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Carlsbad Field Office
P. O. Box 3090
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Hazardous Waste Bureau

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

Subject: Final Audit Report for the Argonne National Laboratory Central Characterization Program Recertification Audit A-17-25

Dear Mr. Kieling:

This letter transmits the Final Audit Report for Carlsbad Field Office (CBFO) Audit A-17-25 of the Argonne National Laboratory Central Characterization Program processes performed to characterize and certify waste in accordance with the Waste Isolation Pilot Plant Hazardous Waste Facility Permit. The audit was conducted August 15 – 17, 2017.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to 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.

Please contact Mr. Martin P. Navarrete, CBFO Senior Quality Assurance Specialist, at (575) 234-7483 should you have any questions concerning this audit report.

Sincerely,

Todd Shrader, Manager
Carlsbad Field Office

Enclosure

CBFO:OQA:MPN:BA:17-2178:UFC 2300.00

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cc: w/enclosure

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CBFO M&RC	

*ED denotes electronic distribution

U.S. DEPARTMENT OF ENERGY
CARLSBAD FIELD OFFICE

FINAL AUDIT REPORT

OF THE

ARGONNE NATIONAL LABORATORY
CENTRAL CHARACTERIZATION PROGRAM

FOR

CHARACERTIZATION AND CERTIFICATION ACTIVITES
FOR REMOTE-HANDLED TRANSURANIC WASTE
AT
LEMONT, ILLINOIS
and CARLSBAD, NEW MEXICO

AUDIT NUMBER A-17-25

August 15 – 17, 2017

Prepared by: Katie D. Gentry **Date:** 9-15-2017
Katie D. Gentry, CTAC
Audit Team Leader

Approved by: Michael R. Brown **Date:** 9/27/2017
Michael R. Brown, Director
CBFO Office of Quality Assurance

1.0 EXECUTIVE SUMMARY

U.S. Department of Energy (DOE) Carlsbad Field Office (CBFO) Recertification Audit A-17-25 was performed to evaluate the continued adequacy, implementation, and effectiveness of established programs for transuranic (TRU) waste characterization activities performed for the Argonne National Laboratory (ANL) by the Nuclear Waste Partnership LLC (NWP) Central Characterization Program (CCP). The audit team evaluated the programs, procedures, and processes for characterizing remote-handled (RH) Summary Category Group (SCG) S5000 debris waste. The audit was conducted relative to the requirements of the Waste Isolation Pilot Plant (WIPP) Hazardous Waste Facility Permit (HWFP) and the *CBFO Quality Assurance Program Document* (QAPD).

Audit activities were conducted at the ANL facilities in Lemont, Illinois, and at the Skeen-Whitlock Building in Carlsbad, New Mexico, August 15 – 17, 2017. Overall, the audit team concluded that the ANL/CCP technical and quality assurance (QA) programs evaluated were adequately established for compliance with applicable upper-tier requirements. However, the audit team was unable to verify effective implementation of most processes due to inactivity at the Host site and lack of objective evidence for review. Batch data reports (BDRs) were not evaluated in regard to Project-Level Data Validation and Verification (PL/V&V). Consequently, implementation and effectiveness of the PL/V&V process at ANL/CCP must be deemed indeterminate. The WIPP Waste Information System (WWIS)/Waste Data System (WDS) process was also deemed indeterminate due to inactivity for the RH waste SCG. Further, the implementation and effectiveness of the enhanced Acceptable Knowledge (AK) products must be deemed indeterminate until all AK requirements can be demonstrated.

CBFO has not provided the Basis of Knowledge document, as required by the Waste Acceptance Criteria, specifying when waste with oxidizing chemicals is acceptable; therefore it was not available for evaluation during the audit, as referenced in A-17-25 Interim Audit Report issued September 13, 2017.

No WIPP HWFP Waste Analysis Plan (WAP)-related conditions adverse to quality (CAQ) corrected during the audit (CDA) or resulting in a corrective action report (CAR) were identified during the audit. No WAP-related Observations were identified during the audit.

2.0 SCOPE AND PURPOSE

2.1 Scope

The scope of the audit included evaluations for the adequacy, implementation, and effectiveness of the technical and QA activities performed by NWP/CCP at ANL for characterization of RH SCG S5000 debris waste. The following areas were evaluated:

General Activities

- Results of Previous Audits
- Changes in Programs or Operations
- New Programs or Activities Being Implemented
- Changes in Key Personnel

Quality Assurance Activities

- Nonconformances
- Personnel Qualification and Training
- Records

Technical Activities

- Enhanced Acceptable Knowledge (AK) (including waste certification)
- Project-Level Data Validation and Verification (PL/V&V)
- Visual Examination (VE)
- WIPP Waste Information System (WWIS)/Waste Data System (WDS)

The evaluation of the adequacy of ANL/CCP documents was based on current versions of the following documents:

- Waste Isolation Pilot Plant Hazardous Waste Facility Permit NM4890139088-TSDF
- DOE/CBFO-94-1012, CBFO *Quality Assurance Program Document* (QAPD)
- WP 13-1, *Nuclear Waste Partnership LLC Quality Assurance Program Description*

Programmatic and technical checklists were developed from current versions of the following documents:

- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- Related technical and QA implementing procedures

2.2 Purpose

Audit A-17-25 was conducted to determine the degree of adequacy and effective implementation of program requirements for the characterization and certification of RH TRU SCG S5000 debris wastes at the ANL for compliance with applicable upper-tier requirements. The audit team also evaluated specific QA elements relating to WIPP HWFP WAP requirements.

3.0 AUDIT TEAM/MANAGEMENT REPRESENTATIVE/ OBSERVERS

Martin Navarrete	CBFO Office of Quality Assurance Representative
Katie Gentry	Audit Team Leader, CBFO Technical Assistance Contractor (CTAC)
Cindi Castillo	Auditor, CTAC
Rick Castillo	Auditor, CTAC
Ricardo Chavez	Auditor, CTAC
John Fernandez	Auditor, CTAC
Dick Blauvelt	Technical Specialist, CTAC
Rhett Bradford	Technical Specialist, CTAC
Randy Fitzgerald	Technical Specialist, CTAC
Jim Vernon	Technical Specialist, CTAC
Dustin Stegman	Technical Specialist-in-Training, CTAC

4.0 AUDIT PARTICIPANTS

The ANL/CCP individuals involved in the audit process are identified in Attachment 1. A pre-audit meeting was held on August 15, 2017, at the ANL facilities in Lemont, Illinois, and at the Skeen-Whitlock Building in Carlsbad, New Mexico. Daily management briefings were held to update ANL/CCP management and staff on audit progress and identified concerns. A post-audit meeting was held on August 17, 2017, in the same locations as previously stated.

Attachment 2 lists the ANL/CCP personnel contacted during the audit by subject area, Attachment 3 identifies the objective evidence compiled (provided in boxes), Attachment 4 lists the audited documents, Attachment 5 lists the processes and equipment evaluated, and Attachment 6 contains the procedure revision matrix.

5.0 SUMMARY OF AUDIT RESULTS

5.1 Program Adequacy, Implementation, and Effectiveness

This audit was performed to assess the capability of ANL/CCP to characterize RH SCG S5000 debris waste for compliance with the requirements specified in the WIPP HWFP WAP and the CBFO QAPD. The waste characterization methods assessed were AK and VE. Other areas evaluated were data generation and PL/V&V, WWIS/WDS data entry, data quality objective (DQO) reconciliation, and the preparation of Waste Stream Profile Forms (WSPFs).

The audit team concluded that, based on personnel interviews, observations of operations, and review of associated documentation and records, the ANL/CCP TRU waste characterization program and activities for characterizing RH SCG S5000 debris waste is adequately established, and in most instances, satisfactorily implemented and effective in achieving the desired results. WIPP WWIS/WDS was deemed indeterminate to due to inactivity in the SCG. The implementation and effectiveness of the enhanced AK products must be deemed indeterminate until all AK requirements can be demonstrated.

5.2 General Activities

5.2.1 Results of Previous Audits

There were no WIPP HWFP WAP-related CAQs identified in the previous recertification audit, A-17-08.

5.2.2 Changes in Programs or Operations

The audit team determined through interviews with the CCP RH Site Project Manager (SPM) that there were no significant changes in programs or operations since the previous recertification audit, A-17-08. During the audit, VE field activities/operations were verified.

5.2.3 New Programs or Activities Being Implemented

In response to the breached drum event at the WIPP in February 2014, the DOE and NWP are strengthening their programs to provide more oversight of TRU waste generator site processing/treatment activities being applied to active waste streams prior to waste being transferred to CCP for characterization.

5.2.4 Changes in Key Personnel

The audit team determined through interviews with the CCP SPM that there has been a change of CCP RH SPM at ANL since the previous recertification audit.

5.3 WAP-related Quality Assurance Activities

The audit team evaluated the QA elements for personnel qualification and training, nonconformances, and records for compliance with requirements in the WIPP HWFP WAP. The evaluation results for each area audited are described below.

5.3.1 Personnel Qualification and Training

The audit team conducted interviews and reviewed implementing procedure CCP-QP-002, Rev. 43, *CCP Training and Qualification Plan*, to determine the degree to which the procedure adequately addresses upper-tier requirements.

The audit team reviewed implementing procedures to determine the degree to which they address upper-tier requirements:

- CCP-PO-047, Rev. 1, *CCP Training and Qualification Program Document*
- CCP-QP-041, Rev. 1, *CCP Job Needs Analysis and Design*
- CCP-QP-042, Rev. 1, *CCP Project Level Training and Qualification*
- CCP-QP-043, Rev. 1, *CCP Operations Level Training and Qualification*

Results of the review indicate that the procedures adequately address upper-tier requirements.

Personnel training records associated with VE, AK, and SPMs were examined to verify implementation of associated requirements and to verify that personnel performing waste characterization activities are appropriately qualified. Record reviews included qualification cards and other pertinent qualification documentation, such as attendance sheets/briefings on newly-revised AK summaries for VE operators and appointment letters for VE experts (VEEs).

No WAP-related deficiencies related to qualification and training were identified during the audit. The procedures reviewed and objective evidence assembled provided evidence to confirm that the applicable requirements for personnel qualification and

training were adequately established for compliance with upper-tier requirements, satisfactorily implemented, and effective in achieving the desired results.

5.3.2 Control of Nonconforming Items

The audit team reviewed implementing procedure CCP-QP-005, Rev. 25, *CCP TRU Nonconforming Item Reporting and Control,* to determine the degree to which the procedure adequately addresses upper-tier requirements. Results of the review indicate that the procedure adequately addresses upper-tier requirements.

There were no nonconformance reports (NCRs) related to RH waste characterization activities for ANL written since the previous recertification audit, A-17-08.

The audit team verified CCP personnel are familiar with the process for reporting NCRs to the Permittee via email to CBFO within the time frame required by the Permit. NCRs will be documented and tracked through resolution through use of the CCP Integrated Data Center (IDC) as well as through the required reconciliation reporting mechanism per CCP-QP-005. The audit team also verified the QA Engineer will perform an evaluation of all NCRs for reportable trends. The audit team determined that CCP personnel are familiar with the overall process associated with NCRs.

No WAP-related deficiencies regarding NCRs were identified during the audit. The procedures reviewed and objective evidence assembled provided evidence to confirm that the applicable requirements for nonconformances are adequately established for compliance with upper-tier requirements, satisfactorily implemented, and effective in achieving the desired results.

5.3.3 QA Records

The audit team conducted interviews with responsible personnel and reviewed the following implementing procedures relative to the control and administration of QA records to determine the degree to which the procedures adequately address upper-tier requirements:

- CCP-PO-001, Rev. 22, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-QP-008, Rev. 26, *CCP Records Management*
- CCP-QP-028, Rev. 17, *CCP Records Filing, Inventorying, Scheduling, and Dispositioning*

Results of the review indicate that the procedures adequately address upper-tier requirements.

The level of control for QA records was verified through review of the RH Records Inventory and Disposition Schedule (RIDS) dated July 11, 2017. The RIDS is reviewed annually, as required. The audit team reviewed a sample of EA15RM3002-1-0, *WIPP Records Inventory Work Sheet*, forms related to changes proposed for the RH RIDS.

Changes on the worksheet forms are adequately collected and detailed for inclusion on the next RIDS revision. The audit team evaluated a sample of transmittal forms used to document submittal of records from the ANL/CCP Host site location to the CCP Records Center in Carlsbad, New Mexico. The audit team determined that the completed forms adequately described the records being transmitted, and that the transmittal process was performed in accordance with the procedure.

The audit team verified the maintenance of records in file cabinets and in the electronic system. Records that are maintained in paper copy in the CCP Records Center are placed in locked fire-resistant cabinets. Access to the file cabinets is controlled through the use of keys, and labels placed on each cabinet post the names of personnel approved for access to the files. Files are adequately organized and maintained in both the paper and electronic file systems. Records are adequately segregated from non-record documents. Files that require control of access, such as those determined to be Unclassified Controlled Nuclear Information (UCNI), Official Use Only (OUO), Internal Use Only (IUO), and No Foreign National (NFORN) documents are maintained on separate electronic servers where computer user access is restricted. Paper copies of these restricted access documents are stored separate from other documents. Records personnel are familiar with requirements for restricted access files and adequately control distribution. Access to electronic files and restricted files is controlled administratively in the case of physical electronic media and by use of server logon/password methods for electronic files maintained on computer servers.

No WAP-related deficiencies regarding records were identified during the audit. The procedures reviewed and objective evidence assembled provided evidence to confirm that the applicable requirements for records are adequately established for compliance with upper-tier requirements, satisfactorily implemented, and effective in achieving the desired results.

5.4 WAP-related 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 WIPP HWFP is cited briefly, and the result of the assessment is provided.

5.4.1 Table C6-1, WAP Checklist

The C6-1 WAP Checklist addresses general program requirements from an overall management perspective. The general requirements checklist addresses both technical requirements and specific WIPP HWFP WAP-related QA programmatic requirements that, when collectively implemented, ensure effective overall management of TRU waste characterization activities. Requirements are integrated into controlled documents to ensure the waste characterization strategy, as defined in the WAP, is accomplished and documented in accordance with controlled processes and procedures.

Technical elements evaluated for waste characterization activities consisted of PL V&V, AK, VE, and preparation of WSPFs. Objective evidence was selected and reviewed to

evaluate the implementation of the associated waste characterization activities. BDRs, sampling records, and personnel qualification and training documentation were included in the evaluation. Where possible, the audit included direct observation of actual waste characterization activities. Each characterization process involves:

- Collecting raw data
- Collecting QA/quality control samples or information
- Reducing the data to a useable format, including a standard report
- Review of the report by the data generation facility and the site project office
- Comparing the data against program DQOs
- Reporting the final waste characterization information to the WIPP

The flow of data from the point of generation to inclusion in the WSPF for each waste characterization technique was reviewed to ensure that all applicable requirements were captured in the site operating procedures. Specific procedures audited and the objective evidence reviewed are described in the following sections.

During the audit, ANL/CCP demonstrated compliance with the waste characterization requirements of the WAP through documentation and by performing characterization activities.

Project-Level Data Validation and Verification (PL/V&V)

The audit team conducted interviews with responsible personnel and reviewed the following implementing procedures relative to the PL/V&V process to determine the degree to which the procedures address upper-tier requirements:

- CCP-TP-001, Rev. 21, *CCP Project Level Data Validation and Verification*
- CCP-TP-002, Rev. 27, *CCP Reconciliation of DQOs and Reporting Characterization Data*
- CCP-TP-200, Rev. 2, *Chemical Compatibility Evaluation Memorandum and Acceptable Knowledge Assessment Review*
- CCP-TP-201, Rev. 0, *Verification of Shipping Criteria and Emplacement Criteria*

Results of the review indicate that the procedures adequately address upper-tier requirements.

There have been no VE BDRs completed since the previous ANL/CCP recertification audit, A-17-08.

The audit team reviewed WSPF for waste stream AERHDM, Rev. 1, and the accompanying Characterization Information Summary (CIS) for lot 47. The WSPF and CIS were generated in accordance with CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data*, and met all of the applicable requirements of CCP-TP-005, *CCP Acceptable Knowledge Documentation.*

There have been no quarterly repeats of the Data Generation Level data completed by Project Level (PL) since the previous recertification audit, A-17-08.

At the time of the audit, there had been no activity performed by CCP in accordance with CCP-TP-200, *Chemical Compatibility Evaluation Memorandum and Acceptable Knowledge Assessment Review*, or CCP-TP-201, *Verification of Shipping Criteria and Emplacement Criteria*.

No WAP-related deficiencies regarding Table C6-1 were identified during the audit. The procedures reviewed and objective evidence assembled provided evidence to confirm that the applicable requirements for PL/V&V are adequately established for compliance with upper-tier requirements. However, because objective evidence was not provided for review during the audit, PL V&V process implementation and effectiveness must be deemed indeterminate.

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

The audit team conducted interviews and reviewed the implementing procedure relative to the WWIS/WDS data entry process to determine the degree to which the procedure adequately addresses upper-tier requirements. The procedure reviewed was CCP-TP-530, Rev. 12, *CCP RH TRU Waste Certification and WWIS/WDS Data Entry*. Results of the review indicate that the procedure adequately addresses upper-tier requirements.

There have been no RH waste WWIS/WDS data entries performed since the previous recertification audit, A-17-08. When RH waste characterization activities resume, containers will be processed using CCP-TP-530, which utilizes functions of the IDC for certification and electronic submittal to WWIS/WDS. There has been no shipping of RH waste packages, and so there were no shipping packages reviewed. Per interviews with CCP personnel, the audit team determined that personnel are familiar with the processes for characterization of RH waste containers and building of RH waste packages and that procedure implementation is expected to be adequate once these activities resume.

No WAP-related deficiencies regarding Table C6-1 were identified during the audit. The procedure reviewed provided evidence to confirm that the applicable requirements for WWIS/WDS are adequately established for compliance with upper-tier requirements. However, since there was no objective evidence provided for review during the audit, the WWIS/WDS process implementation and effectiveness must be deemed indeterminate due to inactivity in all SCGs.

5.4.2 Table C6-2, Acceptable Knowledge Checklist

The audit team conducted interviews with responsible personnel and reviewed the following implementing procedures relative to the AK process to determine the degree to which the procedures address upper-tier requirements:

- CCP-PO-001, Rev. 22, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*

- CCP-QP-002, Rev. 43, *CCP Training and Qualification Plan*
- CCP-QP-042, Rev. 1, *CCP Project Level Training and Qualification*
- CCP-TP-001, Rev. 21, *CCP Project Level Data Validation and Verification*
- CCP-TP-002, Rev. 27, *CCP Reconciliation of DQOs and Reporting Characterization Data*
- CCP-TP-005, Rev. 29, *CCP Acceptable Knowledge Documentation*
- WP 13-QA.03, Rev. 26, *Quality Assurance Independent Assessment Program*

Results of the review indicate that the procedures adequately address upper-tier requirements.

The AK audit team evaluated the AK process for characterizing RH TRU mixed SCG S5000 debris waste. The AK audit team specifically evaluated compliance with the WAP requirements listed in the C6-2 checklist along with portions of the C6-1 checklist. Objective evidence was reviewed and compiled to demonstrate compliance with each of the applicable requirements on these checklists. A significant portion of the audit addressed the status of enhanced AK products for the waste streams examined.

The AK auditors reviewed the latest revision to the AK Summary Report for this waste stream, CCP-AK-ANLE-500, Rev. 13, *Central Characterization Program Acceptable Knowledge Summary Report for Argonne Remote-Handled Debris Waste Waste Stream: AERHDM*, and a copy of the WSPF (Rev. 1) and attachments, in addition to numerous AK source documents to establish support, as noted above, for conclusions noted in the AK summary.

The audit team reexamined the latest revisions to all of these documents to confirm continued support of the required AK elements. This review included the following: the AK Documentation Checklist (Attachment 1); an updated AK Information List (Attachment 4); the AK Hazardous Constituents List (Attachment 5); the respective AK Waste Form, Waste Material Parameters, Prohibited Items, and Packaging (Attachment 6), alongside the justification memoranda for waste material parameter weight estimates; and the Waste Containers List (Attachment 8). The add-container memoranda prepared since the previous recertification audit were examined and will be included in the objective evidence for this audit.

The audit team reviewed training records for four AK Experts (AKEs) and six SPMs who have participated or could potentially participate in waste characterization activities at ANL/CCP. There were no NCRs or discrepancy resolutions generated since the last recertification audit. The audit team examined the handling of AK records for compliance with preparation, legibility, accuracy, review, approval, and maintenance requirements. The distribution, control, and use of appropriate AK procedures were also reviewed. The audit team examined the most recent audit report relevant to AK, NWP Quality Assurance Audit I17-01, completed December 20, 2016, at Oak Ridge

National Laboratory. Although this audit report was not specific to ANL, the activities evaluated are relevant to all of CCP's sites.

The WAP-required container traceability exercise was conducted by the AK audit team for a total of three waste containers from those that have been completely through the characterization and certification process, have not been previously reviewed, and are still on-site. The traceability exercise included a review of relevant VE BDRs along with drum screenshots from the IDC database, a copy of the AK Container Tracking Spreadsheet, add-container memoranda, and ANL WMO-195 and WMO-195A waste container input forms for these individual containers along with other relevant generator documentation.

Since sampling or shipping lots of characterized containers have not been prepared since the previous recertification audit, there were no recent Characterization Reconciliation Reports, Waste Stream Characterization Checklists, or AK Accuracy Reports to review. However, examples of the resolution of AK discrepancies in the AK record and the most recent internal surveillance were collected and examined.

A significant part of the AK portion of this recertification audit was dedicated to the review of enhanced AK products for the waste streams audited. Those enhanced AK products include Interface Waste Management Document Lists (IWMDLs), AK Assessments (AKAs), Chemical Compatibility Evaluations (CCEs), and AK Briefings.

IWMDL
Since the previous recertification audit, there have been no revisions, additions, or deletions to the list of ANL procedures/processes. Documentation of a quarterly review by the ANL SMR to confirm the current status of the IWMDL was collected and examined.

AKA
An AKA (AKA001) was completed on December 16, 2016. The audit team reviewed the contents of that assessment in detail.

CCE
A draft CCE memorandum (CCEM), AK Source Document C6004, dated July 11, 2016, has been submitted to CBFO for approval. The audit team examined the draft CCEM, review comments, and supporting AK source documentation.

AK Briefings
The AK summary has not been revised since the last audit; therefore, there was no requirement for AK Briefings during the audit.

No WAP-related deficiencies regarding Table C6-2 were identified during the audit. The AK auditors concluded that with respect to the AK requirements in the WIPP HWFP WAP, the CCP processes, procedures reviewed, and objective evidence assembled applicable to the three waste streams examined provided evidence confirming that the applicable requirements for AK are adequately established for compliance with upper-tier requirements. However, evidence of all completed requisite enhanced AK products was not provided for review and the audit team concluded that until all enhanced AK

requirements are implemented, the AK process implementation and effectiveness must be deemed indeterminate.

5.4.3 Table C6-4, Visual Examination Checklist

The audit team evaluated the adequacy, implementation, and effectiveness of ANL/CCP activities to characterize and certify RH SCG S5000 debris waste using the VE characterization process. The audit team reviewed the following CCP VE procedures to determine the degree to which they adequately address upper-tier requirements:

- CCP-QP-002, Rev. 43, *CCP Training and Qualification Plan*
- CCP-QP-043, Rev. 1 *CCP Operations Level Training and Qualification*
- CCP-TP-163, Rev. 4, *CCP Evaluation of Waste Packaging Records for Visual Examination of Records*
- CCP-TP-500, Rev. 15, *CCP Remote-Handled Waste Visual Examination*

Results of the review indicate that the procedures adequately address upper-tier requirements.

ANL/CCP uses the two-operator method when performing VE characterization of waste. The audit team interviewed VE operators and the VEE. The audit team also examined the VE operational logbook (RH-ANL-VE-01) and verified logbook entries were logged correctly and reviewed by the Vendor Project Manager (VPM) as required. During the audit, the VE audit team toured the Alpha Gamma Hot Cell Facility (AGHCF) in Building 212 and observed VE being performed on RH container 1451.

There were no VE BDRs completed since the previous recertification audit, A-17-08.

The audit team examined training records for four VE operators/independent technical reviewers (ITRs), and confirmed the appointment of two ANL/CCP VEEs. The audit team verified that VE operators, ITRs, and the VEE were appropriately trained and qualified as required.

No WAP-related deficiencies regarding Table C6-4 were identified during the audit. The procedures reviewed, field observations, and objective evidence assembled provided evidence to confirm that the applicable requirements for VE of CH SCG S5000 debris waste are adequately established for compliance with upper-tier requirements, effectively implemented, and satisfactory in achieving the desired results.

6.0 CARs, CDAs, AND OBSERVATIONS

6.1 Corrective Action Reports

During the audit, the audit team may identify CAQs, as defined below, and document such conditions on CARs.

CAQ – An all-inclusive term used in reference to any of the following: failures, malfunctions, deficiencies, defective items, nonconformances, and technical inadequacies.

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

No WAP-related CARs were identified during the audit.

6.2 Deficiencies Corrected During the Audit

During the audit, the audit team may identify CAQs. Audit team members, the Audit Team Leader (ATL), and the CBFO QA Representative 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 and the CBFO QA Representative, determines if the CAQ is a minor and isolated case requiring only remedial action and therefore can be corrected during the audit.

Upon determination that the CAQ is minor and isolated, the audit team member, in conjunction with the ATL and the CBFO QA Representative, 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 CBFO QA Representative categorizes the condition as corrected during audit (CDA) according to the definition below.

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 WAP-related CAQs were identified and corrected during the audit.

6.3 Observations

During the audit, the audit team may identify potential problems 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 using the following definition:

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

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

No WAP-related Observations were identified during the audit.

7.0 LIST OF ATTACHMENTS

Attachment 1: Personnel Contacted During Audit
Attachment 2: Personnel Contacted During Audit by Subject Area
Attachment 3: Objective Evidence Reviewed During the Audit (provided in boxes)
Attachment 4: Table of Audited Documents
Attachment 5: List of Processes and Equipment Evaluated
Attachment 6: Procedure Revision Matrix

PERSONNEL CONTACTED DURING AUDIT A-17-25				
NAME	**ORG/TITLE**	**PRE-AUDIT MEETING**	**CONTACTED DURING AUDIT**	**POST-AUDIT MEETING**
Rick Aker	Deputy Manager/ASO	X		
Veronica Ballew	QA/NWP		X	X
Pat Beallis	VE Operator/CCP/WMO		X	
Tim Benoit	QA/NWM	X	X	X
Michele Billett	CCP Training Coordinator/CCP/TFE	X		X
Eric Bond	VE/NWM		X	
Norma Castaneda	Characterization Manager/DOE/CBFO			X
Jo Cooney	Chief Health Physics Tech/ANL	X		
Eric Dallmann	ESHD Director/ASO	X		
Dan Dilday	WM Manager/NWM	X		X
A.J. Fisher	Support Manager/CCP/NWP			X
Karen Hellman	Division Director/PMO	X		
Bryan Hill	Interim Ops Manager/NWM	X		X
John Daniel Hlotke	AGHCF Facility Manager/NWM	X		X
Rich Kantrowitz	SPM CCP/NWP	X	X	X
Creta Kirkes	WCA/WCO CCP/NWP		X	
Bob Leppink	Interim Division Director/NWM	X		X
Jessica Madrid	CCP Document Services/NWP		X	
Shelly Martinez	CE NDE CCP/NWP	X		X
Dan Misch	Federal Project Director DOE Argonne Site Office	X		X
Martin Navarrete	Senior QA Specialist/DOE/CBFO			X
Derek Ott	Radiological Engineer/NWP		X	
Berry Pace	Programs Support/NTP			X
Mike Paka	Lead Independent Assessor/AQO			X
Dan Pancake	ANL STR-PM FMS-Deactivation Projects Manager	X	X	X
Spencer Pattee	VPM-VEE CCP/NWP	X	X	X
Sheila Pearcy	CCP Records CCP/TFE	X		X
Kevin Peters	AKE CCP/NWP	X	X	
Denise Price	Director/AQO	X		
Sheri Punchios	QA/NWP			X
Brandye Pyeatt	QA/NWP	X		

PERSONNEL CONTACTED DURING AUDIT A-17-25				
NAME	**ORG/TITLE**	**PRE-AUDIT MEETING**	**CONTACTED DURING AUDIT**	**POST-AUDIT MEETING**
Mat Racz	AGHCF Tech/NWM		X	
Willis Ray	Project Specialist/NWM	X	X	
Ryan Riordan	CCP AKE		X	
Cindy Rock	Program Manager FMS	X	X	
Wesley Root	VPM CCP/NWP	X	X	X
Steve Schafer	AKE CCP/NWP	X	X	
Craig Simmons	RH Operations Manager CCP/NWP	X	X	X
Carolina Soaterna	SPM/NWP		X	
Mark Sreniawski	Health Physicist/ANL	X		

PERSONNEL CONTACTED DURING THE AUDIT BY SUBJECT AREA

Personnel Qualification and Training	Michele Billett
Control of Nonconforming Items	Brandye Pyeatt
Records	Sheila Pearcy
WIPP Waste Information System (WWIS Data Entry)	Creta Kirkes
Waste Certification/Project-Level Data V&V	Carolina Soaterna Derek Ott
Acceptable Knowledge	Kevin Peters Steve Schafer Ryan Riordan Rich Kantrowitz Craig Simmons Dan Pancake
Visual Examination	Pat Beallis Eric Bond Spencer Pattee Wesley Root Mat Racz Willis Ray

Objective Evidence Reviewed During the Audit

The objective evidence supporting Audit A-17-25 is included in the shipping box(es) submitted with this report. Included in the shipping 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.

TABLE OF AUDITED DOCUMENTS			
	PROCEDURE NUMBER	**REV**	**PROCEDURE TITLE**
1.	CCP-PO-001	22	CCP Transuranic Waste Characterization Quality Assurance Project Plan
2.	CCP-PO-047	1	CCP Training and Qualification Program Document
3.	CCP-QP-002	43	CCP Training and Qualification Plan
4.	CCP-QP-005	25	CCP TRU Nonconforming Item Reporting and Control
5.	CCP-QP-008	26	CCP Records Management
6.	CCP-QP-028	17	CCP Records Filing, Inventorying, Scheduling, and Dispositioning
7.	CCP-QP-041	1	CCP Job Needs Analysis and Design
8.	CCP-QP-042	1	CCP Project Level Training and Qualification
9.	CCP-QP-043	1	CCP Operations Level Training and Qualification
10.	CCP-TP-001	21	CCP Project Level Data Validation and Verification
11.	CCP-TP-002	27	CCP Reconciliation of DQOs and Reporting Characterization Data
12.	CCP-TP-005	29	CCP Acceptable Knowledge Documentation
13.	CCP-TP-163	4	CCP Evaluation of Waste Packaging Records for VE of Records
14.	CCP-TP-200	2	Chemical Compatibility Evaluation Memorandum and Acceptable Knowledge Assessment Review
15.	CCP-TP-201	0	Verification of Shipping Criteria and Emplacement Criteria
16.	CCP-TP-506	5	CCP Preparation of the Remote-Handled Transuranic Waste Acceptable Knowledge Characterization Reconciliation Report
17.	CCP-TP-530	12	CCP RH TRU Waste Certification and WWIS/WDS Data Entry
18.	WP 13-QA.03	26	Quality Assurance Independent Assessment Program

List of Processes and Equipment Evaluated

WIPP #	Process/Equipment Description	Applicable to the Following Waste Streams/Groups of Waste Streams
N/A	Acceptable Knowledge	Debris (S5000) – RH
N/A	Data Generation and Project Level Validation & Verification (V&V)	Debris (S5000) – RH
N/A	WIPP Waste Information System / Waste Data System (WWIS/WDS)	Debris (S5000) – RH
8RHVE1	Visual Examination (VE) CCP-TP-500, CCP Remote-Handled Waste Visual Examination CCP-TP-163, CCP Evaluation of Waste Packaging Records for Visual Examination of Records	Debris (S5000) – RH
8RHVE2	Visual Examination (VE) of Newly Packaged RH Waste Drums CCP-TP-500, CCP Remote-Handled Waste Visual Examination	Debris (S5000) – RH
N/A	Quality Assurance Program	Debris (S5000) – RH
NEW PROCESSES OR EQUIPMENT		
NONE		
DEACTIVATED PROCESSES OR EQUIPMENT		
NONE		

Procedure Revision Matrix

Previous ANL/CCP Annual Audit A-17-08 **Current ANL/CCP Annual Audit A-17-25**

No.	Procedure Number	Procedure Title	Revision During Last Annual Audit	Revision During Current Annual Audit	Brief Description of Procedure Changes
1.	CCP-PO-001	CCP Transuranic Waste Characterization Quality Assurance Project Plan	22	22	N/A
2.	CCP-PO-047	CCP Training and Qualification Program Document	N/A	1	1 – Revised Section 4.5.1 to add a requirement that initial qualification of operators must include a comprehensive written examination. Revised the list of Central Characterization Program (CCP) positions in Table 2 to remove appointive positions and make the Table consistent with the one in CCP-PO-049, *CCP Training Implementation Matrix*. Revised Section 1.4 to include a definition of Performance Testing (perform versus simulate)
3.	CCP-QP-002	CCP Training and Qualification Plan	41	43	42 – Revised to incorporate U.S. Department of Energy (DOE) Order 426.2. 43 – Revised Section 7.1.9 to add a requirement that initial qualification of operators must include a comprehensive written examination. Revised steps throughout the document to address the differences between formal training and controlled training. Relocated the section on proctored examinations to Section 5.7.4 for better procedure flow.
4.	CCP-QP-005	CCP TRU Nonconforming Item Reporting and Control	25	25	N/A
5.	CCP-QP-008	CCP Records Management	26	26	N/A
6.	CCP-QP-028	CCP Records Filing, Inventorying, Scheduling, and Dispositioning	16	17	17 – Revised in response to WIPP Form 16-2029, revised to incorporate the requirement in the Nuclear Waste Partnership (NWP) Quality Assurance Program Document (QAPD) regarding maximum time limits for the storage of temporary records.

Procedure Revision Matrix

Previous ANL/CCP Annual Audit A-17-08 **Current ANL/CCP Annual Audit A-17-25**

No.	Procedure Number	Procedure Title	Revision During Last Annual Audit	Revision During Current Annual Audit	Brief Description of Procedure Changes
7.	CCP-QP-041	CCP Jobs Needs Analysis and Design	N/A	1	1 – Revised the list of Central Characterization Program (CCP) positions in Table 1, DOE Function Titles to Equivalent CCP Positions per DOE O 426.2 and Table 5, CCP Position Titles and Information to remove appointive positions and make the Tables consistent with the one in CCP-PO-049, *CCP Training Implementation Matrix*. Revised Section 2.2 to include a definition of Performance Testing (perform versus simulate).
8.	CCP-QP-042	CCP Project Level Training and Qualification	N/A	1	1 – Revised Section 4.0, clarified that Central Characterization Program (CCP) Training's responsibility is to update the Integrated Data Center (IDC). In Section 5.4, modified the level of detail in the Site Project Manager (SPM) section to be consistent with the level of detail provided for other project level positions. Simplified Section 3.4, and deleted Section 5.5.
9.	CCP-QP-043	CCP Operations Level Training and Qualification	N/A	1	1 – Revised to include the Waste Acceptance Criteria (WAC) requirements and remove Central Characterization Program (CCP) Training actions/requirements to the list of qualified individuals (LOQI), since the LOQI is generated by the Integrated Data Center (IDC). Revised Section 4.2 to add a requirement that initial qualification of operators must include a comprehensive written examination.
10.	CCP-TP-001	CCP Project Level Data Validation and Verification	21	21	N/A

Procedure Revision Matrix

Previous ANL/CCP Annual Audit A-17-08 **Current ANL/CCP Annual Audit A-17-25**

No.	Procedure Number	Procedure Title	Revision During Last Annual Audit	Revision During Current Annual Audit	Brief Description of Procedure Changes
11.	CCP-TP-002	CCP Reconciliation of DQOs and Reporting Characterization Data	26	27	27 – Revised to change Subcontract Technical Representative (STR) to Site Management Representative (SMR). Revised to add TRUPACT-III references. Revised to allow Acceptable Knowledge (AK) Summary Report in place of Summation of Aspects when an AK consists of only one waste stream. Also, revised to make editorial changes.
12.	CCP-TP-005	CCP Acceptable Knowledge Documentation	28	29	29 – This revision is to incorporate the lessons learned after the implementation of the enhanced Acceptable Knowledge (AK) requirements and also to incorporate Standing Order CCP-SO-119 Revision 0. In addition, this revision implements a container review for the requirements of the basis of knowledge document.
13.	CCP-TP-163	CCP Evaluation of Waste Packaging Records for VE of Records	4	4	N/A

Procedure Revision Matrix

Previous ANL/CCP Annual Audit A-17-08 **Current ANL/CCP Annual Audit A-17-25**

No.	Procedure Number	Procedure Title	Revision During Last Annual Audit	Revision During Current Annual Audit	Brief Description of Procedure Changes
14.	CCP-TP-200	Chemical Compatibility Evaluation Memorandum and Acceptable Knowledge Assessment Review	0	2	1 – Revised to incorporate changes that were made to the Open Acceptable Knowledge Evaluation Software (OAKES) database regarding Acceptable Knowledge Assessment (AKA) and Chemical Compatibility Evaluation Memorandum (CCEM) checklists. 2 – Revised to incorporate changes that were made to upload checklists from the Open Acceptable Knowledge Evaluation Software (OAKES) into Waste Data System (WDS) and to incorporate changes that were made to WDS for Acceptable Knowledge Assessment (AKA) verification.
15.	CCP-TP-201	Verification of Shipping Criteria and Emplacement Criteria	N/A	0	N/A
16.	CCP-TP-500	CCP Remote-Handled Waste Visual Examination	15	15	N/A
17.	CCP-TP-506	CCP Preparation of the Remote-Handled Transuranic Waste Acceptable Knowledge Characterization Reconciliation Report	5	5	N/A
18.	CCP-TP-530	CCP Remote-Handled Transuranic Waste Certification and WWIS/WDS Data Entry	12	12	N/A
19.	WP 13-QA.03	Quality Assurance Independent Assessment Program	26	26	N/A