



Department of Energy
Carlsbad Field Office
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**NMED
Hazardous Waste Bureau**

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

Subject: Transmittal of the Closeout Audit Report for SNL/CCP Audit A-12-15

Dear Mr. Kieling:

This letter transmits the Final Audit Report for Carlsbad Field Office (CBFO) Audit A-12-15 of the Sandia National Laboratories/Central Characterization Program (SNL/CCP) for processes performed to characterize and certify waste in accordance with the Waste Isolation Pilot Plant Hazardous Waste Facility Permit. The report contains the results of the closeout audit conducted August 14-16, 2012.

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

If you have any questions, please contact Mr. Dennis S. Miehl, Senior Quality Assurance Specialist, CBFO Office of Quality Assurance, at (575) 234-7491.

Sincerely,


Jose R. Franco, Manager
Carlsbad Field Office

Enclosure

130813



Mr. John E. Kieling

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AUG 12 2013

cc: w/Report Narrative
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WWIS Database Administrators ED
Site Documents ED
RCRA Chronology Record ED
WIPP Operating Record
CBFO QA File
CBFO M&RC
*ED denotes electronic distribution

**U.S. DEPARTMENT OF ENERGY
CARLSBAD FIELD OFFICE
FINAL AUDIT REPORT**

OF THE

**SANDIA NATIONAL LABORATORIES
CENTRAL CHARACTERIZATION PROJECT**

FOR

**CLOSEOUT OF WASTE CHARACTERIZATION ACTIVITIES IN
ACCORDANCE WITH THE HAZARDOUS WASTE FACILITY PERMIT**

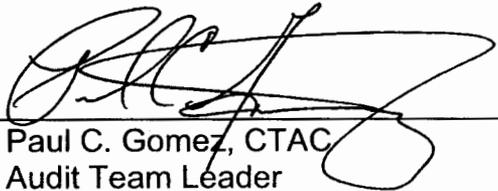
CARLSBAD, NEW MEXICO

AUDIT NUMBER A-12-15

AUGUST 14 – 16, 2012



Prepared by:


Paul C. Gomez, CTAC
Audit Team Leader

Date: August 7, 2013

Approved by:


Martin P. Navarrete, CBFO
Acting Quality Assurance Director

Date: 8-8-13

1.0 EXECUTIVE SUMMARY

U.S. Department of Energy (DOE) Carlsbad Field Office (CBFO) Closeout Audit A-12-15 was conducted to evaluate the continued adequacy, implementation, and effectiveness of Sandia National Laboratories (SNL) transuranic (TRU) waste characterization activities performed by the Washington TRU Solutions (WTS) Central Characterization Project (CCP) for remote-handled (RH) Summary Category Group (SCG) S5000 debris waste. Activities were evaluated relative to the requirements of the Waste Isolation Pilot Plant (WIPP) Hazardous Waste Facility Permit (HWFP) Waste Analysis Plan (WAP) and the *CBFO Quality Assurance Program Document (QAPD)*.

The audit was performed in the Skeen-Whitlock Building in Carlsbad, New Mexico, August 14 – 16, 2012. The audit team concluded that the documentation reviewed and the overall adequacy of the SNL/CCP technical and quality assurance (QA) programs were satisfactory in meeting the WAP and QAPD requirements. The audit team verified that the SNL/CCP documentation processes evaluated for characterization and certification activities related to RH SCG S5000 debris waste were satisfactorily implemented and effective in achieving the desired results.

The audit team identified 16 concerns during the audit as described in the interim audit report. No WAP-related conditions adverse to quality were identified as a result of the audit.

As of October 1, 2012, the DOE WIPP Management and Operating contract has been transitioned from Washington TRU Solutions, LLC, to the Nuclear Waste Partnership LLC (NWP). Distribution and contact lists for this report have been updated as provided by NWP.

2.0 SCOPE AND PURPOSE

2.1 Scope

The audit team evaluated documentation to verify continued adequacy, implementation, and effectiveness of the SNL/CCP TRU waste characterization activities for RH SCG S5000 debris waste generated from the date of the certification audit through May 2012.

The following general areas, as required by Attachment C6 of the HWFP, were audited:

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

The following WAP-related QA elements were audited:

- Personnel Qualification and Training
- Nonconformances
- Records

The following WAP-related waste characterization technical elements were audited for RH SCG S5000 debris waste:

- Acceptable Knowledge (AK) (including waste certification, e.g., Waste Stream Profile Forms)
- Project-level Data Validation and Verification (V&V)
- Headspace Gas (HSG) Sampling
- Visual Examination (VE)
- WIPP Waste Information System/Waste Data System (WWIS/WDS)

The evaluation of the adequacy of SNL/CCP documents was based on current revisions of the following documents:

- Waste Isolation Pilot Plant Hazardous Waste Facility Permit NM4890139088-TSDF
- *CBFO Quality Assurance Program Document (QAPD)*, DOE/CBFO-94-1012

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

- *CCP Transuranic Waste Characterization Quality Assurance Project Plan (QAPjP)*, CCP-PO-001
- *CCP Transuranic Waste Certification Plan*, CCP-PO-002
- Related technical and QA implementing procedures

2.2 Purpose

SNL/CCP Closeout Audit A-12-15 was conducted to assess the level of compliance to the requirements of the WIPP HWFP WAP and the CBFO QAPD, for waste characterization and certification activities for RH SCG S5000 debris waste.

3.0 AUDIT TEAM AND OBSERVERS

AUDITORS/TECHNICAL SPECIALISTS

Courtland Fesmire	Management Representative, CBFO Office of Quality Assurance
Paul Gomez	Audit Team Leader/Technical Specialist, CBFO Technical Assistance Contractor (CTAC)
Porf Martinez	Auditor, CTAC
Cindi Castillo	Auditor, CTAC
Jack Walsh	Auditor, CTAC
Katie Martin	Auditor, CTAC
Tammy Bowden	Auditor, CTAC
Berry Pace	Auditor, CTAC
Dick Blauvelt	Technical Specialist, CTAC
B. J. Verret	Technical Specialist, CTAC
Rhett Bradford	Technical Specialist, CTAC

OBSERVERS

Connie Walker New Mexico Environment Department (NMED) Contractor
Marcus Pinzel RH Manager, CBFO Office of the National TRU Program (NTP)

4.0 AUDIT PARTICIPANTS

The individuals who were contacted during the audit are identified in Attachment 1. A pre-audit meeting was held in the CBFO QA conference room at the Skeen-Whitlock Building in Carlsbad, New Mexico, on August 14, 2012. Daily meetings were held with SNL/CCP management and staff to discuss issues and audit status. The audit was concluded with a post-audit meeting held in the CBFO QA conference room at the Skeen-Whitlock Building in Carlsbad, New Mexico, on August 16, 2012.

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 WAP-related characterization methods assessed were AK, HSG sampling, and VE. Other WAP-related activities evaluated were data-generation and project-level data V&V, WWIS/WDS data entry, data quality objective (DQO) reconciliation, preparation of Waste Stream Profile Forms (WSPFs), training and qualification, nonconformances, and records.

The audit team concluded through review of the objective evidence provided that the applicable SNL/CCP TRU waste characterization activities for RH SCG S5000 debris waste, as described in the implementing procedures, were adequate, satisfactorily implemented, and effective in meeting the WAP requirements. Attachment 2 provides a list of personnel contacted during the audit by area. Attachment 3 is the audit objective evidence (provided in boxes). Attachment 4 is a table of audited documents. Attachment 5 provides a list of processes and equipment evaluated. Attachment 6 provides a procedure revision matrix. Details of audit activities, including objective evidence reviewed, are described below.

5.2 General

5.2.1 Results of Previous Audits

The audit team examined the results of CBFO Certification Audit A-11-23 of the SNL/CCP. The following condition adverse to quality (CAQ), resulting in the issuance of CBFO CAR 11-044, was issued as a result of Audit A-11-23.

No objective evidence was provided to show that the required letter from the SNL Site Technical Representative (STR) was sent to the CCP SPM listing site-specific training required for each SNL/CCP position. This requirement is cited in

CCP-PO-510, Rev. 0, Section 4.1.3. Furthermore, the VE operating procedure (CCP-TP-500, Rev. 11, Section 2.4.1 [C]) cites facility training requirements for knowledge/training on the applicable health and safety plan. Objective evidence provided during the audit only showed that 1 of the 6 qualified VE personnel read or understood the applicable health and safety plan prior to performing work.

Since the previous audit, CCP has obtained correspondence from the SNL STR addressing site-specific training requirements for CCP personnel. The correspondence states that training requirements do not apply to CCP personnel since SNL has determined that escort-in-lieu-of-training applies to them. This provision of site-specific training continues to be implemented. CBFO CAR 11-044 was closed in September 2011.

5.2.2 Changes in Programs or Operations

No changes in SNL/CCP programs or operations have occurred since CBFO Initial Certification Audit A-11-23.

5.2.3 New Programs or Activities Being Implemented

No new programs or activities have been implemented by the SNL/CCP since CBFO Initial Certification Audit A-11-23.

5.2.4 Changes in Key Personnel

No changes in key personnel have been made by SNL/CCP since CBFO Initial Certification Audit A-11-23.

5.3 WAP-related Quality Assurance Elements

The audit team evaluated WAP-related QA program elements for personnel qualification and training, closure of QA records, and control of nonconformances to requirements applicable to the WIPP HWFP WAP and the CBFO QAPD. Each WAP-related QA element audited is discussed in detail in the following sections. The methods used to select objective evidence are discussed, the objective evidence used to assess compliance with the WIPP HWFP WAP and the CBFO QAPD is cited briefly, and the results of the assessment are provided. The following WAP-related QA elements were evaluated by the audit team.

5.3.1 Personnel Qualification and Training

The audit team verified that the SNL/CCP program met the requirements of the CBFO QAPD, section 1.2, Personnel Qualification and Training, as well as WAP-related requirements from Table C6-1. The audit team conducted interviews with Training personnel and reviewed implementing procedure CCP-QP-002, Rev. 32, *CCP Training and Qualification Plan*, to determine adequate implementation of WAP-related requirements. The results of the review indicate that the procedure adequately

addresses WAP-related requirements. Personnel training records associated with VE, HSG Operations/Waste Sampling, AK, and Site Project Management (SPM) were examined to verify implementation of associated requirements and to verify that personnel performing characterization activities are appropriately qualified. Records reviewed included qualification cards, appointment letters, the List of Qualified Individuals (LOQI) for RH waste activities, and other pertinent qualification documentation, including attendance sheets for required briefings on AK waste stream summary training for VE operators. The results of the personnel qualification and training evaluation verified that CCP personnel were properly trained.

No WAP-related concerns regarding personnel training and qualification were identified during the audit. The procedures reviewed and objective evidence assembled and evaluated during the audit provided evidence that the applicable requirements for Personnel Qualification and Training are adequately established for compliance with upper-tier requirements, satisfactory in the implementation of these requirements, and effective in achieving the desired results.

5.3.2 Nonconformances

The audit team verified that the SNL/CCP program met the requirements of the CBFO QAPD, section 1.3, Quality Improvement, as well as WAP-related requirements from Table C6-1. The audit team conducted interviews with appropriate personnel and reviewed implementing procedure CCP-QP-005, Rev. 21, *CCP TRU Nonconforming Item Reporting and Control*, to determine adequate implementation of WAP-related requirements. The results of the review indicate that the procedure adequately addresses WAP-related requirements. The audit team interviewed the project office QA Engineer/Nonconformance Report (NCR) Coordinator and reviewed all NCRs generated at SNL since the previous audit:

NCR-RHSNL-2345-11	NCR-RHSNL-2346-11	NCR-RHSNL-2347-11
NCR-RHSNL-2348-11	NCR-RHSNL-2349-11	NCR-RHSNL-2350-11
NCR-RHSNL-2351-11	NCR-RHSNL-2352-11	NCR-RHSNL-2353-11
NCR-RHSNL-2354-11	NCR-RHSNL-3216-11	NCR-RHSNL-3217-11

The audit team determined there have been no RH waste NCRs meeting the WAP requirements for notification and reporting within seven days since the previous certification audit. All NCRs were verified to be managed and tracked in the CCP Data Center and listed on the CCP NCR Logs. Additionally, the audit team reviewed the SNL RH Waste Data Generation-Level and Project-Level NCR Log Reconciliation Reports generated since 2011, when the waste was packaged, and verified they complied with procedural requirements. This evidence confirms that deficiencies are being appropriately documented and tracked through resolution, as required.

No WAP-related concerns regarding nonconformances were identified during the audit. The procedures reviewed and objective evidence assembled and evaluated during the audit provided evidence that the applicable requirements for Nonconformances were

adequately established for compliance with upper-tier requirements, satisfactory in the implementation of these requirements, and effective in achieving the desired results.

5.3.3 Records

The audit team verified that the SNL/CCP met the requirements of the CBFO QAPD, section 1.5, Records, as well as WAP-related requirements from Table C6-1. The audit team conducted interviews and reviewed implementing procedures relative to the control and administration of QA records to determine the degree to which the procedures adequately address upper-tier requirements. The audit team reviewed procedures CCP-PO-001, Rev. 20, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*; CCP-PO-002, Rev. 26, *CCP Transuranic Waste Certification Plan*; CCP-QP-008, Rev. 19, *CCP Records Management*; and CCP-QP-028, Rev. 14, *CCP Records Filing, Inventorying, Scheduling, and Dispositioning*. The results of the review indicate that the procedures adequately address upper-tier requirements. Control of QA records was verified through review of the CCP RH Records Inventory and Disposition Schedule dated August 15, 2011. CCP-QP-008 now allows up to one year to disposition records into the archive facility.

No WAP-related concerns regarding records were identified during the audit. The procedures reviewed and objective evidence assembled and evaluated during the audit provided evidence that the applicable requirements for Records are adequately established for compliance with upper-tier requirements, satisfactory in the implementation of these requirements, and effective in achieving the desired results.

5.4 WAP-related Waste Characterization Technical Elements

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 WAP is cited briefly, and the result of the assessment is provided.

5.4.1 Table C6-1, WAP Checklist

The audit was performed to assess SNL/CCP's ability to manage and perform TRU waste characterization and certification activities for RH SCG S5000 debris waste. The C6-1 WAP checklist addresses general program requirements from an overall management perspective. The general requirements checklist addresses both technical requirements and specific WAP-related 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.

Technical activities evaluated for characterization and certification activities consisted of data-generation and project-level data V&V, AK, VE, HSG sampling and analysis,

WWIS/WDS, and preparation of WSPFs for RH SCG S5000 debris waste. Objective evidence was selected and reviewed to evaluate the implementation of the associated characterization activities. Batch data reports (BDRs), sampling records, and personnel training documentation were included in the evaluation. Each characterization process involves:

- Collecting raw data
- Collecting quality assurance/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 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, SNL/CCP demonstrated compliance with the waste characterization requirements of the HWFP WAP through documentation and by performing characterization activities.

The audit team conducted interviews with V&V personnel and reviewed implementing procedures CCP-TP-001, Rev. 19, *CCP Project Level Data Validation and Verification*; CCP-TP-003, Rev. 18, *CCP Data Analysis for S3000, S4000, and S5000 Characterization*; and CCP-TP-162, Rev. 1, *CCP Random Selection of Containers for Solids and Headspace Gas Sampling and Analysis*, relative to project-level data V&V activities, to determine the degree to which procedures adequately address upper-tier requirements. The results of the review indicate that the procedures adequately address WAP requirements.

Project-level objective evidence was collected to assess the SPM data review process. The ability of the SNL/CCP to characterize RH SCG S5000 debris waste was evaluated. Objective evidence was collected for RH SCG S5000 debris waste as part of this assessment and utilized in the completion of the WAP C6-1, C6-3, and C6-4 Checklists. The objective evidence included BDRs completed through CCP SPM review for VE and HSG sampling and analysis. In addition, procedures and objective evidence were reviewed to ensure that SNL/CCP data reconciliation is adequately performed and WSPFs are properly prepared. The audit team evaluated project-level data V&V by reviewing the following BDRs.

VE

RHSNLVE110002 RHSNLVE110003 RHSNLVE110004 RHSNLVE110006
SNLRHVE11007 SNLRHVE11008 SNLRHVE11009 SNLRHVE11010

HSG Sampling and Analysis
SNHSG1102 ECL11034M

These BDRs were chosen for review to demonstrate confirmation of AK, reconciliation of DQOs, and the appropriate preparation of WSPF SNL-HCF-S5400-RH.

The audit team reviewed objective evidence to ensure project-level activities were adequately performed to support waste characterization. The quarterly repeats of data generation-level re-reviews for HSG sampling and VE were requested. SNL/CCP provided data for all quarters requested and the team found no violations of the WIPP HWFP.

A review was performed of the WSPF/Characterization Information Summary for the S5000 debris waste stream. The WSPF was found to include all correct and appropriate documentation for SNL-HCF-S5400-RH.

The random selection of containers for the SNL/CCP waste stream was found to be properly completed for SNL-HCF-S5400-RH, including a cross-reference table to the containers selected for HSG sampling and analysis.

SNL/CCP performs HSG sampling using SUMMA[®] canisters. The audit team examined Sampling BDR SNHSG1102 for SCG S5000 debris waste. Drum age criteria (DAC), sample chain-of-custody (COC), and shipment to the analytical laboratory were reviewed and determined to be satisfactory. The results of the HSG analysis of the SUMMA[®] canister samples was reviewed by the team, as well as the training and qualification of V&V personnel.

The analysis and reporting of the field reference standard was found to be accurately completed. The audit team concluded that the SNL/CCP HSG sampling and analysis V&V processes are adequate, satisfactorily implemented, and effective.

The audit team evaluated SNL/CCP VE project-level processes to determine the effectiveness of VE as a characterization method. The team also reviewed BDRs RHSNLVE110002, RHSNLVE110003, RHSNLVE110004, RHSNLVE110006, SNLRHVE11007, SNLRHVE11008, SNLRHVE11009, and SNLRHVE11010.

The team conducted interviews and reviewed implementing procedure CCP-TP-530, Rev. 10, *CCP RH TRU Waste Certification and WWIS/WDS Data Entry*, relative to the WWIS/WDS data entry process to determine the degree to which the procedure adequately addresses upper-tier requirements. The results of the review indicate that the procedure adequately addresses WAP requirements.

As part of this assessment, objective evidence was collected for RH SCG S5000 debris waste and utilized in the completion of the WAP C6-1 Checklist. The audit team evaluated the implementation of the CCP RH TRU Waste Certification and WWIS/WDS Data Entry procedure for entering data using the WWIS/WDS data entry spreadsheet.

The evaluation included data population of the spreadsheet, review of data entry by a Waste Certification Assistant (WCA), and waste certification by the Waste Certification Official (WCO). Records reviewed included container information summaries, pages from BDRs showing analyses values, WWIS/WDS Container Data Reports, and submittals for WWIS review/approval.

The audit team reviewed one WWIS/WDS waste certification package for RH waste canister SNLNM0007, which had three internal containers (SNLNM007018, SNLNM007025, and SNLNM007099).

No WAP-related concerns regarding Table C6-1, WAP Checklist, were identified during the audit. Overall, the procedures reviewed and objective evidence assembled and evaluated during the audit provided evidence that the requirements applicable to the general C6-1 WAP Checklist are adequately established for compliance with the WIPP HWFP WAP, satisfactory in the implementation of these requirements, and effective in achieving the desired results.

5.4.2 Table C6-3, Acceptable Knowledge Checklist

The audit team conducted interviews with AK personnel and reviewed implementing procedures CCP-TP-002, Rev. 24, *CCP Reconciliation of DQOs and Reporting Characterization Data*; CCP-TP-003, Rev. 18, *CCP Data Analysis for S3000, S4000, and S5000 Characterization*; CCP-TP-005, Rev. 24, *CCP Acceptable Knowledge Documentation*; CCP-TP-162, Rev. 1, *CCP Random Selection of Containers for Solids and Headspace Gas Sampling and Analysis*; CCP-TP-506, Rev. 2, *CCP Preparation of the RH TRU Waste AK Characterization Reconciliation Report*; CCP-QP-021, Rev. 7, *CCP Surveillance Program*; and WP 13-QA.03, Rev. 19, *Quality Assurance Independent Assessment Program*, relative to AK activities, to determine the degree to which procedures adequately address upper-tier requirements. The results of the review indicate that the procedures adequately address WAP requirements.

The audit team evaluated AK activities associated with the SNL RH S5000 debris waste stream generated in the SNL Hot Cell Facility (HCF). The waste stream examined is identified as SNL-HCF-S5400-RH. The primary document in the review process was the AK Summary Report CCP-AK-SNL-500, Rev. 4, *Sandia National Laboratories/New Mexico Remote Handled Hot Cell Facility Transuranic Waste (Debris)*. This closeout audit was based on the requirements contained in the HWFP WAP. The audit team verified compliance with all of the AK requirements, compiled and reviewed objective evidence to demonstrate compliance, and completed the appropriate WAP C6-1 and C6-3 Checklists.

The objective evidence compiled and reviewed for compliance to the WAP requirements for this waste stream included the AK Summary Report cited above, relevant AK source documents, an approved WSPF with attachments, and BDRs for HSG sampling and analysis from HSG Lot 2, along with information concerning VE characterization activities occurring since the certification audit conducted in July 2011.

The audit team reviewed CCP Attachment 1, AK Documentation Checklist; Attachment 4, AK Source Document Information List; Attachment 5, AK Hazardous Constituents List; Attachment 6, AK Waste Form, Waste Material Parameters, Prohibited Items and Packaging, along with the applicable justification memo for waste material parameter weight estimates; and Attachment 8, AK Container List. The random container selection memo for Lot 2 HSG sampling and analysis was also examined, as well as the corresponding HSG Summary Report.

Examples of the resolution of AK discrepancies in the AK record, a WAP-compliant AK Accuracy Report, and the most recent internal surveillance were also collected and examined, as well as screenshots from the Integrated Data Center database and a copy of the AK Tracking Spreadsheet.

The audit team reviewed requisite training records provided for AK Experts (AKEs) and SPMs. The WAP-required container traceability exercise was conducted for three waste containers from the total available population of 22, including one drum from Lot 2 of the HSG sampling batch. Original SNL container disposal request forms were compiled as available, since shipment of the reviewed waste to the WIPP had just been completed.

The audit team also examined the AK record regarding the methods for qualification of AK information.

No WAP-related concerns were identified in the evaluation of the Acceptable Knowledge program. The procedures reviewed and objective evidence assembled and evaluated during the audit provide evidence that the applicable requirements for AK were determined to be adequate in addressing the applicable requirements of the WIPP HWFP WAP, satisfactory in the implementation of these requirements, and effective in achieving the desired results.

5.4.3 Table C6-4, Headspace Gas Checklist

The audit team conducted interviews with personnel and reviewed implementing procedures CCP-TP-082, Rev. 8, *CCP Waste Container Filter Vent Operation*; CCP-TP-093, Rev. 16, *CCP Sampling of TRU Waste Containers*; and CCP-TP-106, Rev. 7, *CCP Headspace Gas Sampling Batch Data Report Preparation*, relative to HSG sampling activities, to determine the degree to which these procedures adequately address upper-tier requirements. The results of the review indicate that the procedures adequately address WAP requirements.

RH waste HSG sampling activities performed by the SNL/CCP were evaluated. The HSG samples taken at SNL were recorded in BDR SNHSG1102, which contained copies of the COC form, sample tags, needle blank results, container data, temperature equilibration information, and an Independent Technical Reviewer form.

Training for personnel performing sampling activities and initiating and maintaining custody was verified to be current and acceptable.

The audit team verified compliance with all of the HSG sampling requirements, compiled and reviewed objective evidence to demonstrate compliance, and completed the appropriate WAP C6-1, C6-3 and C6-4 Checklists.

No WAP-related concerns were identified in the evaluation of HSG sampling activities during the audit. The procedures reviewed and objective evidence assembled and evaluated provided evidence that the applicable requirements for HSG are adequately established for compliance with the WIPP HWFP WAP, satisfactory in the implementation of these requirements, and effective in achieving the desired results.

5.4.4 Table C6-6, Visual Examination

The audit team evaluated the adequacy, implementation, and effectiveness of the SNL/CCP VE process for characterizing RH SCG S5000 debris waste. SNL/CCP uses two qualified operators when performing RH VE characterization activities. Since waste characterization activities at SNL have been completed, the audit team also evaluated the closeout activities related to VE for compliance with applicable requirements. The audit team verified compliance with all of the VE requirements, compiled and reviewed objective evidence to demonstrate compliance, and completed the appropriate WAP C6-1, C6-3, and C6-6 Checklists.

The audit team reviewed procedures CCP-TP-500, Rev.11, *CCP Remote-Handled Waste Visual Examination*, and CCP-QP-002, Rev. 32, *CCP Training and Qualification Plan*, relative to VE activities, to determine the degree to which these procedures adequately address upper-tier requirements. The results of the review indicate that the procedures adequately address WAP requirements.

The audit team examined the following RH VE BDRs:

RHSNLVE100001	RHSNLVE110001
RHSNLVE110002	RHSNLVE110003
RHSNLVE110004	RHSNLVE110006
SNLRHVE11007	SNLRHVE11008
SNLRHVE11009	SNLRHVE11010

The results of the examination indicate that SNL/CCP is performing VE activities in accordance with approved standard operating procedures.

The audit team examined training and qualification records for six VE operators and concluded the required training was adequate and qualifications were current. The audit team also confirmed the appointment of SNL/CCP VE Experts (VEEs) as required. Five VEEs were appointed at SNL/CCP.

No WAP-related concerns were identified in the evaluation of VE activities during the audit. The procedures and objective evidence, assembled and evaluated, provided evidence that the applicable requirements for characterizing RH SCG S5000 debris waste using the Visual Examination process are adequately established for compliance with the WIPP HWFP WAP, satisfactory in the implementation of these requirements, and effective in achieving the desired results.

6.0 CORRECTIVE ACTIONS, OBSERVATIONS, AND RECOMMENDATIONS

6.1 Corrective Action Reports

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

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

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

No WAP-related CARs were identified during this 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 to correct the condition and determines if the condition was corrected in an acceptable manner. Once it has been determined that the CAQ has been corrected satisfactorily, the ATL categorizes the condition as a 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 CDAs were identified during this 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 member, in conjunction with the ATL, evaluates these conditions and classifies them as Observations or Recommendations using the following definitions.

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

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

Once a determination is made, the CBFO QA representative categorizes the condition appropriately.

7.1 Observations

No WAP-related Observations were identified during this audit.

7.2 Recommendations

No WAP-related Recommendations were suggested during this audit.

8.0 LIST OF ATTACHMENTS

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

PERSONNEL CONTACTED DURING AUDIT				
NAME	ORG/TITLE	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST-AUDIT MEETING
Armijo, Cheryl	CCP Records Analyst		X	
Atwood, Alyca	CCP/Records		X	
Billett, Michele	CCP/Training		X	
Cannon, Val	WTS/CCP QA	X		X
Fisher, A. J.	WTS/CCP/Tech Advisor	X	X	X
Garcia, Joseph	WTS CCP/VEE		X	
Jones, Laura	WTS/CCP/QA		X	
Kirkes, Creta	WTS/CCP/WCO		X	
Licklitter, Ken	Tech. Specialists/AK		X	
Mojica, Tommy	WTS/CCP/VEE		X	
Payanes, Jose	CCP/Document Services		X	
Punchios, Sheri	CCP/Records		X	X
Quintana, Irene	WTS/CCP/PM	X	X	X
Walker, Mak	WTS/QA CARs		X	

Personnel Contacted During the Audit by Area	
Nonconformances	Val Cannon Mak Walker
Training	Michele Billett
Records	Alyca Atwood Sheri Punchios Cheryl Armijo Jose Payanes
Acceptable Knowledge	Ken Lickliter Irene Quintana
Headspace Gas Sampling	Irene Quintana
Visual Examination	Tommy Mojica Joseph Garcia Irene Quintana
WIPP Waste Information System/Waste Data System (WWIS/WDS)	Creta Kirkes
Waste Certification/Project Level Validation & Verification	Irene Quintana

Objective Evidence

The objective evidence supporting Audit A-12-15 is included in the box(es) submitted with this report. Included in the box(es) is a "Content Map" describing the location (using color coding) and identity of all required objective evidence supporting the performance of the audit.

TABLE OF AUDITED DOCUMENTS

No	Procedure Number	Rev	DOCUMENT TITLE
1.	CCP-AK-SNL-500	4	Central Characterization Project Acceptable Knowledge Summary Report for Sandia National Laboratories
2.	CCP-PO-001	20	CCP Transuranic Waste Characterization Quality Assurance Project Plan
3.	CCP-PO-002	26	CCP Transuranic Waste Certification Plan
4.	CCP-QP-002	32	CCP Training and Qualification Plan
5.	CCP-QP-005	21	CCP TRU Nonconforming Item Reporting and Control
6.	CCP-QP-008	19	CCP Records Management
7.	CCP-QP-021	7	CCP Surveillance Program
8.	CCP-QP-028	14	CCP Records Filing, Inventorying, Scheduling, and Dispositioning
9.	CCP-TP-001	19	CCP Project Level Data Validation and Verification
10.	CCP-TP-002	24	CCP Reconciliation of DQOs and Reporting Characterization Data
11.	CCP-TP-003	18	CCP Data Analysis for S3000, S4000, and S5000 Characterization
12.	CCP-TP-005	24	CCP Acceptable Knowledge Documentation
13.	CCP-TP-082	8	CCP Preparing and Handling Waste Containers for Headspace Gas Sampling
14.	CCP-TP-093	16	CCP Sampling of TRU Waste Containers
15.	CCP-TP-106	7	CCP Headspace Gas Sampling Batch Data Report Preparation
16.	CCP-TP-162	1	CCP Random Selection of Containers for Solids and Headspace Gas Sampling and Analysis
17.	CCP-TP-500	11	CCP Remote-Handled Waste Visual Examination
18.	CCP-TP-506	2	CCP Preparation of the Remote-Handled Transuranic Waste Acceptable Knowledge Characterization Reconciliation Report
19.	CCP-TP-507	7	CCP Shipping of Remote-Handled Transuranic Waste
20.	CCP-TP-530	10	CCP RH TRU Waste Certification and WWIS/WDS Data Entry
21.	WP 13-QA.03	19	Quality Assurance Independent Assessment Program

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-PO-001	CCP Transuranic Waste Characterization Quality Assurance Project Plan	19	20	Rev 20: Revised to incorporate Class 2 Permit Modification (Transuranic Package Transporter Model III and Standard Large Box 2).
2.	CCP-PO-002	CCP Transuranic Waste Certification Plan	25	26	Rev 26: Revised to incorporate revision 7.1 and 7.2 of DOE/WIPP-02-3122, <i>Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant</i> , minor editorial changes, and delete Appendix 11.
3.	CCP-QP-002	CCP Training and Qualification Plan	30	32	Rev 31: Revised based on Revision 2 of the DOE/WIPP 02-3214, <i>Remote-Handled TRU Waste Characterization Program Implementation Plan</i> . Rev 32: Revised to simplify the process for tracking waste stream Summary Training in Section 4.2. Added full requalification as an option in Section 4.1.2 [I]. Added the Training Module in Integrated Data Center (IDC) as a source of Training information to the note in Section 4.1. Incorporated Standing Orders CCP-SO-051 in Section 4.4.1[C], CCP-SO-069 in Section 4.2, and CCP-SO-078 in Section 4.1.2[F]. Expanded Section 4.1.1 to add a documented analysis of positions requiring qualification, in response to Carlsbad Field Office (CBFO) Corrective Action Report (CAR) 12-010.
4.	CCP-QP-005	CCP TRU Nonconforming Item Reporting and Control	19	21	Rev. 20: Revised to incorporate relevant steps from CCP-QP-004, <i>CCP Corrective Action Management</i> , and other editorial changes. Rev. 21: Revised to incorporate clarification of K-trend code designee's signature authority and other editorial changes and freeze file items.
5.	CCP-QP-008	CCP Records Management	17	19	Rev. 18: Revised to support corrective action report (CAR)-LANL-0004-10. Rev. 19: Revised to change the number of the form in the definition of retention period. Change to Section 4.8 for clarification.

No.	Procedure Number	Procedure Title	Revision During Last Annual Audit	Revision During Current Annual Audit	Brief Description of Procedure Changes
6.	CCP-QP-021	CCP Surveillance Program	7	7	N/A
7.	CCP-QP-028	CCP Records Filing, Inventorying, Scheduling and Dispositioning	12	14	<p>Rev. 13: Revised to correct reference section of the procedure and remove a reference that is no longer active.</p> <p>Rev. 14: Revised to bring into line with the Waste Isolation Pilot Plant (WIPP) Inventory Worksheets and general editing of the procedure.</p>
8.	CCP-TP-001	CCP Project Level Data Validation and Verification	19	19	N/A
9.	CCP-TP-002	CCP Reconciliation of DQOs and Reporting Characterization Data	23	24	<p>Rev. 24: Revised to make editorial changes. Replacing Waste Stream Profile Form (WSPF) change notice with revision to WSPF. Revising instructions for completing WSPF package.</p>
10.	CCP-TP-003	CCP Data Analysis for S3000, S4000 and S5000 Characterization	18	18	N/A
11.	CCP-TP-005	CCP Acceptable Knowledge Documentation	21	24	<p>Rev. 22: Revised to address changes in Revision 2 of the Remote-Handled Tru Waste Characterization Program Implementation Plan (WCPIP). Incorporated editorial changes and technical clarifications throughout procedure.</p> <p>Rev. 23: Revised to clarify what constitutes a record as part of the resolution to resolve CBFO CAR 11-043.</p> <p>Rev. 24: Revised to address comments from inspectors during U.S. Environmental Protection Agency (EPA) Baseline Inspection EPA-SNL-CCP-RH-06.11-8 (June 6/8, 2011). Also revised to incorporated lessons learned from Carlsbad Field Office (CBFO) records surveillance.</p>
12.	CCP-TP-082	CCP Preparing and Handling Waste Containers for Headspace Gas Sampling	8	8	N/A
13.	CCP-TP-093	CCP Sampling of TRU Waste Containers	15	16	<p>Rev. 16: Deleted incorrect Uniform Resource Locator (URL) for approved filters and add Standard Large Box 2 (SLB2) information to Packaging Configuration Table and Drum Age Criteria (DAC) table, and other editorial changes.</p>

No.	Procedure Number	Procedure Title	Revision During Last Annual Audit	Revision During Current Annual Audit	Brief Description of Procedure Changes
14.	CCP-TP-106	CCP Headspace Gas Sampling Batch Data Report Preparation	7	7	N/A
15.	CCP-TP-162	CCP Random Selection of Containers for Solids and Headspace Gas Sampling and Analysis	1	1	N/A
16.	CCP-TP-500	CCP Remote-Handled Waste Visual Examination	11	11	Rev. 11: Implement Revision 2 of Remote-Handled Transuranic (TRU) Waste Characterization Program Implementation Plan DOE/WIPP-02-3214
17.	CCP-TP-506	CCP Preparation of the Remote-Handled Transuranic Waste Acceptable Knowledge Characterization Reconciliation Report	2	2	N/A
18.	CCP-TP-507	CCP Shipping of Remote-Handled Transuranic Waste	7	7	N/A
19.	CCP-TP-530	CCP RH TRU Waste Certification and WWIS/WDS Data Entry	9	10	Rev 10: Revised Table 1, Data Sources for the RH WDS Master Template, to include a new source for Gross Weight and a new field label and source for remote-handled (RH) nondestructive assay (NDA).
20.	WP 13-QA.03	Quality Assurance Independent Assessment Program	17	19	Rev 18: Added allowance for the Assurance Programs manager to extend the time limit for issuance of an audit report. (6.0) Rev 19: Added discussion of effectiveness reviews (Introduction). Added clarification for developing criteria for (4.3) and performing (5.0) effectiveness reviews. Deleted reference to EFCOG Contractor Guide For Performance of Effectiveness Reviews (4.3, 5.0).

WIPP #	Process/Equipment Description	Applicable to the Following Waste Streams/Groups of Waste Streams	Currently Approved by NMED	Currently Approved by EPA
APPROVED PROCESSES OR EQUIPMENT				
SNL/CCP Audit A-12-15 Remote Handled (RH) S5000 debris waste				
N/A	Acceptable Knowledge (AK) Procedure – CCP-TP-002 & CCP-TP-005	Debris (S5000)	Yes	Yes
20RHVE1	Visual Examination (VE) Procedure – CCP-TP-500	Debris (S5000)	Yes	Yes
N/A	Headspace Gas Sampling Procedure – CCP-TP-093	Debris (S5000)	Yes	N/A
N/A	Data Generation and Project Level Validation & Verification (V&V) Procedure – CCP-TP-001	Debris (S5000)	Yes	Yes
N/A	WIPP Waste Information System (WWIS/WDS) Procedure – CCP-TP-530 and CCP-TP-507	Debris (S5000)	Yes	Yes
N/A	Quality Assurance	N/A	N/A	Yes