

The audit team interviews of MILCC6 NDA staff adequately verified the calibration range, operating parameters, and measurement uncertainty in accordance with upper-tier requirements and CCP-TP-077.

The audit team examined training records for NDA personnel and confirmed they were appropriately trained and qualified as required, and the equipment software versions installed and used to perform NDA operations were appropriately identified, documented in logbook # CCP-CH-SRS-NDA-MILCC6-01 (2020) and consistent with the versions listed in the CCP-QP-022, Rev. 19, *CCP Software Quality Assurance Plan*.

The procedures reviewed, field observation thru live-streaming, and objective evidence assembled provided evidence that the applicable requirements for NDA characterization of CH SCG S5000 debris wastes using the MILCC6 was adequately established for compliance with upper-tier requirements. The processes for characterizing CH SCG S5000 debris wastes were satisfactorily implemented and effective in achieving the desired results. No non-WAP-affecting concerns in the area of NDA were identified.

5.6.2 Container Management

The audit team interviewed SRS-CCP Container Management personnel and reviewed documentation to verify that SRS-CCP complies with the requirements of CCP-TP-068, Rev. 12, *CCP Standardized Container Management*.

The audit team verified the vendor project manager verifies the container IDs are in the AK tracking spreadsheet and recorded on Attachment 2 prior to entering the controlled area. The audit team confirmed through interview and live video of containers HBL130035 and HBL130036, that the container integrity checks are performed. The container traveler is placed in an attached plastic pocket on the drum. The audit team confirmed container management personnel use a certified scale and check weights for all waste containers. The calibration check for scale LIFT-SCL-001 was verified to be accurate and current, and the due date on the scale for recalibration is 10-12-2021.

The audit team reviewed three container travelers (Attachment 1) and three container inspection/weight reports (Attachment 2). All documents were complete as required and entered into the CCP records system.

The audit team examined training and qualification documentation for Container Management personnel and determined the operators were qualified and able to perform Container Management operations.

The procedure reviewed, field observation thru live-streaming, and objective evidence assembled provided evidence that the applicable requirements for container management are adequately established for compliance with upper-tier requirements,

satisfactorily implemented, and effective in achieving the desired results. No non-WAP-related concerns in the area of container management were identified.

5.6.3 Flammable Gas Analysis

The audit team verified and reviewed documentation to verify that SRS-CCP complies with the requirements of the DOE/WIPP-06-3345, *Waste Isolation Plant Flammable Gas Analysis*.

The SRS-CCP FGA is implemented using the DOE/WIPP procedure DOE/WIPP-06-3345, Revision 10, *Waste Isolation Plant Flammable Gas Analysis*.

The SRS-CCP FGA Batch Data Reports reviewed were:

- SR20FG14003_ICAL (Initial Calibration Report)
- SR20FG14004_MDL (Minimum Detection Limit Level Report)
- SR20FG14005
- SR20FG14006
- SR20FG14007

All reports were complete, reviewed as required, and entered into the CCP records system. There were no NCRs associated with the FGA BDRs. The site did report a WIPP Form resulting in a CAQ; WF20-1300 was written on container 773A120012 for a faulty needle assembly and potential integrity issues. The WF20-1300 has a lessons learned associated with the WIPP Form.

The audit team examined training and qualification documentation for FGA operators and determined the operators were qualified and able to perform FGA operations. The audit team verified the results from sampling of containers in the BDRs and analytical operations records utilizing an Agilent Technologies Gas Chromatograph 7890B series GC for CH waste containers as reported in the BDRs, immediately followed by sample analysis. The team also verified the use of the procedure to determine the sampling scenario, determination of the drum age criteria, recording of the filter number, and all information properly documented on the procedure attachments. All appropriate tools were utilized on the NucFil-19DS filter and needle assembly. No discrepancies were verified for either sampling or analysis of CH containers.

The audit team verified the use and proper VPM review of logbook CCP-CH-SRS-FGA-14-01 from the field. The audit team verified that Independent Technical Review was performed following analytical BDR completion, that any discrepancies were noted and returned to the analyst for correction, and that the completed and reviewed BDR was submitted to CCP Records in accordance with CCP procedures.

NorLab Certificates of Accuracy were examined for Internal Standards and Bromofluorobenzene (BFB), Initial Calibration Standards, and for Continuing Calibration

Standards. All standards were within their expiration dates and provided the required number of volatile compounds including hydrogen.

The procedures reviewed, field observation thru live-streaming, and objective evidence assembled provided evidence that the applicable requirements for FGA characterization of CH SCG S5000 debris wastes was adequately established for compliance with upper-tier requirements. The processes for characterizing CH SCG S5000 debris wastes were satisfactorily implemented and effective in achieving the desired results. No non-WAP-affecting concerns in the area of FGA were identified.

5.6.4 Dose-to-Curie

The audit team conducted interviews with responsible personnel and verified no waste characterization field activities for Dose-to-Curie have been performed by SRS-CCP in Area E. Dose-to-Curie is not applicable to the scope of this audit.

6.0 CARs, CDAs, 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 corrective action reports (CARs).

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

Significant Condition Adverse to Quality – 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.

6.1.1 WAP-Affecting Corrective Action Reports

No WAP-affecting CARs were identified during the audit.

6.1.2 Non-WAP-Affecting Corrective Action Reports

One non-WAP-affecting CAR was identified during the audit.

CAR 21-009

Condition Adverse to Quality:

RTR operators are not consistently identifying multiple horsetails found within the waste. Per the AK packaging description these horsetails could potentially be layers of confinement. Without RTR operators providing detailed descriptions of the horsetails seen within the waste, these twist and tape closures (horsetails) not identified by RTR operators appear to be unidentified layers of confinement. Containers reviewed included: 773A160001, 773A160003, 773A160006, 773A160011, 773A140015, 773A140002, and 773A170001. Container V35C012006 was viewed over live stream video. Container V35C012001 was viewed live in the field.

Requirement:

CCP-TP-053, Rev. 18, *CCP Standard Real-Time Radiography (RTR) Inspection Procedure*, Section 4.4.2, Data Entry for applicable radiography data sheet, Sections 1 through 4, states:

[B] Ensure the following data are recorded or displayed in Section 2, as applicable.

- Estimated number of Layers of Confinement

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 Management 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 Management 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 Management 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 Management 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.

6.2.1 WAP-Affecting Deficiencies Corrected During the Audit

No WAP-affecting CAQs were identified or corrected during this audit.

6.2.2 Non-WAP-Affecting Deficiencies Corrected During the Audit

No non-WAP-affecting 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.

6.3.1 WAP-Affecting Observations

No WAP-affecting Observations were identified during the audit.

6.3.2 Non-WAP-Affecting Observations

One non-WAP-affecting Observation was identified during the audit.

Observation 1

Additional discussions with CCP personnel have determined that the historic issues regarding maintenance of AK Attachment 4, the Acceptable Knowledge Information List, have been addressed. CCP is maintaining the applicable and appropriate AK Source Documents by waste stream and in a format consistent with the elements of Attachment 4. In addition, the AK procedure CCP-TP-005 has been revised to call for the generation of a complete Attachment 4 for each waste stream identified in an AKSR when that report is issued or revised. Furthermore, CCP will continue the practice of issuing a current Attachment 4 for a waste stream upon request such as might come from an auditor. A response to this Observation is requested to provide additional information regarding CCP maintenance of the AK Source Document records and other ideas regarding the appropriate use of this element of the AK record.

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 identified during the audit.

7.0 LIST OF ATTACHMENTS

- Attachment 1: Meeting Attendees and Personnel Contacted During Audit A-21-08
- Attachment 2: Personnel Contacted During the Audit by Subject Area
- Attachment 3 Summary Table of Audit Results
- Attachment 4: WAP-Related Objective Evidence Reviewed During the Audit
- Attachment 5: Table of Audited Procedures
- Attachment 6: List of Processes and Equipment Reviewed

MEETING ATTENDEES AND PERSONNEL CONTACTED DURING AUDIT A-21-08				
NAME	ORG/TITLE	PRE-AUDIT MEETING	CONTACTED DURING AUDIT	POST-AUDIT MEETING
Ballew, Veronica	NWP/QA Program/Project Integration Manager	X	X	X
Bruce, Devin	NWP/CCP FGA Operator		X	
Biswell, David	NMED/Observer	X	X	X
Brantly, Todd	SRS Radcon Manager		X	
Carlton, Tim	Mirion/NDA Operator	X	X	
Carver, Tom	DOE/CBFO Waste Characterization/ ONTP	X	X	X
Comeau, Chuck	DOE-SRS		X	X
Dawson, Jana	Trinity Engineering/ for NMED	X	X	X
Dover, Dale	NWP/CCP FGA Lead Operator	X	X	X
Gallegos, Adam	Mirion/NDA EA	X	X	X
Gonzalez, Jorge	NWP/CCP SPM	X	X	X
Groover, Terry-Anne	NWP/CCP Cog Eng. NDE		X	X
Haar, Kevin	NWP/CCP NDA Cog Engineer	X	X	X
Harvill, Joe	NWP/CCP NDA Tech Advisor	X	X	
Hernandez, Jennifer	NWP/CCP Training Manager	X	X	X

MEETING ATTENDEES AND PERSONNEL CONTACTED DURING AUDIT A-21-08				
NAME	ORG/TITLE	PRE-AUDIT MEETING	CONTACTED DURING AUDIT	POST-AUDIT MEETING
Jolly, Darren	CBFO/OQA Manager		X	
Kantrowitz, Rich	NWP/CCP Technical Support	X	X	X
Kareis, Nikki	NWP/CCP RTR Manager	X	X	X
Kirkes, Creta	NWP/CCP WCO	X	X	X
Lee, Ronnie	NWP/CCP Manager	X	X	
Lopez, Joe	CBFO/OQA Software QA Specialist	X	X	X
Maestas, Ricardo	NMED/Observer		X	X
Matheny, Derek	NWP/CCP VPM	X	X	X
McLean, Megan	NMED/Observer	X	X	X
Morgan, Tom	SRS 58-E		X	X
Pace, Berry	NWP/CCP Characterization Advisor	X	X	X
Peters, Kevin	Tech-Specs/CCP AKE	X	X	X
Pyeatt, Brandie	NWP/CCP QA	X		
Reeves, Ron	NWP/CCP Operations Manager	X	X	X
Riordan, Ryan	Tech-Specs/CCP AKE	X	X	X
Saiz, Sheri	NWP/QA Admin. Specialist	X	X	
Salter, Scott	NWP/CCP Manager		X	X

MEETING ATTENDEES AND PERSONNEL CONTACTED DURING AUDIT A-21-08				
NAME	ORG/TITLE	PRE-AUDIT MEETING	CONTACTED DURING AUDIT	POST-AUDIT MEETING
Searcy, William	Mirion/NDA Operator		X	
Shepley, Todd	TBS Services Subcontractor NDA Operator		X	
Smith, Patrick	NWP/CCP QA	X		X
Teal, James	NWP/CCP RTR Operator		X	
Tilmon, Giovanna	TFE/CCP Records	X	X	X
Tilmon, Pat	NWP/CCP VPM	X	X	X
Treadway, Shawn	NWP/CCP Container Management Manager	X	X	
Wade, Daniel	NWP/CCP Manager	X	X	X
Walker, Connie	Tech-Specs/CCP AKE	X	X	X
Webb, Jessica	TFE/CCP Document Service Manager		X	X
Yturralde, Jewell	TFE/CCP Record Manager	X	X	X

**PERSONNEL CONTACTED DURING THE AUDIT BY SUBJECT AREA
(WAP-RELATED)**

Acceptable Knowledge	Kevin Peters Ryan Riordan Connie Walker
Project Level V&V	Jorge Gonzalez Daniel Wade
Real-Time Radiography	Nikki Karris James Teal Terry-Anne Groover Derek Matheny Pat Tilmon
Flammable Gas Analysis	Devin Bruce Dale Dover
Personnel Qualification and Training	Jennifer Hernandez
Control of Nonconforming Items	Veronica Ballew Brandy Pyeatt
Records	Jewell Yturralde
WIPP Waste Information System (WWIS Data Entry)	Creta Kirkes

Audit A-21-08 SUMMARY TABLE OF AUDIT RESULTS

QA / Technical Elements	Concern Classification				QA Evaluation			Technical Evaluation
	CARs	CDAs	Obs	Rec	Adequacy	Implementation	Effectiveness	
Program Status/Program Changes/Interface					A	S	E	
Acceptable Knowledge & Waste Certification			1		A	S	E	
Project Level V&V					A	S	E	
Real-Time Radiography	1				A	S	E	
Nondestructive Assay					A	S	E	
Container Management					A	S	E	
Flammable Gas Analysis					A	S	E	
C6 General QA Elements (NCRs, Qualls & Training, Records)					A	S	E	
C6 General QA Elements (WWIS/WDS)					A	S	E	
TOTALS	1	0	1	0	A	S	E	

Definitions

- E = Effective
- S = Satisfactory
- I = Indeterminate
- M = Marginal
- U = Unsatisfactory
- CAR = Corrective Action Report
- CDA = Corrected During Audit
- NE = Not Effective
- Obs = Observation
- Rec = Recommendation
- A = Adequate
- NA = Not Adequate

WAP-Related Objective Evidence Reviewed During the Audit

The WAP-related objective evidence supporting the Audit A-21-08 are included in the shipping box(es) submitted with the final audit 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.

Audit A-21-08
TABLE OF AUDITED PROCEDURES

	Document No.	Revision Number	Document Title
1.	CCP-PO-001	23	CCP Transuranic Waste Characterization Quality Assurance Project Plan
2.	CCP-PO-002	31	CCP Transuranic Waste Certification Plan
3.	CCP-PO-004	39	CCP/SRS Interface Document
4.	CCP-PO-005	30	CCP Conduct of Operations
5.	CCP-PO-043	0	CCP Interface Document Preparation
6.	CCP-PO-047	3	CCP Training and Qualification Program Document
7.	CCP-PO-049	2	CCP Training Implementation Matrix
8.	CCP-QP-002	46	CCP Training and Qualification Plan
9.	CCP-QP-005	27	CCP TRU Nonconforming Item Reporting and Control
10.	CCP-QP-008	27	CCP Records Management
11.	CCP-QP-010	32	CCP Document Preparation, Approval, and Control
12.	CCP-QP-022	19	CCP Software Quality Assurance Plan
13.	CCP-QP-028	17	CCP Records Filing, Inventorying, Scheduling, and Dispositioning
14.	CCP-QP-041	4	CCP Job Needs Analysis and Design
15.	CCP-QP-042	2	CCP Project Level Training and Qualification
16.	CCP-QP-043	3	CCP Operations Level Training and Qualification
17.	CCP-TP-001	22	CCP Project Level Data Validation and Verification
18.	CCP-TP-002	29	CCP Reconciliation of DQOs and Reporting Characterization Data
19.	CCP-TP-005	32	CCP Acceptable Knowledge Documentation
20.	CCP-TP-021	0	CCP Real-Time Radiography #8 Operating Procedure
21.	CCP-TP-028	11	CCP Radiographic Training Container Construction
22.	CCP-TP-030	39	CCP CH TRU Waste Certification and WWIS/WDS Data Entry
23.	CCP-TP-048	18	CCP NDA System Data Reviewing, Validating, and Reporting Procedure
24.	CCP-TP-053	18	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
25.	CCP-TP-058	6	CCP NDA Performance Demonstration Program
26.	CCP-TP-068	12	CCP Standardized Container Management
27.	CCP-TP-076	5	CCP Operating the Mobile ISOCS Large Container Counter Using NDA 2000
28.	CCP-TP-077	4	CCP Calibrating the Mobile ISOCS Large Container Counter Using NDA 2000
29.	CCP-TP-200	7	Enhanced Acceptable Knowledge Review
30.	DOE/WIPP-06-3345	10	Waste Isolation Plant Flammable Gas Analysis
31.	WP 13-1	39	Nuclear Waste Partnership LLC, Quality Assurance Program Description
32.	WP 13-QA.03	30	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
LIST OF PROCESSES/EQUIPMENT		
To Be Assigned	Non-Destructive Assay (NDA) Equipment MILCC6	Debris (S5000) - CH
To Be Assigned	Non-Destructive Examination (NDE) Equipment RTR #8	Debris (S5000) - CH
To Be Assigned	Flammable Gas Analysis (FGA) Process FGA 14	Debris (S5000) - CH
N/A	Acceptable Knowledge (AK)	Debris (S5000) - CH
N/A	Project Level Validation and Verification (V&V)	Debris (S5000) - CH
N/A	WIPP Waste Information System/Waste Data System (WWIS/WDS)	Debris (S5000) - CH
N/A	Quality Assurance Program	Debris (S5000) - CH