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Department of Energy

memorandum

Carlsbad Field Office
Carlsbad, New Mexico 88221

DATE: SEP - 5 2014

**REPLY TO
ATTN OF:** CBFO:QAD:DM:RS:14-1308:UFC: 2300.00

SUBJECT: Interim Audit Report A-14-26, SNL/CCP Characterization and Certification Activities
for RH TRU Waste

TO: James Todd, DOE-SNL

The Carlsbad Field Office (CBFO) conducted an initial certification audit of the Sandia National Laboratories Central Characterization Program (SNL/CCP) characterization and certification activities for remote-handled transuranic waste on August 5-7, 2014. The interim audit report for Audit A-14-26 is attached.

The audit team concluded that, with the exceptions described below, the implementing procedures reviewed during the audit are adequate relative to the flow-down of requirements and the technical activities evaluated are satisfactorily implemented and effective, with exception of the Dose to Curie (DTC) activities that will be evaluated at a later date.

As a result of the audit, one CBFO Corrective Action Report was issued and transmitted under a separate cover letter. Additionally, three conditions adverse to quality, isolated in nature, were corrected during the audit. The audit team identified two observations and offered four recommendations to SNL/CCP management for consideration.

If you have questions concerning the audit report, please contact me at (575) 234-7491.

Dennis S. Miehls
Senior Quality Assurance Specialist

Attachment



James Todd

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SEP - 5 2014

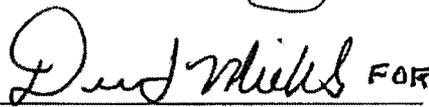
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U.S. DEPARTMENT OF ENERGY
CARLSBAD FIELD OFFICE
INTERIM INITIAL AUDIT REPORT
OF THE
SANDIA NATIONAL LABORATORIES
CENTRAL CHARACTERIZATION PROGRAM
CARLSBAD, NEW MEXICO
AUDIT NUMBER A-14-26
AUGUST 5 – 7, 2014
TRU WASTE CHARACTERIZATION AND CERTIFICATION



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

Date: 9-5-2014

Approved by:  FOR
Michael R. Brown, Director
CBFO Quality Assurance Division

Date: 9-5-2014

1.0 EXECUTIVE SUMMARY

U.S. Department of Energy (DOE) Carlsbad Field Office (CBFO) Audit A-14-26 was performed to evaluate the adequacy, implementation, and effectiveness of programs for transuranic (TRU) waste characterization activities performed for the Sandia National Laboratories (SNL) 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 wastes utilizing the visual examination (VE) and dose-to-curie (DTC) processes. This initial certification 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)* and the *Remote-Handled TRU Waste Characterization Program Implementation Plan (WCP/IP)*.

CBFO Surveillance S-14-33 was conducted June 16–17, 2014, at the SNL Technical Area V Hot Cell Facility (HCF) in Albuquerque, New Mexico, to observe performance of VE and DTC characterization activities prior to the A-14-26 Audit conducted at the Skeen-Whitlock Building in Carlsbad, New Mexico, August 5–7, 2014. Overall, the audit team concluded that the SNL/CCP technical and quality assurance (QA) programs evaluated were adequately established for compliance with applicable upper-tier requirements, satisfactorily implemented, and effective in achieving the desired results. However, the team was unable to fully evaluate the DTC program which resulted in an indeterminate evaluation. DTC will be reevaluated at a later date.

2.0 SCOPE AND PURPOSE

2.1 Scope

The following general areas were audited:

- Results of Previous S-14-33 Surveillance
- Changes in Established Programs or Operations
- New Programs or Activities Being Implemented
- Changes in Key Personnel

The following QA elements were audited:

- Personnel Qualification and Training
- Nonconformances
- Records
- WIPP Waste Information System/Waste Data System (WWIS/WDS)

The following waste characterization technical elements were audited:

- Acceptable Knowledge (AK)
- Project Level - Validation and Verification (V&V)
- Visual Examination (VE)
- Dose-to-Curie (DTC)

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

- *Quality Assurance Program Document (QAPD)*, DOE/CBFO-94-1012
- *Waste Isolation Pilot Plant Hazardous Waste Facility Permit*, NM4890139088-TSDF
- *Remote-Handled TRU Waste Characterization Program Implementation Plan (WCPIP)*, DOE/WIPP-02-3214

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
- Related CCP technical and QA implementing procedures

2.2 Purpose

Audit A-14-26 was conducted to determine the degree of adequacy and effective implementation of program requirements for the characterization and certification of RH SCG S5000 debris waste at the SNL.

3.0 AUDIT TEAM AND OBSERVERS

AUDITORS/TECHNICAL SPECIALISTS

Dennis Miehl	Management Representative, CBFO Quality Assurance Division
Paul C. Gomez	Audit Team Leader, CBFO Technical Assistance Contractor (CTAC)
Greg Knox	Auditor, CTAC
Tammy Ackman	Auditor, CTAC
Jim Schuetz	Auditor, CTAC
Dick Blauvelt	Technical Specialist, CTAC
Porf Martinez	Technical Specialist, CTAC
Jim Oliver	Technical Specialist, CTAC

OBSERVERS

Ricardo Maestas	New Mexico Environment Department (NMED)
Steve Holmes	NMED
Colman Smith	NMED

4.0 AUDIT PARTICIPANTS

The SNL/CCP personnel contacted during the audit process are identified in Attachment 1. A pre-audit meeting was held on August 5, 2014, at the Skeen-Whitlock Building in Carlsbad, New Mexico. Daily management briefings were provided to update CCP management and staff on audit progress and identified concerns. A post-audit meeting was held on August 7, 2014, at the Skeen-Whitlock Building in Carlsbad, New Mexico. Attachment 2 tabulates the summary of audit results, Attachment 3 lists the audited documents, and Attachment 4 lists the processes and equipment reviewed.

5.0 SUMMARY OF AUDIT RESULTS

5.1 Program Adequacy, Implementation, and Effectiveness

This audit was performed to assess the capability of SNL/CCP to characterize and certify RH SCG S5000 debris waste for compliance with the requirements specified in the WIPP HWFP Waste Analysis Plan (WAP), the CBFO QAPD, and the WCPIP. The characterization methods assessed were AK, VE, Project Level V&V, and DTC.

The audit team concluded that, based on personnel interviews, observance of operations, and review of associated documentation and records, the SNL/CCP TRU waste characterization program and activities for characterizing RH SCG S5000 debris waste are adequately established, satisfactorily implemented, and effective in achieving the desired results, with the exception of DTC activities, including Project Level V&V and WWISMWDS for DTC, which remain indeterminate and will be reassessed at a later date.

5.2 General Activities

5.2.1 Results of Previous Surveillance

The results of the last CBFO surveillance of SNL/CCP (S-14-33) were examined. CBFO Corrective Action Reports (CARs) 14-048, 14-049, and 14-050 were initiated during that surveillance, which identified conditions adverse to quality regarding operations activities performed during DTC, and documentation supporting those activities. The audit team did not identify similar/same conditions during the course of this audit, the CARs are in the evaluation process for revisions to the procedures affected and are scheduled for closure in early September 2014.

5.2.2 Changes in Programs or Operations

This is an initial certification audit for SNL/CCP; therefore, there are no changes in programs or operations to be reported.

5.2.3 New Programs or Activities Being Implemented

This is an initial certification audit of the SNL/CCP RH program. CCP introduced "RH Projects" management and operations for characterizing RH waste as part of its organization. The audit team verified this against CCP-PO-002, *CCP Transuranic Waste Certification Plan*, and issued an observation that CCP's new organization chart and CCP-PO-002 do not support the "RH Projects" portion of the organization. For details see Observation 1 in section 6.3.

5.2.4 Changes in Key Personnel

This is an initial certification audit of the SNL/CCP RH program. The initial key personnel are in place.

5.3 Quality Assurance Activities

The audit team evaluated the applicable QA elements for personnel qualification and training, non-conformances, and records for compliance with requirements in the HWFP WAP and the WCPIP. The evaluation results for the audit are described below.

5.3.1 Personnel Qualification and Training

The audit team conducted interviews with responsible personnel and reviewed implementing procedure CCP-QP-002, Rev. 37, *CCP Training and Qualification Plan*, to determine the degree to which the procedure adequately addresses upper-tier requirements. Results of the review indicate that the procedure adequately addresses those requirements.

Personnel training records associated with AK, VE, Project Level V&V, and DTC were examined to verify compliance with associated requirements and to confirm that personnel are appropriately trained/qualified. Record reviews included qualification of DTC and VE Operator/Independent Technical Reviewers (ITRs); VE Expert (VEE) appointment documentation; AK Expert qualifications; and Vendor Project Manager (VPM) and Site Project Manager (SPM) qualification cards. The audit team also reviewed the RH Program-SNL List of Qualified Individuals dated May 27, 2014.

No deficiencies regarding personnel qualification and training were identified. 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 Nonconformances

The audit team conducted interviews with responsible personnel and reviewed implementing procedure CCP-QP-005, Rev. 24, *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.

The audit team interviewed the CCP project office QA engineer; reviewed the RH VE Nonconformance Report Log; and selected the following nonconformance reports (NCRs) for review:

NCR-SNL-0762-14, Rev. 0
NCR-SNL-0763-14, Rev. 0

The team concluded that deficiencies are being appropriately documented and tracked through resolution as required. There were no NCRs deemed reportable to the Permittees within seven days, as required by the Permit. All the NCRs examined were verified to have been entered, managed, and tracked in both the CCP Integrated Data Center (IDC) and the CCP NCR Logs.

No deficiencies regarding NCRs were identified. 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 Records

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. 21, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*; CCP-PO-002, Rev. 27, *CCP Transuranic Waste Certification Plan*; CCP-QP-008, Rev. 22, *CCP Records Management*; and CCP-QP-028, Rev. 15, *CCP Records Filing, Inventorying, Scheduling, and Dispositioning*. Results of the review indicate that the procedures adequately address upper-tier requirements.

Control of records was verified through review of the RH Records Inventory and Disposition Schedule dated June 18, 2014, and through interviews with responsible personnel.

The procedures reviewed and objective evidence assembled and evaluated during the audit provided evidence that the applicable requirements for QA records are adequately

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

5.3.4 WIPP Waste Information System/Waste Data System

Procedure CCP-TP-530, Rev. 11, *CCP RH TRU Waste Certification and WWIS/WDS Data Entry*, was evaluated with respect to requirements of the CBFO QAPD, Rev. 11, section 2.1 – *Work Processes*. The audit team determined that requirements are adequately addressed and that the procedure contains adequate flow-down of QAPD requirements related to waste data management and container certification using the WIPP Waste Information System/Waste Data System (WWIS/WDS).

The audit team interviewed CCP Waste Certification Officials (WCOs) and reviewed CCP training records and determined that the WCOs are qualified to perform certification activities for RH waste from SNL and all other CCP host site locations. Waste Certification Assistants (WCAs) were also verified to be qualified to perform data management activities and WWIS/WDS data entry activities for RH waste from SNL and all other CCP host site locations.

The audit team interviewed CCP WCOs and reviewed documentation for certification of new Waste Stream Profile Forms (WSPFs) for the SNL host location. Certification data were entered into the WWIS, and WSPFs were approved and added to the WDS in accordance with CCP procedures.

The audit team evaluated a sample of data entry packages for evidence of WWIS/WDS RH waste data entry. Data are entered from excerpts of record batch data reports (BDRs) and other measurement reports, verified in spreadsheet applications, and submitted electronically to the WWIS/WDS database. Data entry packages for RH containers include Container Information Summary (CIS) lists, radiation survey documentation, WDS Master Template.xls data spreadsheet reports, and excerpts from DTC and VE BDRs. A single data entry package was available at the time of the audit and contained data from BDRs that had been through SPM review and approval. The package was in DRAFT status because the WDS Master Template.xls data spreadsheet identified a discrepancy in the fissile gram equivalent values compared to those on the BDR. An NCR was generated and the containers were not certified. The audit team observed an NCR notation in the BDR and verified there was an open NCR associated with the containers. Because all of the containers presented to the audit team for evaluation had an open NCR and the certification process could not be completed, the effectiveness of the data entry and certification process was deemed indeterminate. The process is similar to that for RH waste data entry and waste container certification at other CCP host locations; therefore, determination of effectiveness should be achievable once the NCR is resolved and the data package is completed. This will be evaluated by surveillance at a date to be determined.

The audit team evaluated WDS Master Template.xls spreadsheet and IDC software applications used for data entry, electronic verification of data, and transfer of data to

the WWIS/WDS. Application of software QA and control of these software items was deemed to be adequate.

The audit team identified no additional issues related to WWIS/WDS data entry and waste certification. Overall, the team concluded that the upper-tier requirements in the CBFO QAPD adequately flow down into CCP procedures. However, due to the open NCR described above, implementation of the data entry and certification process was deemed indeterminate. The effectiveness of the program can be determined once the NCR is resolved and an evaluation of the entire WWIS/WDS data entry and waste certification process is performed.

5.4 Technical Activities

Audit team evaluations of applicable SNL/CCP technical activities are summarized in the following subsections.

5.4.1 Acceptable Knowledge/Waste Certification

The audit team reviewed implementing procedures CCP-QP-021, Rev. 10, *CCP Surveillance Program*; CCP-TP-002, Rev. 26, *CCP Reconciliation of DQOs and Reporting Characterization Data*; CCP-TP-005, Rev. 26, *CCP Acceptable Knowledge Documentation*; CCP-TP-506, Rev. 5, *CCP Preparation of the RH TRU Waste AK Characterization Reconciliation Report*; and WP 13-QA.03, Rev. 23, *Quality Assurance Independent Assessment Program*, to determine the degree to which the procedures adequately address upper-tier requirements. The results of the review indicate that the referenced procedures adequately address upper-tier requirements. 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 HWFP and WCPIP is cited briefly, and the result of the assessment is provided.

The waste stream examined is identified as SNL-HCF-S5400-RH. A primary document in the review process was the Acceptable Knowledge (AK) Summary Report CCP-AK-SNL-500, Rev. 6, titled *CCP Acceptable Knowledge Summary Report for Sandia National Laboratories RH Hot Cell Facility TRU Waste (Debris)*. The portion of the waste stream examined during this audit included fuel fragments that had been previously stored as "accountable" material but has been released for shipment to WIPP. The characteristics of this portion of the waste stream are consistent with those of the debris waste examined in earlier audits.

This audit was based upon the requirements contained in the WIPP Resource Conservation and Recovery Act permit and described in the WAP, as well as the requirements of the WCPIP and the WIPP WAC. The team reviewed documentation to support all AK requirements, completing WCPIP checklists, the WAP C6-2 and C6-1 checklists, and compiling and reviewing objective evidence to demonstrate compliance.

The objective evidence reviewed and compiled included the AK Summary Report listed above, relevant AK source documents, and an approved WSPF and attachments and

BDRs for VE and DTC characterization activities occurring since the A-12-15 SNL/CCP close-out audit conducted in 2012.

With regard to the WAP requirements, in addition to the AK Summary Report, AK Source Document Summaries, and other relevant AK records cited above, the audit team reviewed completed attachments for the waste stream as required by CCP procedure CCP-TP-005: Attachment 1 - *Acceptable Knowledge Documentation Checklist*; Attachment 4 - *Acceptable Knowledge Information List*; Attachment 5 - *Hazardous Constituents*; Attachment 6 - *Waste Form, Waste Material Parameters, Prohibited Items, and Packaging*, along with the applicable justification memorandum for waste material parameter weight estimates; and Attachment 8 - *Waste Containers List*, with an add-container memorandum.

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 along with screenshots from the IDC database and a copy of the AK Tracking Spreadsheet. Requisite training records for AK Experts and SPMs were reviewed by the designated QA auditor based upon names provided by the AK auditors. The WAP-required container traceability exercise was conducted for two waste containers from the total available population of seven. Original SNL container disposal request forms or historic database information for these two containers were compiled as available.

Additional supporting documentation for the WCPIP requirements included a draft Characterization Reconciliation Report for shipping lot 3, a WCPIP AK Accuracy Report, and the CCP RH TRU Radiological Characterization Report for this waste stream, CCP-AK-SNL-501, Rev 3. Examples from the AK record were reviewed to assure that all of the data quality objectives cited in the WCPIP were met. In addition, the auditors examined the AK record regarding the methods for qualification of AK information as required by the WCPIP.

During the review of the documents, the audit team offered two recommendations. The first (see Recommendation 1 in section 6.4) addressed changes to be made to the text of the AK Summary Report for the purposes of clarification and consistency. These changes were incorporated into an existing freeze file that will be addressed in the upcoming revision to the AK Summary. The second (see Recommendation 2 in section 6.4) addressed freeze file changes that were inadvertently omitted when CCP-AK-SNL-501, Rev. 3 was issued. These will be incorporated into the next revision.

Additionally, a concern was raised regarding information in the Attachment 6 - *Waste Form, Waste Material Parameters, Prohibited Items and Packaging* regarding the number of layers of confinement of the waste. The listing of zero layers of confinement is not consistent with the information in the AK Summary, which was revised to indicate the correct number of one layer of confinement. In addition, the Attachment 3 - *Acceptable Knowledge Source Document Summary* for C1047 also shows the number zero. Both attachments were corrected during the audit (CDA) and included in the AK record. This concern is identified as CDA-1 (for details see CDA-1 in section 6.2).

Overall, the AK program was adequate in addressing the requirements of the WCPIP, the WAC, and the WAP as applicable, satisfactory in the implementation of these requirements, and effective in achieving the desired results.

5.4.2 Project Level Validation and Verification

The audit team verified the CCP Project Level Validation and Verification (V&V) program. The CCP RH Projects Manager provided two VE BDRs for the audit team to review:

SNLRHVE14001

SNLRHVE14002

The project level verified that the current version of the AK document was used for the characterization review of the data provided by the data generation level. The project level also provided adequate information regarding quarterly data generation review of VE data. The use of the project level checklist for VE from CCP-TP-500, Rev. 13, *CCP Remote-Handled Waste Visual Examination*, was verified to be implemented and effective in meeting the objectives of the hazardous waste facility permit.

The audit team verified project level V&V of DTC characterization data from the one BDR (SNLRHDTC14001) provided as objective evidence. The BDR had a Project Level NCR written against the results provided through the WCO. The fissile gram equivalent information was affected in the software program calculations. The procedure was deemed adequate and effective, yet implementation is indeterminate due to the BDR not being completed. Therefore, the Dose-to-Curie V&V characterization process shall be audited at a later date once the problem is completely resolved.

5.4.3 Table C6-4, Visual Examination Checklist

The audit team evaluated the SNL/CCP VE characterization process for newly-generated RH SCG S5000 debris waste. On June 16 and 17, 2014, CBFO conducted a surveillance for VE operations performed at the Sandia National Laboratories, as documented in CBFO Surveillance Report S-14-33. The scope of this audit was to complete the evaluation of the VE process to requirements of the HWFP by evaluating completed VE BDRs and verifying training requirements were met.

The audit team conducted interviews with responsible personnel and reviewed implementing procedures CCP-TP-500, Rev. 13, *CCP Remote-Handled Waste Visual Examination*, and CCP-QP-002, Rev. 37, *CCP Training and Qualification Plan*, to determine the degree to which the procedures adequately address upper-tier requirements. Results of the review indicate that the procedures adequately address upper-tier requirements.

SNL/CCP uses the two-operator method when performing VE characterization. The two qualified operators visually examine the waste as it is placed into containers. The audit team interviewed VE operators and the VEE.

The audit team examined the following RH VE BDRs generated from operations performed in the SNL HCF to verify implementation and compliance with the requirements in CCP-TP-500:

- SNLRHVE0001
- SNLRHVE0002

During the review of the VE BDRs, the audit team identified two conditions adverse to quality, one observation, and two recommendations. In the first concern, the audit team identified that the VE operator recorded "N/A" as the number of layers of confinement of the waste. This concern was isolated in nature, was corrected during the audit, and the audit team was able to verify completion of corrective actions prior to the end of the audit. For details see CDA-2 in section 6.2.

In relation to the above mentioned concern, the audit team identified that the VE operators did not initiate an NCR upon discovering that the layers of confinement identified during VE operations did not match the number of layers of confinement documented in the AK Summary. For details see CBFO CAR 14-057 in section 6.1.

The audit team also identified that VE ITR checklist question 13, specific to precision, is answered inconsistently. This concern was also identified during CBFO Audit A-14-26 of the Oak Ridge National Laboratory CCP. However, additional information was provided evidencing that CCP previously identified this concern during management assessment MA-CCP-0018-13, and has initiated actions (described in CTS #42858) to resolve this and other similar ambiguous questions on the ITR and SPM checklists related to the achievements of quality assurance objectives. For this reason, this concern has been classified as an observation. For details see Observation 2 in section 6.3.

The audit team identified that several 30-gallon initial (inner) containers had the same container or package ID number as the final 55-gallon containers recorded on the respective Visual Examination Data Forms. Although this is not a condition adverse to quality, the language in the NOTE discussing how the container or package ID number is recorded in CCP-TP-500, section 4.1.2 [B.1], is not clear. The audit team recommends that this language be clarified to ensure proper documentation of container/package ID numbers. For details see Recommendation 3 in section 6.4.

The audit team also recommends that the VE operators document on the VE Data Sheet verification that the output drum was empty prior to initiating the VE process. For details see Recommendation 4 in section 6.4.

With the exception of the issues identified above, the audit team concluded that VE operations for newly-generated RH SCG S5000 debris waste, using CCP-TP-500, Rev. 13, *CCP Remote-Handled Waste Visual Examination*, are adequate in meeting upper-tier requirements, and the procedures are satisfactorily implemented and effective.

5.4.4 Dose-to-Curie

The audit team assessed the adequacy, implementation, and effectiveness of the DTC methodology used at SNL, as part of the CCP, to characterize SCG S5000 waste. The audit team also evaluated the DTC measurement system.

This audit was performed in Carlsbad, New Mexico, as a follow on activity to Surveillance S-14-33 that was conducted at the SNL site in Albuquerque, New Mexico, on June 16-17, 2014 (see Surveillance Report for S-14-33).

Based on a review of the current revisions of SNL/CCP procedures, technical documents, and a completed BDR provided prior to the audit, a checklist was prepared and used to evaluate the following:

- System stability as evidenced by the implementation and effectiveness of quality control measurements, and the use of calibrated equipment as evidenced in the BDR
- Applicability of each detector's calibration and operational range to the matrix, geometry and radionuclide content of the drums assayed
- Completed BDR to ensure data are reported and reviewed as required
- Data storage and retrievability
- Personnel qualification and training

The audit team interviewed DTC personnel and examined electronic and paper copies of reports and records.

The audit team specifically reviewed the following BDR:

- SNLRHDTTC14001 that includes three 55-gallon drums from the SNL-HCF-S5400-RH waste stream

BDR SNLRHDTTC14001, page 6 (Attachment 1), has a line labeled "BDR Number" for including the BDR number. This line was blank. This was corrected during the audit (see CDA-3 in section 6.2).

The associated NCR issued by CCP resulted in there being no completed BDRs for review as objective evidence.

Overall, DTC activities were determined to be adequate in terms of the governing requirements, but indeterminate with regard to the implementation and effectiveness of those governing requirements.

6.0 CORRECTIVE ACTIONS

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) – Term used in reference to failures, malfunctions, deficiencies, defective items, and non-conformances.

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

One deficiency necessitating a CAR was identified during the audit.

CAR 14-057

The VE operators did not initiate an NCR upon discovering that the layers of confinement of the waste identified during VE operations on containers within BDR SNLRHVE14001 did not match the number of layers of confinement documented in the AK Summary (CCP-AK-SNL-500, Rev. 6). This concern was cited per CCP-TP-500, Rev. 13, section 2.4.2 [A]: "If a condition adverse to quality is identified, the individual(s) identifying the condition SHALL initiate a nonconformance report (NCR) in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*."

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 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 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.

Three deficiencies were identified and corrected during this audit.

CDA-1

Completed Attachment 6 (from AK procedure CCP-TP-005) incorrectly identifies the number of layers of confinement of the waste in this waste stream and AK Source Document Summary C1047 incorrectly identifies the number of layers of confinement for this waste stream. This deficiency was corrected prior to the closure of this audit.

CDA-2

On the VE data sheet for inner container number SNL001501 (30-gallon inner container) in BDR SNLRHVE14002, the VE operator recorded "N/A" as the number of layers of confinement of the waste. This deficiency was corrected prior to the closure of this audit.

CDA-3

BDR SNLRHDTTC14001, page 6 (Attachment 1), has a line labeled "BDR Number" for including the BDR number. This line was blank. This deficiency was corrected prior to the closure of this 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.

Two Observations were identified during Audit A-14-26.

Observation 1

Due to a recent reorganization of the CCP personnel, the CCP Organization Chart provided in CCP-PO-002 does not support the RH Projects portion of the organization.

Observation 2

An inconsistency was observed on how CCP-TP-500 VE ITR checklist question 13, specific to precision, is answered. On BDR SNLRHVE14001, the ITR answers "Yes" to the question; on BDR SNLRHVE14002, the ITR answers "N/A."

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.

Four Recommendations were presented for SNL/CCP management consideration during the audit.

Recommendation 1

Changes are needed for CCP-AK-SNL-500, Rev. 6, to address issues of clarity and consistency. A complete list of freeze file changes will be provided prior to the closeout.

1. Page 11-Reword text to clarify that the listed absorbents are not used for neutralization of liquids
2. Page 22-Clarify that the waste was generated during pre- and post-test experiments in the HCF and D&D of HCF gloveboxes and SCBs
3. Page 25, para. 1-See No. 2
4. Page 33, Table 2-Change "shielded and shielded" to "shielded and unshielded"
5. Page 33, sec. 5.3-See No. 2
6. Page 34, In paragraph preceding sec. 5.4.1.1, add AK Source Document M1007 to the reference list since it contains relevant MSDS documentation
7. Page 34, Same paragraph, see No. 1
8. Page 41, sec. 5.4.2.2-Change "approached" to "approach" -two places
9. Page 45, para. 1-Add AK Source Document M1007 to reference list
10. Page 48, table 10-For Hyprez lubricant use, delete the word solvent

11. Page 48, table 10-For projector light bulb, delete "UNK" in EPA HWNs column
12. Page 48, table 10-delete PCBs entry

Recommendation 2

Freeze file changes proposed for revision 3 of CCP-AK-SNL-501 were not completed. Some changes were made to the table of contents but other changes to listings of the AK source documents were not made.

Recommendation 3

The audit team identified that several 30-gallon initial (inner) containers had the same container or package ID number as the final 55-gallon containers recorded on the respective Visual Examination Data Forms. Although this is not a condition adverse to quality, the language in the "NOTE" discussing how the container or package ID number is recorded in CCP-TP-500, section 4.1.2 [B.1], is not clear. The audit team recommends that this language be clarified to ensure proper documentation of container/package ID numbers.

Recommendation 4

The audit team recommends that the VE operators document on the VE Data Sheet verification that the output drum was empty prior to initiating the VE process.

7.0 LIST OF ATTACHMENTS

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

PERSONNEL CONTACTED DURING AUDIT A-14-26				
NAME	ORG/TITLE	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST-AUDIT MEETING
Michele Billett	NWP/CCP NTPC Training Coordinator		X	
Michael Brown	Director of CBFO Quality Assurance Division	X		X
Norma Castaneda	CBFO NTP Representative			X
A. J. Fisher	NWP/CCP Support Services		X	X
Ed Gulbransen	NWP/CCP Manager	X		X
Joe Harvill	NWP/CCP NDA Support			X
Steve Holmes	NMED Observer			X
Laura Jones	NWP/CCP QAE		X	
Irene Joo	NWP/CCP RH Projects Manager	X	X	X
Creta Kirkes	NWP/CCP WCO Team Lead		X	
Wayne Ledford	NWP/CCP QA Specialist	X	X	X
Ricardo Maestas	NMED Observer	X		
Dennis Miehl	CBFO QA Representative	X		X
Spencer Pattee	NWP/CCP VEO/VEE		X	
Sheila Percy	NWP/CCP NTPC Records Manager	X	X	
Wes Root	NWP/CCP VE ITR		X	
Mak Walker	NWP/CCP QA			X

SUMMARY OF AUDIT RESULTS

Documents	Concern Classification				QA Evaluation		Technical
	CARs	CDAs	Obs	Rec	Adequacy	Implementation	Effectiveness
Activity							
Management - Organization			1		A	S	E
Acceptable Knowledge		1		2	A	S	E
Reconciliation of DQO's/WSPFs					A	S	E
Project Level V & V					A	I	E
WWIS/WDS					A	I	E
Visual Examination	1	1	1	2	A	S	E
Dose-to-Curie		1			A	I	E
Training					A	S	E
Nonconformance Reporting					A	S	E
QA Records					A	S	E
TOTALS	1	3	2	4	A	S	E

Definitions

E = Effective
 S = Satisfactory
 I = Indeterminate
 M = Marginal

CAR = Corrective Action Report
 CDA = Corrected During Audit
 NE = Not Effective
 Obs = Observation

Rec = Recommendation
 A = Adequate
 NA = Not Adequate

TABLE OF AUDITED DOCUMENTS			
NUMBER	PROCEDURE NUMBER	REV	PROCEDURE TITLE
1.	CCP-PO-001	21	CCP Transuranic Waste Characterization Quality Assurance Project Plan
2.	CCP-PO-002	27	CCP Transuranic Waste Certification Plan
3.	CCP-PO-005	24	CCP Conduct of Operations
4.	CCP-QP-002	37	CCP Training and Qualification Plan
5.	CCP-QP-005	24	CCP TRU Nonconforming Item Reporting and Control
6.	CCP-QP-008	22	CCP Records Management
7.	CCP-QP-010	24	CCP Document Preparation, Approval, and Control
8.	CCP-QP-016	19	CCP Control of Measuring and Testing Equipment
9.	CCP-QP-017	4	CCP Identification and Control of Items
10.	CCP-QP-021	10	CCP Surveillance Program
11.	CCP-QP-022	14	CCP Software Quality Assurance Plan
12.	CCP-QP-028	15	CCP Records Filing, Inventorying, Scheduling, and Dispositioning
13.	CCP-TP-001	21	CCP Project Level Data Validation and Verification
14.	CCP-TP-002	26	CCP Reconciliation of DQOs and Reporting Characterization Data
15.	CCP-TP-005	26	CCP Acceptable Knowledge Documentation
16.	CCP-TP-163	4	CCP Evaluation of Waste Packaging Records for Visual Examination of Records
17.	CCP-TP-500	13	CCP Remote-Handled Waste Visual Examination
18.	CCP TP-504	15	CCP Dose-to-Curie Survey Procedure for Remote-Handled Transuranic Waste
19.	CCP-TP-506	5	CCP Preparation of the RH TRU Waste AK Characterization Reconciliation Report
20.	CCP-TP-530	11	CCP RH TRU Waste Certification and WWIS/WDS Data Entry
21.	WP 13-QA.03	23	Quality Assurance Independent Assessment Program
22.	WP 15-GM1002	2	Issues Management Processing of WIPP Forms

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 Environmental Protection Agency
PROCESSES OR EQUIPMENT				
20RHVE1	Visual Examination Procedure: CCP-TP-500 Description – RH Characterization performed utilizing Visual Examination (VE) and Acceptable Knowledge (AK) Procedure: CCP-TP-163 Description – CCP Evaluation of Waste Packaging Records for Visual Examination	Debris (S5000)	NO	NO
N/A	Acceptable Knowledge Procedure: CCP-TP-005 Description – CCP Acceptable Knowledge Documentation	Debris (S5000)	NO	NO
N/A	Data Validation and Verification Procedure: CCP-TP-001, CCP-TP-500, CCP-TP-504 Description – CCP Project Level Data Validation and Verification, CCP Remote-Handled Waste Visual Examination, CCP Dose-to-Curie Survey Procedure for Remote-Handled Transuranic Waste	Debris (S5000)	NO	NO
20DTC1	Dose-to-Curie Procedure: CCP-TP-504 Description – CCP Dose-to-Curie Survey Procedure for Remote-Handled transuranic Waste	Debris (S5000)	N/A	NO
N/A	Quality Assurance Program	N/A	N/A	YES
N/A	WIPP Waste Information System (WWIS)/Waste Data System (WDS)	N/A	NO	NO
NEW PROCESSES OR EQUIPMENT				
NONE				
DEACTIVATED PROCESSES OR EQUIPMENT				
NONE				