANL-505C, Fuel Examination Waste Confirmation Test	Debris (S5000)	N/A	NO
<b>PREVIOUSLY APPROVED PROCESSES OR EQUIPMENT</b>				
The following were reevaluated during CBFO Audit A-10-23				
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
8HSG2	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	RH Debris Waste Stream: AERHDM	3	5	<u>R4-</u> Revised to include additional containers generated in the K-Wing hot cells of the Chemical Technology Building. Also revised to incorporate new packaging configuration for AERHDM waste drums (direct-loaded 30-gallon drums). Revised to address freeze file changes and rec. identified during A-09-021. <u>R5-</u> Revised to include additional containers of AGHCF fuel examination waste previously not included in AERHDM. Waste consists primarily of test specimen residues (fragments, samples, and swarf) and associated debris.
2	CCP-AK-ANLE-501	RH TRU Debris Waste From ANL-E	1	3	<u>R2-</u> Revised to add Appendix A that addresses debris waste from K-Wing hot cells. <u>R3-</u> Revised to add appendix C that addresses FEW processed in the AGHCF.
3	CCP-AK-ANLE-502	RH Waste Stream: AERHDM	1	1	No Change
4	CCP-PO-001	CCP TRU Waste QAPjP	17	18	Revised to incorporate mods to the HWFP, to make editorial changes that are needed and to change the WIPP WWIS to WDS.
5	CCP-PO-002	CCP TRU Waste Cert. Plan	21	24	<u>R22-</u> Revised to incorporate Revision 6.4 of DOE/WIPP-02-3122. <u>R23-</u> Revised to add Hanford Non-Destructive Assay (NDA) equipment. <u>R24-</u> Revised to incorporate Revision 6.5 of DOE/WIPP-02-3122, <i>Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant</i> .
6	CCP-PO-500	CCP/ANL RH-TRU Waste Interface Document	1	1	No Change
7	CCP-QP-002	CCP Training and Qualification Plan	27	29	<u>R28-</u> Revised to address (CAR)-CCP-0012-09, to clarify AK briefings, training for solids lab, and approval process for training material. References to CCP PM were removed and

### Procedure Revision Matrix

No	Procedure Number	Procedure Title	Revision During Last Annual Audit	Revision During Current Annual Audit	Brief Description of Procedure Changes
					the responsibilities assigned to the Lead SPM and CCP Manager responsible for Training. <u>R29</u> -Revised to incorporate changes to Att. 4, CCP Test Drum Data Sheet for CH waste and other editorial changes.
8	CCP-QP-005	CCP TRU Nonconforming Item Reporting and Control	17	18	Revised to incorporate freeze file editorial changes, clarify the ability to delete/remove containers from the BDR/Container ID list when revising a NCR per CAR-LANL-0001-09, and incorporate CCP-SO-024,1.
9	CCP-QP-008	CCP Records Management	14	16	<u>R15</u> -Revised to make personnel title changes and name changes to organizations. Added section 4.7.1[H] for lost records as well as a section for receipt and handling of OUO and UCN documents. <u>R16</u> -Revised to clarify and address the submittal of historical source documents.
10	CCP-QP-011	CCP Notebooks and Logbooks	9	10	Revised in response to CAR-CCP-0012-09, to clarify document scope for WAP Laboratory Logbook use.
11	CCP-QP-021	CCP Surveillance Program	6	7	General revision to clarify follow-up to observations and provide clarity of text.
12	CCP-QP-028	CCP Records Filing, Inventorying, Scheduling, and Dispositioning	9	11	<u>R10</u> - Revised to incorporate changes to Att. 2, Instructions for filling out the RIDS. <u>R11</u> - Revised to bring instructions regarding location in Att. 4, Instructions for Filling Out the RIDS, in line with current practice.
13	CCP-TP-001	CCP Project Level Data V & V	17	17	No Change
14	CCP-TP-002	CCP Reconciliation of DQOs and Reporting Characterization Data	21	22	Revised for Class 2 Modification Request WIPP HWFP EPA I.D. Number NM4890139088.
15	CCP-TP-003	CCP Data Analysis for S3000, S4000, and S5000 Char.	16	17	Revised to delete a reference that is no longer applicable and add the new reference. Also to update attachments and correct editorial errors.
16	CCP-TP-005	CCP AK Documentation	18	19	Revised document to address the WIPP Form WF09-171 from an internal CCP audit and to incorporate minor editorial changes and technical clarifications noted as a result of various AK audits.
17	CCP-TP-082	CCP Preparing and Handling	7	7	No Change

**Procedure Revision Matrix**

No	Procedure Number	Procedure Title	Revision During Last Annual Audit	Revision During Current Annual Audit	Brief Description of Procedure Changes
		Waste Containers for Headspace Gas Sampling			
18	CCP-TP-093	Sampling of TRU Waste Containers	13	13	No Change
19	CCP-TP-106	CCP HSGS BDR Preparation	6	6	No Change
20	CCP-TP-162	CCP Random Selection of Containers for Solids and HSGS and Analysis	0	0	No Change
21	CCP-TP-163	CCP Evaluation of Waste Packaging Records for VE of Records	2	2	No Change
22	CCP-TP-500	CCP RH Waste VE	8	9	Revised to make changes for a two-shift operation and two different sets of qualifies operators to be able to work on the same RH-VE. Added Table 1, Prohibited Items List, and updated language to reflect the permit mod. (See Standing Order #3, FEW)
23	CCP-TP-506	CCP Preparation of the RH TRU Waste AK Characterization Reconciliation Report	2	2	No Change
24	CCP-TP-530	CCP RH TRU Waste Certification and WWIS Data Entry	7	9	<u>R8</u> - Revised to remove Section 4.4.24 in response to CAR-RHLANL-0001-09 as well as minor editorial changes. <u>R9</u> - Revised to allow use of the WDS as well as include steps for canisters measuring <200 mRem per CCP-SO-042.
25	WP 13-QA.03	Q A Independent Assessment Program	16	17	Review document for side bars.

### Procedure Revision Matrix

Additional Procedures Reviewed During Audit A-10-23					
1	CCP-AK-ANL-505C	Waste Fuel Examination Confirmation Test		0	
2	CCP-QP-010	CCP Document Preparation, Approval and Control		20	
3	CCP-QP-014	CCP Notebooks and Logbooks		3	
4	CCP-QP-016	CCP Control Of Measuring, Testing and Data Collection Equipment		15	
5	CCP-QP-017	CCP Identification and Control Of Items		3	
6	CCP-QP-018	CCP Management Assessment		8	
7	CCP-QP-019	CCP Quality Assurance Reporting to Management		5	
8	CCP-QP-023	CCP Handling, Storage and Shipping		3	
9	CCP-QP-026	CCP Inspection Control		9	
10	CCP-QP-027	CCP Test Control		4	