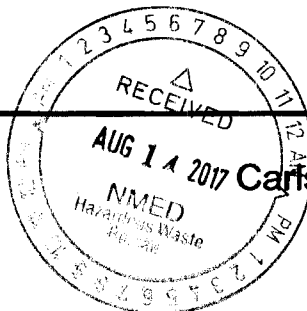


**ENTERED**

United States Government

Department of Energy

memorandumCarlsbad Field Office
Carlsbad, New Mexico 88221DATE: **AUG 14 2017**REPLY TO
ATTN OF: CBFO:OQA:DSM:BA:17-1998:UFC 2300.00

SUBJECT: Transmittal of the Interim Audit Report for Certification Audit A-17-24 SNL/CCP Remote-Handled Transuranic Waste Characterization Activities

TO: Mr. Dave Rast, DOE-SNL

The Carlsbad Field Office (CBFO) performed Audit A-17-24 of the Sandia National Laboratories Central Characterization Program (SNL/CCP) on July 18, 2017. The audit team concluded that the overall status of the program is adequately established for compliance with upper tier requirements, indeterminate in the implementation of these requirements, and indeterminate in achieving the desired results.

If you have any questions or comments, please contact me at (575) 234-7491.

Dennis S. Miehl
Senior Quality Assurance Specialist

Attachment

cc: w/attachment

J. Carswell, CBFO	*ED	V. Ballew, NWP	ED
M. Brown, CBFO	ED	S. Saiz, NWP	ED
J.R. Stroble, CBFO	ED	A. Boyea, NWP	ED
M. Navarrete, CBFO	ED	J. Walsh, EPA	ED
M. Fineran, CBFO	ED	J. Ellis, EPA	ED
M. Stapleton, CBFO	ED	T. Peake, EPA	ED
N. Castaneda, CBFO	ED	E. Feltcorn, EPA	ED
T. Carver, CBFO	ED	R. Joglekar, EPA	ED
H. Cruickshank, CBFO	ED	J. Kieling, NMED	ED
B. Covert, NWP	ED	R. Maestas, NMED	ED
J. Britain, NWP	ED	D. Biswell, NMED	ED
M. Percy, NWP	ED	P. Martinez, CTAC	ED
R. Lee, NWP	ED	C. Castillo, CTAC	ED
R. Kantrowitz, NWP	ED	M. Leroch, CTAC	ED
A.J. Fisher, NWP	ED	P. Gomez, CTAC	ED
B. Pace, NWP	ED	D. Harvill, CTAC	ED
C. Simmons, NWP	ED	G. White, CTAC	ED
B. Schrock, NWP	ED	Site Documents	ED
J. Harvill, NWP	ED	CBFO QA File	
J. Carter, NWP	ED	CBFO M&RC	
M. McDaniel, NWP	ED	*ED denotes electronic distribution	

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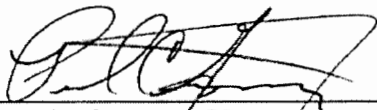
U.S. DEPARTMENT OF ENERGY
CARLSBAD FIELD OFFICE
INTERIM AUDIT REPORT
OF THE
SANDIA NATIONAL LABORATORIES
CENTRAL CHARACTERIZATION PROGRAM
FOR
WASTE CHARACTERIZATION ACTIVITIES IN ACCORDANCE WITH
THE WASTE ISOLATION PILOT PLANT HAZARDOUS WASTE
FACILITY PERMIT

CARLSBAD, NEW MEXICO

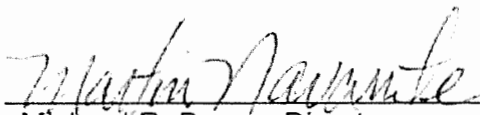
AUDIT NUMBER A-17-24

July 18, 2017



Prepared by: 
Paul C. Gomez, CTAC
Audit Team Leader

Date: August 09, 2017

Approved by: 
Michael R. Brown, Director
Office of Quality Assurance

Date: August 10, 2017

1.0 EXECUTIVE SUMMARY

U.S. Department of Energy (DOE) Carlsbad Field Office (CBFO) Recertification Audit A-17-24 was performed to evaluate the adequacy, implementation, and effectiveness of transuranic (TRU) waste characterization activities performed by the Nuclear Waste Partnership LLC (NWP) Central Characterization Program (CCP) for remote-handled (RH) Summary Category Group (SCG) S5000 debris waste at the Sandia National Laboratories (SNL) host site location. The audit was conducted relative to the requirements of the Waste Isolation Pilot Plant (WIPP) Hazardous Waste Facility Permit (HWFP), the CBFO Quality Assurance Program Document (QAPD), the Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant (WAC), the Remote-Handled TRU Waste Characterization Program Implementation Plan (WCPIP), and the Waste Isolation Pilot Plant Documented Safety Analysis (DSA), Chapter 18. The audit was performed in the Skeen-Whitlock Building in Carlsbad, New Mexico July 18, 2017.

SNL/CCP TRU waste characterization activities have been suspended, and no characterization activities have occurred since the previous recertification Audit A-17-10, conducted November 15 – 17, 2016. The results of Audit A-17-24 confirmed that SNL/CCP operations are now in a state of suspension.

The HWFP issued to the WIPP by the New Mexico Environment Department (NMED) requires that the DOE conduct audits of each generator/storage site prior to certifying that the site meets the waste characterization requirements for shipment of waste to the WIPP. In accordance with Attachment C6 of the HWFP, audits must be performed at least annually after the initial audit to determine continued compliance with the HWFP Waste Analysis Plan (WAP).

Once waste characterization activities resume at the Sandia host site location, CBFO will conduct a recertification audit as a basis for reinstating authority to perform waste characterization activities and continue waste shipments from the SNL host site location to the WIPP. This audit will evaluate compliance with all NMED permit, Waste Acceptance Criteria, Quality Assurance, and Documented Safety Analysis requirements currently applicable to waste characterization/certification and shipping activities. CBFO has not provided the required Basis of Knowledge (BOK) document specifying when waste with oxidizing chemicals is acceptable; therefore, it was not available for evaluation during the audit. Further, batch data reports (BDRs) and field activities for characterizing S5000 debris waste were not evaluated during this audit due to inactivity for this SCG.

Since SNL/CCP suspended waste characterization activities, the audit team was unable to determine the adequacy, implementation of plans and procedures, or the effectiveness of characterization activities. Therefore, the adequacy, implementation and effectiveness of all aspects of the SNL/CCP waste characterization activities are indeterminate.

2.0 SCOPE AND PURPOSE

2.1 Scope

The audit team evaluated documentation to verify adequacy, implementation, and effectiveness of the SNL/CCP TRU waste characterization activities for RH SCG S5000 debris waste. The following elements were evaluated:

General

- Review of the SNL/CCP Site Interface Agreement
- 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

- Project-Level Data Validation and Verification
- Acceptable Knowledge
- Visual Examination
- Dose-to-Curie
- Waste Certification (e.g., Waste Stream Profile Forms)
- WIPP Waste Information System/Waste Data System

The evaluation of the adequacy of SNL/CCP 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*
- *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant, DOE/WIPP-02-3122*
- *Remote-Handled TRU Waste Characterization Program Implementation Plan (WCPIP), DOE/WIPP-02-3214*
- *Waste Isolation Pilot Plant Documented Safety Analysis (DSA) Chapter 18, DOE/WIPP-07-3372*

- *WP 13-1, Nuclear Waste Partnership LLC Quality Assurance Program Description*

2.2 Purpose

This annual audit was conducted to assess the SNL/CCP level of compliance to the requirements of the WIPP HWFP and the CBFO QAPD in performing waste characterization and certification activities for RH SCG S5000 debris waste.

3.0 AUDITORS/MANAGEMENT REPRESENTATIVE

Dennis S. Miehls	CBFO Office of Quality Assurance (OQA) Representative
Paul C. Gomez	Audit Team Leader, CBFO Technical Assistance Contractor (CTAC)

4.0 AUDIT PARTICIPANTS

The individuals contacted during the audit are identified in Attachment 1. A pre-audit meeting was held in the CBFO OQA conference room at the Skeen-Whitlock Building in Carlsbad, NM on July 18, 2017. The audit was concluded with a post-audit meeting at the Skeen-Whitlock Building in Carlsbad, NM on July 18, 2017.

Attachment 2 provides the current status of the SNL/CCP waste characterization processes and equipment list. Audit activities are described below.

5.0 SUMMARY OF AUDIT RESULTS

5.1 Program Adequacy, Implementation, and Effectiveness

This audit was performed to assess the ability of SNL/CCP to characterize RH SCG S5000 debris waste to the requirements specified in the WIPP HWFP WAP and the CBFO QAPD. The scope of the audit included the evaluation of the following waste characterization methods: acceptable knowledge (including data quality objective reconciliation and the preparation of Waste Stream Profile Forms), visual examination, and dose-to-curie. Other areas evaluated were generation- and project-level data validation and verification and WIPP Waste Information System/Waste Data System (WWIS/WDS) data entry.

The audit team concluded that no waste characterization activities for RH SCG S5000 debris waste have been performed by SNL/CCP during the past year; thus, all waste characterization activities have been deemed indeterminate.

5.2 General

5.2.1 Results of Previous Audits

The results of the previous CBFO Certification Audit, A-17-10, of SNL/CCP were examined. The audit team verified that no waste characterization activities have been performed by SNL/CCP since the previous audit. Therefore, the adequacy, implementation, and effectiveness of all waste characterization activities at the Sandia host site location are indeterminate.

5.2.2 Changes in Programs or Operations

No waste characterization activities have been performed by SNL/CCP since the previous audit; therefore, there have been no changes in programs or operations.

5.2.3 New Programs or Activities Being Implemented

No waste characterization activities have been performed by SNL/CCP since the previous audit; therefore, there have been no new programs or activities implemented.

5.2.4 Changes in Key Personnel

No waste characterization activities have been performed by SNL/CCP since the previous audit; although, one change regarding key personnel has changed for the RH Project Manager.

5.2.5 Generator Site Technical Review

CBFO and NWP, as WIPP HWFP co-permittees, have not yet scheduled or performed a Generator Site Technical Review (GSTR). Performance of a GSTR evaluation at the Sandia host site location will be completed prior to CBFO declaring readiness for SNL/CCP to receive a program certification audit. Issues generated as a result of the GSTR evaluation will be resolved to allow a closure letter to be issued for the review. Issue resolution may be performed prior to or after the program certification audit is performed and all issues and issue resolutions will be evaluated during a program recertification audit.

5.2.6 SNL/CCP Program Interface

No waste characterization activities have been performed by SNL/CCP since the previous audit; therefore, there have been no changes in program interface.

5.3 Quality Assurance Activities

The scope of the audit included the evaluation of QA elements for personnel qualification and training, QA records, and control of nonconformances to requirements applicable to the WIPP HWFP WAP and the CBFO QAPD. The evaluation results for each area audited are described below.

5.3.1 Control of Nonconforming Items

The audit team conducted interviews with responsible personnel and verified the status of management of existing nonconformance reports through review of nonconformance documentation and issues management logs. Data and information on existing SNL/CCP nonconformance reports has been migrated into the Integrated Data Center (IDC) database management program. The IDC is currently used by CCP for managing and processing nonconformances at other CCP host site locations. The IDC will be used to manage and process nonconformance reports when certification activities resume at the Sandia host site location. There have been no nonconformances reported and no waste characterization activities have been performed by CCP at the Sandia host site location since the previous audit. Accordingly, the applicable requirements for nonconformances were deemed indeterminate and will require a full evaluation as part of a SNL/CCP recertification audit before waste characterization and certification activities resume.

5.3.2 Personnel Qualification and Training

The audit team conducted interviews with responsible personnel and verified no waste characterization activities have been performed by SNL/CCP since the previous audit. Accordingly, the applicable requirements for personnel training and qualification were deemed indeterminate and will require a full evaluation as part of a SNL/CCP recertification audit once waste characterization and certification activities resume.

5.3.3 QA Records

The audit team conducted interviews with responsible personnel and verified no waste characterization activities have been performed by SNL/CCP since the previous audit. Accordingly, the applicable requirements for records were deemed indeterminate and will require a full evaluation as part of a SNL/CCP recertification audit before waste characterization and certification activities resume.

5.4 Technical Activities

The scope of the audit included the evaluation of technical elements for characterizing RH SCG S5000 debris waste in accordance with applicable requirements in the WIPP HWFP WAP and the CBFO QAPD. The evaluation results for each area audited are described below.

5.4.1 Project-Level Data Validation and Verification

The audit team conducted interviews with responsible personnel and verified no waste characterization activities have been performed by SNL/CCP since the previous audit. Accordingly, the applicable requirements project-level data validation and verification were deemed indeterminate and will require a full evaluation as part of a SNL/CCP recertification audit before waste characterization and certification activities resume.

5.4.2 Acceptable Knowledge

The audit team conducted interviews with responsible personnel and verified no waste characterization activities have been performed by SNL/CCP since the previous audit. Accordingly, the applicable requirements for acceptable knowledge were deemed indeterminate and will require a full evaluation as part of a SNL/CCP recertification audit before waste characterization and certification activities resume.

Enhanced Acceptable Knowledge (AK) products for the SNL/CCP program, including the Interface Waste Management Documents List (IWMDL), AK Assessments (AKA), Chemical Compatibility Evaluation (CCE), Basis of Knowledge (BOK), and AK Briefings, have not been generated for the SNL/CCP program. Enhanced AK products for the SNL/CCP program will be evaluated during a SNL/CCP program recertification audit.

5.4.3 Visual Examination

The audit team conducted interviews with responsible personnel and verified no waste characterization activities have been performed by SNL/CCP since the previous audit. Accordingly, the applicable requirements for visual examination were deemed indeterminate and will require a full evaluation as part of a SNL/CCP recertification audit before waste characterization and certification activities resume.

5.4.4 Dose-to-Curie

The audit team conducted interviews with responsible personnel and verified no waste characterization activities have been performed by SNL/CCP since the previous audit. Accordingly, the applicable requirements for dose-to-curie were deemed indeterminate and will require a full evaluation as part of a SNL/CCP recertification audit before waste characterization and certification activities resume.

5.4.5 WIPP Waste Information System/Waste Data System

The audit team conducted interviews with responsible personnel and verified status of existing container data in the WWIS/WDS through electronic access of a sample of container data. Data and information on existing SNL/CCP batch data reports has been migrated into the IDC database management program. The IDC is currently used by CCP for waste certification activities where batch data reports are referenced as part of the waste certification process. The IDC will be used for certification of waste containers and transmittal of data to the WWIS/WDS when activities resume at the Sandia host site location. There has been no WWIS/WDS data entry, and no waste

characterization activities have been performed by SNL/CCP since the previous audit. Accordingly, the applicable requirements for WIPP WWIS/WDS data entry were deemed indeterminate and will require a full evaluation as part of a SNL/CCP recertification audit before waste characterization and certification activities resume.

6.0 CORRECTIVE ACTIONS, OBSERVATIONS, AND RECOMMENDATIONS

6.1 Corrective Action Reports

During the audit, the audit team may identify conditions adverse to quality (CAQs), as defined below, and document such conditions on a corrective action report (CAR).

Condition Adverse to Quality – 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 quality assurance program.

No CARs were initiated during the audit.

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 corrected during the audit (CDA) according to the definition below.

Corrected During the Audit – Refers to correction of an isolated deficiency that does 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 CDAs were identified 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 Observations were identified during the audit.

6.4 Recommendations

During the audit, the audit team may identify 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 Recommendations using the following definition:

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.

No Recommendations were provided to management during the audit.

7.0 LIST OF ATTACHMENTS

- Attachment 1: Personnel Contacted During Audit A-17-24
- Attachment 2: Summary Table of Audit Results
- Attachment 3: Table of Audited Documents
- Attachment 4: List of Processes and Equipment Reviewed

PERSONNEL CONTACTED DURING AUDIT A-17-24				
NAME	ORG/TITLE	PRE-AUDIT MEETING	CONTACTED DURING AUDIT	POST-AUDIT MEETING
Dennis Miehl	DOE/CBFO/Senior Quality Assurance Specialist	X		X
Norma Castañeda	CBFO Waste Characterization Manager		X	X
Betty Humphries	Sandia Site Technical Representative	X		X
Berry Pace	Records / Issues Management	X	X	X
Sheila Percy	CCP Records Manager	X		X
Craig Simmons	CCP RH Project Manager	X		X
Michele Billet	CCP Training Lead	X	X	X
Brandy Pyeatt	NWP QA		X	

Summary Table of Audit Results

QA / Technical Elements	Concern Classification				QA Evaluation		Technical Evaluation
	CARs	CDAs	Obs	Rec	Adequacy	Implementation	Effectiveness
QA General C6-1 - NCRs					I	I	I
QA General C6-1 - Training					I	I	I
QA General C6-1 - Records					I	I	I
Project Level Data V & V					I	I	I
Acceptable Knowledge					I	I	I
Visual Examination					I	I	I
Dose-to-Curie					I	I	I
Waste Certification - Reconciliation of DQO's and WSPFs					I	I	I
QA General C6-1 - WWIS / WDS					I	I	I
TOTALS							

Definitions

CAR = Corrective Action Report

Rec = Recommendation

A = Adequate

NE = Not Effective

I = Indeterminate

CDA = Corrected During Audit

S = Satisfactory

NA = Not Adequate

M = Marginal

Obs – Observation

E = Effective

U = Unsatisfactory

Table of Audited Documents

	PROCEDURE NUMBER	REV	PROCEDURE TITLE
1.	--	--	--
2.	--	--	--
3.	--	--	--
4.	--	--	--
5.	--	--	--
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10.	--	--	--
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20.	--	--	--

NOTE: CCP procedures have not been identified for association with the scope of work at the Sandia host site location and were not evaluated during this audit since characterization has been suspended since the previous audit.

List of Processes and Equipment Reviewed

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				
20RHVE1	Visual Examination – CCP RH Waste Visual Examination Procedure – CCP-TP-500	Debris(S5000)	Suspended	Suspended
N/A	Acceptable Knowledge – CCP Reconciliation of DQOs and Reporting Characterization, and CCP Acceptable Knowledge Documentation Procedure – CCP-TP-002 and CCP-TP-005	Debris(S5000)	Suspended	Suspended
20DTC1	Dose-to-Curie – CCP Dose-to-Curie Survey Procedure for RH Transuranic Waste Procedure – CCP-TP-504	Debris(S5000)	Suspended	Suspended
N/A	Data Generation and Project Level Validation & Verification (V&V) Procedure – CCP-TP-001, CCP-TP-500, and CCP-TP-504	Debris(S5000)	Suspended	Suspended
N/A	WIPP Waste Information System (WWIS)/Waste Data System (WDS) Procedure – CCP-TP-530	Debris(S5000)	Suspended	Suspended
N/A	Quality Assurance	Debris(S5000)	N/A	YES
NEW PROCESSES OR EQUIPMENT				
Characterization activities are currently suspended, therefore no new processes or equipment have been introduced.				
DEACTIVATED PROCESSES OR EQUIPMENT				
Characterization activities are currently suspended.				