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Department of Energy
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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 Recertification Audit Report for the Hanford Site/Central Characterization Project Audit A-12-11

Dear Mr. Kieling:

This letter transmits the Final Audit Report for Carlsbad Field Office (CBFO) Audit A-12-11 of the Hanford Site/Central Characterization Project 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 recertification audit conducted May 15-16, 2012.

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

If you have any questions, please contact Mr. Randy Unger, Director of the Office of Quality Assurance, at (575) 234-7065.

Sincerely,

Jose R. Franco, Manager
Carlsbad Field Office

Enclosure

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cc: w/ Report Narrative

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WIPP Operating Record	ED
CBFO QA File	
CBFO M&RC	

*ED denotes electronic distribution

U.S. DEPARTMENT OF ENERGY
CARLSBAD FIELD OFFICE

FINAL AUDIT REPORT

OF THE

HANFORD SITE
CENTRAL CHARACTERIZATION PROJECT

FOR

WASTE CHARACTERIZATION ACTIVITIES IN ACCORDANCE WITH THE HAZARDOUS WASTE FACILITY PERMIT

CARLSBAD, NEW MEXICO

AUDIT NUMBER A-12-11

MAY 15 – 16, 2012

Prepared by: Earl Bradford, CTAC
Audit Team Leader

Date: 7/25/2012

Approved by: Randy Unger, CBFO
Director, Office of Quality Assurance

Date: 23 Oct 12

1.0 EXECUTIVE SUMMARY

Carlsbad Field Office (CBFO) Recertification Audit A-12-11 was performed to evaluate the continued adequacy, implementation, and effectiveness of Hanford Site transuranic (TRU) waste characterization activities performed by the Washington TRU Solutions (WTS) Central Characterization Project (CCP) for contact-handled (CH) Summary Category Group (SCG) S5000 debris waste and CH SCG S3000 solids waste. Activities were evaluated relative to the requirements of the Waste Isolation Pilot Plant (WIPP) Hazardous Waste Facility Permit (HWFP), the *CBFO Quality Assurance Program Document* (QAPD), and the *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant* (WAC). The audit was performed in the Skeen-Whitlock Building in Carlsbad, New Mexico, May 15 and 16, 2012.

Hanford/CCP suspended waste characterization activities at the end of September 2011 due to funding issues. No new containers of waste were introduced into the characterization process after September 2011; however, containers requiring the completion of generation-level data reviews and project-level data validation and verification (V&V) activities to finalize the characterization process were managed for a short time thereafter.

The audit team evaluated headspace gas (HSG) sampling, solids sampling and analysis (SS/SA), real-time radiography (RTR), visual examination (VE), and nondestructive assay (NDA) batch data reports (BDRs), acceptable knowledge (AK) documentation, training documentation, nonconformance reports, records, logbooks, and audio/video media generated from the date of the previous audit (CBFO Recertification Audit A-11-10, April 5 – 7, 2011) through September 2011. The audit team concluded that, for the documentation reviewed, the overall adequacy of the Hanford/CCP technical and quality assurance (QA) programs was satisfactory in meeting upper-tier requirements as applicable to the audited activities. The audit team verified that, for the documentation evaluated, the Hanford/CCP program for characterization and certification activities related to SCG S5000 CH debris waste and SCG S3000 CH solids waste was satisfactorily implemented and effective.

Since Hanford/CCP suspended waste characterization activities at the Hanford Site, the audit team was unable to evaluate HSG sampling, RTR, VE, and NDA characterization activities in the field to determine the implementation and effectiveness of characterization procedures, or to verify personnel and equipment were available to continue characterization activities. For this reason, these processes were deemed indeterminate.

The audit team verified that AK activities (including data quality objective [DQO] reconciliation and preparation of Waste Stream Profile Forms [WSPFs]), project-level data V&V, WIPP Waste Information System/Waste Data System (WWIS/WDS) data entry, and QA activities (nonconformance reporting, records management, and training qualifications), as related to the HWFP Waste Analysis Plan (WAP), continue to be adequate, satisfactorily implemented, and effective.

No conditions adverse to quality were identified during the audit. The audit team identified four Observations, and one Recommendation was offered for management consideration. The Observations and the Recommendation are described in section 7.0 of this report.

2.0 SCOPE AND PURPOSE

2.1 Scope

The audit team evaluated documentation to verify continued adequacy, implementation, and effectiveness of the Hanford/CCP TRU waste characterization activities for CH SCG S5000 debris waste and CH SCG S3000 solids waste generated from the date of the previous audit through September 2011. The following elements were evaluated.

General

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

Quality Assurance

Personnel Qualification and Training
Nonconformances
Records

Technical

Acceptable Knowledge (AK) (including waste certification, e.g., Waste Stream Profile Forms)
Project-level Data Validation and Verification (V&V)
Solids Sampling and Analysis (SS/SA)
Headspace Gas (HSG) Sampling
Real-time Radiography (RTR)
Visual Examination (VE)
Nondestructive Assay (NDA)
WIPP Waste Information System/Waste Data System (WWIS/WDS)

The evaluation of the adequacy of Hanford/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, DOE/CBFO-94-1012

Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant, DOE/WIPP-02-3122

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

CCP Transuranic Waste Characterization Quality Assurance Project Plan, CCP-PO-001

CCP Transuranic Waste Certification Plan, CCP-PO-002

Related technical and QA implementing procedures

2.2 Purpose

The Hanford/CCP annual Recertification Audit A-12-11 was conducted to assess the level of compliance to the requirements of the WIPP HWFP, the WAC, and the CBFO QAPD for waste characterization and certification activities for CH SCG S5000 debris waste and CH SCG S3000 solids waste.

3.0 AUDIT TEAM AND OBSERVERS

Courtland G. Fesmire	Management Representative, CBFO Office of Quality Assurance
Earl Bradford	Audit Team Leader, CBFO Technical Assistance Contractor (CTAC)
Charlie Riggs	Auditor, CTAC
Jack Walsh	Auditor, CTAC
Rick Castillo	Auditor, CTAC
Katie Martin	Auditor, CTAC
Tammy Bowden	Auditor, CTAC
Greg Knox	Auditor, CTAC
Sheila Hailey	Auditor-in-training, CTAC
Paul Gomez	Technical Specialist, CTAC
Rhett Bradford	Technical Specialist, CTAC
Porf Martinez	Technical Specialist, CTAC
James Oliver	Technical Specialist, CTAC
Mavis Lin	Technical Specialist, CTAC
Dick Blauvelt	Technical Specialist, CTAC

OBSERVERS

Mike Eagle	U.S. Environmental Protection Agency (EPA)
Steve Holmes	New Mexico Environment Department (NMED)
Connie Walker	NMED Contractor
Norma Castaneda	CBFO Office of the National TRU Program (NTP)

4.0 AUDIT PARTICIPANTS

The individuals contacted during the audit are identified in Attachment 1. A pre-audit meeting was held in room T-224 at the Skeen-Whitlock Building in Carlsbad, New Mexico, on May 15, 2012. A meeting was held the morning of May 16, 2012, with Hanford/CCP management and staff to discuss issues, audit progress, and potential deficiencies. The audit was concluded with a post-audit meeting in room T-224 at the Skeen-Whitlock Building in Carlsbad, New Mexico, on May 16, 2012.

Attachment 2 contains a list of personnel contacted during the audit by subject area. Attachment 3 contains a list of Hanford/CCP waste containers characterized and certified since the last recertification audit (A-11-10) and entered into the WDS. Attachment 4 conveys the objective evidence reviewed during the audit (in boxes). Attachment 5 contains a list of Hanford/CCP documents audited. Attachment 6 lists the processes and equipment evaluated during the audit. Attachment 7 is the Procedure Revision Matrix identifying procedure changes since the last audit. Audit activities, including objective evidence reviewed, are described below.

5.0 SUMMARY OF AUDIT RESULTS

5.1 Program Adequacy, Implementation, and Effectiveness

This audit was performed to assess the ability of the Hanford/CCP to characterize CH SCG S5000 debris waste and CH SCG S3000 solids waste to the requirements specified in the WIPP HWFP WAP, the WAC, and the CBFO QAPD. The characterization methods assessed were AK (including DQO reconciliation, and the preparation of WSPFs), HSG sampling, SS/SA, VE, RTR, and NDA. Other areas evaluated were generation-level data, project-level data V&V, and WWIS/WDS data entry.

The audit team concluded that, for the documentation reviewed, the applicable Hanford/CCP TRU waste characterization activities for CH SCG S5000 debris waste and CH SCG S3000 solids waste, as described in the implementing procedures, were adequate, satisfactorily implemented, and effective. The audit team was unable to evaluate HSG sampling, SS/SA, RTR, VE, and NDA characterization activities in the field, or verify personnel and equipment were available to continue characterization activities. For this reason, these processes were deemed indeterminate for continuing waste characterization activities at the Hanford Site.

5.2 General

5.2.1 Results of Previous Audits

The results of CBFO Recertification Audit A-11-10 of the Hanford/CCP were examined. The conditions adverse to quality (CAQs) that were issued as a result of that audit had been corrected and closed and the audit team verified continued corrective action implementation during the performance of this audit.

5.2.2 Changes in Programs or Operations

The Hanford/CCP suspended waste characterization activities at the end of September 2011 due to funding issues. Only those waste containers already in the characterization process that could be completed and certified for shipment to WIPP were processed after that time. Containers requiring project-level data V&V were processed for a short time thereafter until completion. No new waste containers were brought into the characterization process after September 2011.

The Hanford/CCP has identified 221 waste containers that have been fully characterized and entered into the WDS since the previous audit. They are considered ready for shipment, but remain at the Hanford Site. The containers are 55-gallon drums and standard waste boxes (SWBs) containing SCG S-5000 debris waste. The container numbers are listed in Attachment 3. All other fully characterized containers have been shipped to WIPP.

During the audit, no characterization activities were being performed at the Hanford Site. The audit team was unable to evaluate HSG sampling, SS/SA, RTR, VE, or NDA field operations including procedure implementation, personnel/operator availability, and active personnel/operator training qualifications.

5.2.3 New Programs or Activities Being Implemented

No new programs or activities have been implemented by the Hanford/CCP since the previous audit (CBFO Recertification Audit A-11-10).

5.2.4 Changes in Key Personnel

No changes in key personnel have been made by the Hanford/CCP since the previous audit (CBFO Recertification Audit A-11-10).

5.3 Quality Assurance Activities

The audit team evaluated the QA elements for personnel qualification and training, QA records, and control of nonconformances to requirements applicable to the HWFP WAP. The evaluation results for each area audited 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. 31, *CCP Training and Qualification Plan*, to determine the degree to which the procedure adequately addresses upper-tier requirements. The review indicated that the procedure adequately addresses applicable requirements.

Personnel training records associated with VE, RTR, NDA, HSG sampling, AK, and site project management were examined to verify implementation of associated

requirements and to verify that personnel performing characterization activities were appropriately qualified. Records reviews included qualification cards and other pertinent qualification documentation such as attendance sheets/briefings on newly revised AK summaries for RTR and VE operators, VE expert appointment letters, test drum and training container documentation, and eye exams.

No concerns 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 training and qualification 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 reviewed implementing procedure CCP-QP-005, Rev. 20, *CCP TRU Nonconforming Item Reporting and Control*, relative to the control and reporting of nonconformance reports (NCRs) to determine the degree to which the procedure adequately addresses upper-tier requirements. The review indicated that the procedure adequately addresses applicable requirements.

The audit team interviewed the resident QA engineer and then randomly selected a sampling of NCRs to confirm that deficiencies are being appropriately documented and tracked through resolution, as required. The following NCRs were reviewed: NCR-RL-2283-11, NCR-RL-2476-11, NCR-RL-2739-11, NCR-RL-2742-11, NCR-RL-2950-11, NCR-RL-3075-11, and NCR-ECL-3289-11.

The audit team reviewed two NCRs (NCR-RL-2319-11 and NCR-RL-2333-11) that documented non-administrative deficiencies first identified at the site project manager (SPM) level and determined that the deficiencies had been reported to the Permittee within seven days, as required. There have been no reportable CH waste NCRs since the previous recertification audit. All NCRs were verified as being managed and tracked in the CCP data center and on the CCP NCR logs.

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

5.3.3 Records

The audit team conducted interviews and reviewed implementing procedures CCP-PO-001, Rev. 20, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*; CCP-QP-008, Rev. 19, *CCP Records Management*; and CCP-QP-028, Rev. 14, *CCP Records Filing, Inventorying, Scheduling, and Dispositioning,* relative to the control and administration of QA records to determine the degree to which the procedures

adequately address upper-tier requirements. The review indicated that the procedures adequately address requirements.

Control of QA records was verified through review of the CH Records Inventory and Disposition Schedule dated 8/15/2011.

One concern was identified regarding the potential loss of the electronic media for two AK source documents, which are QA records, that could not be retrieved during the audit (see section 7.1, Observation 1). The audit team verified that the two source documents were electronically stored in the back-up server and included in CCP Records. Additionally, the audit team reviewed a total of 30 BDRs from records storage and found no additional records-related issues.

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.

5.4 Technical Activities

Each technical area audited is discussed in detail in the following sections. The method used to select objective evidence is discussed, the objective evidence used to assess compliance with the HWFP is cited briefly, and the result of the assessment is provided.

5.4.1 Acceptable Knowledge

The audit team conducted interviews with responsible 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*; and CCP-TP-005, Rev. 24, *CCP Acceptable Knowledge Documentation*, relative to AK activities to determine the degree to which procedures adequately address upper-tier requirements. The review indicated that the procedures adequately address requirements.

The audit team reviewed the AK record for a CH SCG S5000 debris waste stream and a CH SCG S3000 solids waste stream. The specific waste streams examined included RLCCP308D1, a mixed debris waste stream generated from the decontamination and decommissioning of Building 308, and RLCCPPUNIT, a solidified plutonium nitrate waste stream primarily from Building 325 and the Plutonium Finishing Plant. The AK summaries reviewed were CCP-AK-RL-114, Rev. 1, and CCP-AK-RL-116, Rev. 1, respectively. The complete AK record associated with each waste stream was evaluated during the audit, as detailed below.

This audit was conducted based on the requirements contained in the WIPP HWFP and described in the WAP, as well as the latest requirements of the WAC. The audit team reviewed documentation in support of all relevant requirements, completing the WAP

C6-1 and C6-3 checklists and compiling and reviewing objective evidence to demonstrate compliance.

The objective evidence reviewed included the AK summary reports listed above, numerous AK source documents, an approved WSPF for RLCCP308D1, a draft WSPF for RLCCPPUNIT, and BDRs for HSG sampling and analysis, SS/SA, RTR, and NDA.

The audit team reviewed the random container selection memos for HSG Lots 1 and 2, along with the corresponding HSG Summary Report for Lot 1. In addition, the audit team reviewed the random container selection memo for SS/SA prepared by Hanford for waste stream RLCCPPUNIT. CCP incorporated the SS/SA results developed by Hanford after review by CCP staff.

The audit team also reviewed the documentation associated with each waste stream, including the AK Documentation Checklist, (attachment 1 of CCP-TP-005); the AK Source Document Information List (attachment 4 of CCP-TP-005); the AK Hazardous Constituents List (attachment 5 of CCP-TP-005); the AK Waste Form, Waste Material Parameters, Prohibited Items and Packaging (attachment 6 of CCP-TP-005) along with the justification for waste material parameter weight estimates; the Radionuclides List, (attachment 7 of CCP-TP-005) with a copy of the AK/NDA memos; and the AK Container Lists (attachment 8 of CCP-TP-005) including "add container" memos for the RLCCP308D1 debris stream.

The audit team also reviewed documentation of the resolution of AK discrepancies, NCRs pertaining to prohibited items, and the most recent internal surveillance of the AK activities. The audit team reviewed computer screen-prints from the Item Description Code database, container input forms, and copies of the AK tracking spreadsheets.

The audit team conducted the WAP-required container traceability exercise for a total of four waste containers: one from HSG Lot 1, one from the SS/SA Lot, and two other containers that had been completely through the characterization process. AK characterization checklists were also reviewed.

The audit team identified two concerns while evaluating the AK processes. The first concern consisted of a list of recommended changes to the AK summaries pertaining to clarifications to the text regarding, for example, a consistent and exact number of containers in the waste stream populations (see section 7.1, Recommendation 1). The second concern dealt with the need for additional characterization data for waste stream RLCCPPUNIT to complete the elements of the WSPF package before it was submitted for approval. For example, additional RTR data was needed to address questions on the Reconciliation of DQOs form (see section 7.1, Observation 2).

The procedure reviews and document reviews provided evidence that the applicable requirements for Acceptable Knowledge are adequately established for compliance with upper-tier requirements, satisfactory in the implementation of these requirements, and effective in achieving the desired results.

5.4.2 Project-level Data Validation and Verification

The audit team conducted interviews with responsible 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 V&V activities to determine the degree to which procedures adequately address upper-tier requirements. The review indicated that the procedures adequately address requirements.

The audit team reviewed objective evidence to ensure project-level V&V activities were adequately performed to support waste characterization activities. The audit team also verified the random selections completed for Lots 1 and 2 of waste stream RLBWD.001, Lots 1 and 2 of waste stream RLM231ZD.001, and Lots 1 and 2 of waste stream RLCCP308D1. The audit team verified quarterly reports and results for the 2nd, 3rd, and 4th quarters of 2011 VE, real-time radiography (RTR), and HSG sampling. The audit team verified that the field reference sample (FRS) results were satisfactorily reported in support of HSG BDRs that were examined. The memorandum for the disposition of HSG samples was also reviewed.

The project-level data V&V process was evaluated by reviewing the following BDRs:

<u>Real-time Radiography</u>
RLRTR01003
RLRTRB0199
RLRTRB0207
RLRTRA0201
RLRTRA0216
RLRTR010026

<u>Visual Examination</u>
RLVEPF0035
RLVEPF0036

<u>Headspace Gas</u>

RLHSG1101	ECL11009G	ECL11009M
RLHSG1105	ECL11020G	ECL11020M
RLHSG1110	ECL11029G	ECL11029M

<u>Nondestructive Assay</u>
RLGEAB0148
RLGEAA0150
RLNDAB11036
RLNDAB11024
RLGEAA0165

The audit team verified through review of the referenced RTR, VE, HSG sampling and analysis, NDA BDRs and supporting referenced documentation, that the project-level V&V activities are acceptable and in compliance with applicable requirements.

No concerns were identified related to project-level data V&V during the audit. The procedure and document reviews provided evidence that the applicable requirements for the project-level data V&V process are adequately established for compliance with upper-tier requirements, satisfactory in the implementation of these requirements, and effective in achieving the desired results.

5.4.3 Solids Sampling and Analysis

Solids sampling and analysis and associated generation-level data V&V are performed at the Idaho National Laboratory (INL) under a separate certified program.

The audit team requested and received the SS/SA BDRs that were reviewed in the previous recertification audit (A-11-10). The audit team verified that no new SS/SA activities have been performed since the previous audit.

The audit team had previously verified the Hanford/CCP processes for project-level data V&V.

No concerns were identified during the audit regarding solids sampling. Since there had been no sampling and analysis activities since the previous audit, the audit team concluded that the implementation and effectiveness of the SS/SA process was indeterminate for continuing SS/SA waste characterization activities at the Hanford Site.

5.4.4 Headspace Gas Sampling

The audit team conducted interviews with responsible personnel and reviewed implementing procedures CCP-TP-082, Rev. 8, *CCP Waste Containers Filter Vent Operations*; 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 procedures adequately address upper-tier requirements. The review indicated that the procedures adequately address requirements.

The audit team reviewed HSG sampling documentation generated in the timeframe between the previous audit and September 2011 to assess the ability of Hanford/CCP to collect HSG samples for the purpose of characterizing CH waste from SCG S5000. Hanford/CCP operations for HSG sampling is performed using SUMMA® canisters. The audit team was unable to evaluate HSG sampling activities in the field during the audit due to the suspension of activities since September 2011.

HSG sample analyses are performed by the INL Environmental Chemistry Laboratory and are evaluated under a separate audit.

The audit team examined five HSG sampling BDRs (RLHSG1101, RLHSG1104, RLHSG1107, RLHSG1109, and RLHSG1110) that were generated during the referenced timeframe. The audit team reviewed the documentation supporting the random selections of HSG containers for sampling, collection of duplicate samples, the authorization to cease collection of an FRS, drum age criteria, and sample chain of custody and transfer to the analytical laboratory.

The audit team verified calibration of measuring and test equipment and proper training and qualification of sampling individuals.

The audit team was unable to evaluate HSG sampling activities in the field or identify and verify that HSG operators were properly qualified.

One concern was identified during evaluation of the HSG processes. During the review of HSG sampling BDRs, the audit team discovered some confusion regarding how NCRs are referenced in applicable BDRs.

NCR-ECL-3289-11 was initiated at the INL as a result of two sample monitoring thermometers that were found by Laboratory personnel to be faulty upon receipt of the Hanford/CCP samples. The NCR originator (INL/CCP Laboratory personnel) referenced BDR RLHSG1109 (a Hanford/CCP HSG sampling BDR) in block 3 of the NCR, as opposed to the INL/CCP Laboratory BDRs ECL11028M and ECL11028G. Upon further review of BDR RLHSG1109 and associated checklists, the audit team determined there was no reference to the NCR. When the auditor questioned the SPM about the reference to the NCR, the SPM revised the BDR checklist to indicate "Yes" and added the reference to NCR-ECL-3289-11.

Further investigation revealed that in the INL/CCP Laboratory BDRs associated with HSG sampling (BDRs ECL11028M and ECL11028G), the SPM accurately captured the NCR information. It was also confirmed by the auditors that NCR-ECL-3289-11 was appropriately captured in the WDS (see section 7.1, Observation 3).

The procedures and documents reviewed provided evidence that the applicable requirements for HSG sampling are adequately established for compliance with upper-tier requirements.

Since the audit team was unable to evaluate HSG sampling activities in the field or identify and verify HSG operators were properly qualified, the audit team concluded that the implementation and effectiveness of the referenced procedures was indeterminate for continuing HSG sampling waste characterization activities at the Hanford Site.

5.4.5 Real-time Radiography

The audit team conducted interviews with responsible personnel and reviewed implementing procedures CCP-TP-028, Rev. 6, *CCP Radiographic Test Drum and*

Training Container Construction; CCP-TP-053, Rev. 11, *CCP Standard Real-Time Radiography (RTR) Inspection Procedure*; CCP-TP-198, Rev. 5, *CCP HE-RTR Operating Procedure*; and CCP-TP-068, Rev. 8, *CCP Standardized Container Management*, relative to RTR activities to determine the degree to which procedures adequately address upper-tier requirements. The review indicated that the procedures adequately address requirements.

The audit team evaluated the adequacy, implementation, and effectiveness of Hanford/CCP's ability to characterize and certify CH SCG S3000 solids waste and CH SCG S5000 debris waste using the RTR characterization process for documentation generated from the date of the previous audit to September 2011.

The audit team examined the following CH waste RTR BDRs to verify implementation and compliance with the requirements for documenting RTR activities, as stipulated in CCP-TP-053, for waste characterized during the referenced timeframe:

RLRTRA0187
RLRTRA0207
RLRTR010014
RLRTR010045
RLRTRB0162
RLRTRB0207

The audit team evaluated evidence of RTR operator required capability demonstrations for three RTR operators. Records of RTR operator training and qualification, including audio/video media of capability demonstrations, were examined by the audit team. The reviews indicated that the RTR operators were appropriately qualified as required for those activities performed during the referenced timeframe.

The audit team was unable to evaluate RTR activities in the field or identify and verify RTR operators were properly qualified.

No concerns were identified during the audit related to RTR activities. The procedures and documents reviewed provided evidence that the applicable requirements for RTR are adequately established for compliance with upper-tier requirements.

Since the audit team was unable to evaluate RTR activities in the field or identify and verify RTR operators were properly qualified, the audit team concluded that the implementation and effectiveness of the referenced procedures was indeterminate for continuing RTR waste characterization activities at the Hanford Site.

5.4.6 Visual Examination

The audit team conducted interviews with responsible personnel and reviewed implementing procedures CCP-TP-113, Rev. 16, *CCP Standard Contact-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 procedures adequately

address upper-tier requirements. The review indicated that the procedures adequately address requirements.

The audit team evaluated the adequacy, implementation, and effectiveness of Hanford/CCP's ability to characterize and certify CH SCG S3000 solids waste and CH SCG S5000 debris waste using the VE characterization process for documentation generated from the date of the previous audit to September 2011.

The audit team examined the following CH waste VE BDRs to verify implementation and compliance with the requirements for documenting VE activities, as stipulated in CCP-TP-113, for waste characterized during the referenced timeframe:

CH
RLVEPF0035
RLVEPF0036

No CH SCG S3000 solids BDRs were generated during the referenced timeframe.

The audit team examined training records and qualification cards for three VE operators based on the BDRs reviewed and concluded that the required training was adequate and qualifications were current. The audit team also confirmed the appointment of one Hanford/CCP VE expert, as required.

The audit team was unable to evaluate VE activities in the field or identify and verify VE operators were properly qualified.

The audit team identified one concern while evaluating the Hanford/CCP VE process. While reviewing the two VE BDRs (RLVEPF0035 and RLVEPF0036), the audit team noted the sequential numbering of the BDRs was reversed. The SPM recorded the condition on an internal NCR to accurately document the numbering sequence. The VE recorded in BDR RLVEPF0036 was actually performed prior to the VE recorded in BDR RLVEPF0035 (see section 7.1, Observation 4).

The procedures and documents reviewed provided evidence that the applicable requirements for VE are adequately established for compliance with upper-tier requirements.

Since the audit team was unable to evaluate VE activities in the field or identify and verify VE operators were properly qualified, the audit team concluded that the implementation and effectiveness of the referenced procedures was indeterminate for continuing VE waste characterization activities at the Hanford Site.

5.4.7 Nondestructive Assay

The audit team conducted interviews with responsible personnel and reviewed implementing procedures CCP-TP-070, Rev. 0, *CCP Gamma Energy Assay (GEA) Calibration, Confirmation, and Verification Procedure*; CCP-TP-071, Rev. 1, *CCP*

Gamma Energy Assay (GEA) Operating Procedure; CCP-TP-072, Rev. 2, *CCP Gamma Energy Assay (GEA) Data Review, Validation, and Reporting Procedure*; CCP-TP-137, Rev. 2, *CCP Operation of the Hanford SuperHENC Assay System*; CCP-TP-144, Rev. 0, *CCP Hanford SuperHENC Calibration Procedure*; CCP-TP-148, Rev. 7, *CCP SuperHENC Data Reviewing, Validating, and Reporting Procedure*; and CCP-TP-058, Rev. 4, *CCP NDA Performance Demonstration Program*, relative to NDA activities to determine the degree to which the procedures adequately address upper-tier requirements. The review indicated that the procedures adequately address requirements.

The audit team assessed the adequacy, implementation, and effectiveness of the NDA systems used by the Hanford/CCP to characterize waste from CH SCG S3000 (solids) and CH SCG S5000 (debris) on the two Gamma Energy Assay (GEA) units (GEA-A and GEA-B) and a Super High-Efficiency Neutron Counter (SHENCA) for documentation generated from the date of the previous audit to September 2011.

Based on a review of the current revisions of Hanford/CCP procedures, calibration reports, and other supporting and technical documents provided prior to and during the audit, checklists were prepared and used to evaluate each system for the following:

- System stability as evidenced by the implementation and effectiveness of daily and weekly measurement controls, calibration verifications, and weekly interfering matrix checks
- Applicability of each system's calibration and operational range to the matrix, geometry and radionuclide content of samples assayed
- Determination of the number of containers assayed, completed NDA BDRs, and BDRs that had been through project-level review
- Participation in the most recent CBFO-sponsored NDA Performance Demonstration Program (PDP) Cycle
- Completed BDRs to ensure data are reported and reviewed as required
- Data storage and retrievability
- Personnel qualification and training

The audit team was unable to evaluate NDA activities in the field or identify and verify NDA operators/analysts were properly qualified.

The audit team did review electronic and paper copies of reports and records. The audit team examined training records and qualification cards for NDA operators/analysts based on the BDRs reviewed and concluded that the required training was adequate and qualifications were current at the time of performing NDA activities.

Since Audit A-11-10, unit GEA-A has assayed 341 waste containers resulting in 38 BDRs, and unit GEA-B has assayed 277 waste containers resulting in 30 BDRs.

Since Audit A-11-10, the SHENCA has assayed 182 SWBs resulting in 38 BDRs. The audit team selected two BDRs (RLNDAB11011 and RLNDAB11022) at random for review. Hanford/CCP performed calibration verifications on the SHENCA. These activities are documented in CCP-SHENCA-11-001, Rev. 0, CCP-SHENCA-11-003, Rev. 0, and CCP-SHENCA-11-004, Rev. 0. The audit team reviewed the calibration verification reports associated with each NDA unit.

The GEA units successfully participated in PDP Cycle 18A assaying sample waste matrices consisting of combustibles and metals loaded with sources of weapons-grade plutonium. The SHENCA most recently participated in PDP Cycle B10B where the sample matrices consisted of combustibles loaded with sources of weapons-grade plutonium with enhanced americium-241 and a mixed metals matrix loaded with weapons-grade plutonium.

All NDA instruments used at the Hanford Site ceased WIPP assay operations in September 2011. All routine performance checks were also ceased, so equipment performance can be assessed only through the end of fiscal year 2011.

No concerns were identified during the audit regarding NDA. The procedures and documents reviewed provided evidence that the applicable requirements for NDA are adequately established for compliance with upper-tier requirements.

Since the audit team was unable to evaluate NDA activities in the field or identify and verify NDA operators/analysts were properly qualified, the audit team concluded that the implementation and effectiveness of the referenced procedures was indeterminate for continuing NDA waste characterization activities at the Hanford Site.

5.4.8 WIPP Waste Information System/Waste Data System

The audit team conducted interviews and reviewed implementing procedure CCP-TP-030, Rev. 29, *CCP CH 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 review indicated that the procedures adequately address requirements.

The audit team verified implementation of the procedure and the use of the WWIS/WDS data entry spreadsheet. The evaluation included data population of the spreadsheet, review of data entry by a Waste Certification Assistant, and waste certification by the Waste Certification Official. Records reviews included container information summaries, pages from BDRs showing analyses values, WWIS/WDS Container Data Reports, and submittals for WWIS/WDS review/approval.

The audit team reviewed three WWIS/WDS waste certification packages (RLMW09700289, RLMW10700115, and RLMW10700116) for CH waste from waste stream RLCCP308D1. No completed waste certification packages were available for SCG S3000 waste.

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

6.0 CORRECTIVE ACTIONS

6.1 Corrective Action Reports

During the audit, the audit team may identify conditions adverse to quality (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 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 CAQs were identified during this audit.

6.2 Deficiencies Corrected During the Audit

During the audit, the audit team may identify CAQs that can be resolved during the audit. The formal definition of deficiencies that can be corrected during the audit (CDA) is as follows:

CDA – An isolated deficiency that does not require a root cause determination or actions to preclude recurrence. Correction of the deficiency can be verified prior to the end of the audit. Examples include one or two minor changes required to correct a procedure (isolated), one or two forms not signed or not dated (isolated), and one or two individuals that have not completed a reading assignment.

No isolated CAQs were identified and corrected during the audit that would have warranted documentation of closure on a CDA.

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 Audit Team Leader (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.

Recommendation – A suggestion that is 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.

7.1 Observations

Observation 1

The audit team discovered that the electronic media containing AK historical source documents M367 and P606, which are QA records associated with AK Summary Report CCP-AK-RL-114, could not be found during the audit. However, these files were located on the WIPP Garrison back-up server. The audit team verified the electronic media was included in CCP Records.

Observation 2

The draft WSPF for waste stream RLCCPPUNIT lacks the characterization data necessary to complete the DQO reconciliation checklist and the table addressing the absence of prohibited items. In addition, there is an inconsistency between the number of containers in this waste stream and the WSPF and the Summary of Aspects section of the WSPF package. To avoid a CAQ, these items must be addressed in the version submitted for approval.

Observation 3

While reviewing the two VE BDRs (RLVEPF0035 and RLVEPF0036) the audit team noticed the sequential numbering of the BDRs was not in compliance with the procedure. The SPM recorded the condition on an internal NCR to accurately document the numbering sequence. The VE recorded in BDR RLVEPF0036 was actually performed prior to the VE recorded in BDR RLVEPF0035. The audit team verified the VE activities were performed in sequence; however, the BDR numbers were incorrect.

Observation 4

During the review of HSG sampling BDRs, the audit team identified a concern indicating some confusion regarding how NCRs are referenced in applicable BDRs.

NCR-ECL-3289-11 was initiated at the INL as a result of two sample monitoring thermometers that were found by laboratory personnel to be faulty upon receipt of the Hanford/CCP samples. The NCR originator (INL/CCP Laboratory personnel) referenced BDR RLHSG1109 (a Hanford/CCP HSG sampling BDR) in block 3 of the NCR, as opposed to the INL/CCP Laboratory BDRs ECL11028M and ECL11028G. Upon further review of BDR RLHSG1109 and associated checklists, the audit team determined there was no reference to the NCR. When the auditor questioned the SPM

about the reference to the NCR, the SPM revised the BDR checklist to indicate "Yes" and added the reference to NCR-ECL-3289-11.

Further investigation revealed that in the INL/CCP Laboratory BDRs associated with HSG sampling (BDRs ECL11028M and ECL11028G), the SPM accurately captured the NCR information. It was also confirmed by the auditors that NCR-ECL-3289-11 was appropriately captured in the WDS.

7.2 Recommendations

Recommendation 1

The audit team recommended that additions be made to the freeze files for Hanford/CCP AK summaries for waste streams RLCCPPUNIT and RLCCP308D1 to include changing the term "confirmation" to "characterization" and adding a footnote to the Waste Material Parameter Weight Estimate table regarding the potential for skewing the data with the disposal of pipe over-packs; for waste stream RLCCP308D1, changing the number of containers from 114 to 113; and for waste stream RLCCPPUNIT, revising the total number of containers in the waste stream to 68.

8.0 LIST OF ATTACHMENTS

Attachment 1: Personnel Contacted During Audit A-12-11
Attachment 2: Personnel Contacted During Audit A-12-11 by Subject Area
Attachment 3: List of Hanford/CCP Containers Characterized Since Recertification Audit (A-11-10) and Entered into the WDS
Attachment 4: Audit A-12-11 Objective Evidence
Attachment 5: Audit A-12-11 List of Audited Documents
Attachment 6: Audit A-12-11 List of Processes and Equipment Reviewed
Attachment 7: Audit A-12-11 Procedure Revision Matrix

PERSONNEL CONTACTED DURING AUDIT A-12-11

NAME	ORG/TITLE	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST-AUDIT MEETING
Cheryl Armijo	WTS/CCP Records		X	
Michele Billett	WTS/CCP Training		X	
Barbara Broomfield	WTS/SPM			X
Mitch Carter	Stoller/CH/RH Mobile Loading		X	
Norma Castaneda	CBFO/NTP CH Certification Manager	X		X
Cherie Davis	Tech. Specs./Records Secretary		X	
Neil Dickes	WTS/NDA Spec.			X
Mark Doherty	Tech. Specs./AK Expert		Per Telecon.	Per Telecon.
Mike Eagle	EPA/QA Lead Auditor			X
Courtland Fesmire	CBFO QA Representative	X		X
A.J. Fisher	WTS/Senior Tech. Advisor			X
Bruce Gillespie	Canberra NDA Tech.	X	X	X
Creta Kirkes	WTS/WCO		X	
Steve Holmes	NMED Observer	X		X
Laura R. Jones	WTS/QA Engineer		X	X
Sheri Nance	Tech. Specs. AK Expert	Per Telecon.	Per Telecon.	
Cathy Nesser	WTS QA Specialist	X		
Derek Ott	MCS Operator	X	X	X
Berry Pace	CTAC Auditor (Observer)	X		X
Sheila Pearcy	CCP Records Manager	X	X	X
Eric Pennala	MCS/General Manager			X
Mike Ramirez	WTS/CCP SPM	X		
Ron Reeves	WTS/PM			X

PERSONNEL CONTACTED DURING AUDIT A-12-11

NAME	ORG/TITLE	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST-AUDIT MEETING
Steve Schafer	Tech. Specs./AK Expert	Per Telecon.	Per Telecon.	Per Telecon.
Andrew Stallings	NDE Cognizant Engineer	X	X	X
Charlie Turner	WTS/Labs Manager		Per Telecon.	Per Telecon.
Jim Vernon	WTS/CCP SPM	X	X	X
Joe Wachter	Canberra/MCS EA	X	X	X
Veronica Waldram	WTS/CCP SPM	X	X	X
Connie Walker	NMED Contractor	X		X

Personnel Contacted During Audit A-12-11 by Subject Area	
Nonconformances	Laura R. Jones
Training	Michele Billett
Records	Sheila Pearcy Cheryl Armijo Cherie Davis
Acceptable Knowledge	Jim Vernon Veronica Waldram Sheri Nance Steve Schafer Mark Doherty
Headspace Gas Sampling	Veronica Waldram Jim Vernon Charlie Turner
Real-time Radiography	Veronica Waldram Andrew Stallings
Visual Examination	Veronica Waldram Andrew Stallings
WIPP Waste Information System/Waste Data System (WWIS/WDS)	Creta Kirkes
Waste Certification/Project Level Validation & Verification	Veronica Waldram Jim Vernon

Audit A-12-11
List of Hanford/CCP Containers Characterized Since Recertification Audit A-11-10 and Entered into the WDS

(All containers are 55-gallon drums, unless otherwise noted.)

RL0000782
RL0000796
RL0000802
RL0000858
RL0020938 (SWB)
RL0028658 (SWB)
RL0029175
RL0032645
RL0037142 (SWB)
RL0037151 (SWB)
RL0037153 (SWB)
RL0037155 (SWB)
RL0037377 (SWB)
RL0037378 (SWB)
RL0037525 (SWB)
RL0037526 (SWB)
RL0037963 (SWB)
RL0040437
RL0040474
RL0040475
RL0045430
RL0048263
RL0053119
RL0053144
RL0053200
RL0053210
RL0054891
RL0054950
RL0054953
RL0054969
RL0055200
RL0055292
RL0055823
RL0055939
RL0056091
RL0056093
RL0056158
RL0056159
RL0056204
RL0056223
RL0056678
RL0056679
RL0056692
RL0056693
RL0056714
RL0058274
RL0058437
RL0058496
RL0058866
RL0058976
RL0061306
RL0062233
RL0062234
RL0063673
RL0065391
RL0065492
RL0065504
RL0066992
RL0067142
RL0067192
RL0067242
RL0067469
RL0067488
RL0067519
RL0067928 (SWB)
RL0067935 (SWB)
RL0067940 (SWB)
RL0067969 (SWB)
RL0067972 (SWB)
RL0067987 (SWB)
RL0069053
RL0069147
RL0069195
RL0069224
RL0069777
RL0069811
RL0069875
RL0069886
RL0069963
RL0070012
RL0070128
RL0071049
RL0071387
RL0071389
RL0071436
RL0071449
RL0071450
RL0071512
RL0071520
RL0071548
RL0071581
RL0071869
RL0071895
RL0071917
RL0071945
RL0072263
RL0072302
RL0072375
RL0072422
RL0072444
RL0072449
RL0073410
RL0074538
RL0074547
RL0074712
RL0074736
RL0074824
RL0074863
RL0075944
RL0075950
RL0075951
RL0076007
RL0077342
RL0077422
RL0077423
RL0077505
RL0077506
RL0077510
RL0077512
RL0077565
RL0077568
RL0077570
RL0077621
RL0077630
RL0077648
RL0077666
RL0077673
RL0077677
RL0077680
RL0077691
RL0078296 (SWB)
RL0078297 (SWB)
RL0078307 (SWB)
RL0078313 (SWB)
RL0078693
RL0078695
RL0078697
RL0078702
RL0078703
RL0078730
RL0078734
RL0078736
RL0078741
RL0078743
RL0078755
RL0078771
RL0078772
RL0078793
RL0078796
RL0078890
RL0079424

RL0079425
RL0079440
RL0080577 (SWB)
RL0080620 (SWB)
RL0080623 (SWB)
RL0080624 (SWB)
RL84047
RL9400952 (SWB)
RLMW08700284(SWB)
RLMW08700285(SWB)
RLMW08700292(SWB)
RLMW08700452(SWB)
RLMW08700482(SWB)
RLMW09700028(SWB)
RLMW09700035(SWB)
RLMW09700037(SWB)
RLMW09700049(SWB)
RLMW09700167(SWB)
RLMW09700168(SWB)
RLMW09700196(SWB)
RLMW09700199(SWB)
RLMW09700200(SWB)
RLMW09700201(SWB)
RLMW09700210(SWB)
RLMW09700218(SWB)
RLMW09700223(SWB)
RLMW09700224(SWB)
RLMW09700229(SWB)
RLMW09700230(SWB)
RLMW09700231(SWB)
RLMW09700232(SWB)
RLMW09700255(SWB)
RLMW09700259(SWB)
RLMW09700408(SWB)
RLMW10700003(SWB)
RLMW10700017(SWB)
RLMW10700052(SWB)
RLMW10700087(SWB)
RLMW10700088(SWB)
RLMW10700090(SWB)
RLMW10700092(SWB)
RLMW10700093(SWB)
RLMW10700094(SWB)
RLMW10700098(SWB)
RLMW10700099(SWB)
RLMW10700100(SWB)
RLMW10700101(SWB)
RLMW10700102(SWB)
RLMW10700117(SWB)
RLMW10800480
RLMW10800630(SWB)
RLMW10800631(SWB)
RLMW11700025(SWB)
RLMW11700026(SWB)
RLMW11700027(SWB)
RLMW11700028(SWB)
RLMW11700031(SWB)
RLMW11800001(SWB)
RLMW11800004(SWB)
RLMW11800013(SWB)
RLMW11800021(SWB)
RLMW11800022(SWB)
RLMW11800023(SWB)
RLMW11800029(SWB)
RLMW11800032(SWB)
RLMW11800034(SWB)
RLMW11800036(SWB)
RLMW11800040(SWB)
RLRHZ-103-A15279
RLZ72-7-5

Audit A-12-11
Objective Evidence

The objective evidence supporting Audit A-12-11 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.

Audit A-12-11
List of Audited Documents

No.	Procedure Number	REV	DOCUMENT TITLE
1.	CCP-PO-001	20	CCP Transuranic Waste Characterization Quality Assurance Project Plan
2.	CCP-PO-002	26	CCP Transuranic Waste Certification Plan
3.	CCP-QP-002	31	CCP Training and Qualification Plan
4.	CCP-QP-005	20	CCP TRU Nonconforming Item Reporting and Control
5.	CCP-QP-008	19	CCP Records Management
6.	CCP-QP-021	7	CCP Surveillance Program
7.	CCP-QP-023	3	CCP Handling, Storage and Shipping
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-028	6	CCP Radiographic Test Drum and Training Container Construction
14.	CCP-TP-030	29	CCP CH TRU Waste Certification and WWIS/WDS Data Entry
15.	CCP-TP-033	19	CCP Shipping of CH TRU Waste
16.	CCP-TP-053	11	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
17.	CCP-TP-058	4	CCP NDA Performance Demonstration Program
18.	CCP-TP-068	8	CCP Standardized Container Management
19.	CCP-TP-070	0	CCP Gamma Energy Assay (GEA) Calibration, Confirmation and Verification Procedure
20.	CCP-TP-071	1	CCP Gamma Energy Assay (GEA) Operating Procedure
21.	CCP-TP-072	2	CCP Gamma Energy Assay (GEA) Data Review, Validation and Reporting Procedure
22.	CCP-TP-082	8	CCP Waste Containers Filter Vent Operation
23.	CCP-TP-093	16	CCP Sampling of TRU Waste Containers
24.	CCP-TP-106	7	CCP Headspace Gas Sampling Batch Data Report Preparation
25.	CCP-TP-113	16	CCP Standard Contact-Handled Waste Visual Examination
26.	CCP-TP-137	2	CCP Operation of the Hanford SuperHENC Assay System
27.	CCP-TP-144	0	CCP Hanford SuperHENC Calibration Procedure
28.	CCP-TP-148	7	CCP SuperHENC Data Reviewing, Validating, and Reporting Procedure
29.	CCP-TP-162	1	CCP Random Selection of Containers for Solids and Headspace Gas Sampling and Analysis
30.	CCP-TP-180	2	CCP Analytical Sample Management
31.	CCP-TP-198	5	CCP HE-RTR Operating Procedure
32.	WP 13-QA.03	18	Quality Assurance Independent Assessment Program

Audit A-12-11
List of Processes and Equipment Reviewed

WIPP #	Process/Equipment Description	Applicable to the Following Waste Streams/Groups of Waste Streams	Currently Approved by NMED	Currently Approved by EPA
PREVIOUSLY APPROVED PROCESSES OR EQUIPMENT				
18GEAA	Radiological Characterization by NDA – Hanford Gamma Energy Assay System Unit A – 55-gallon drums Procedure –CCP-TP-071	Debris (S5000) Solids (S3000)	N/A	YES
18GEAB	Radiological Characterization by NDA – Hanford Gamma Energy Assay System Unit B – 55-gallon drums Procedure –CCP-TP-071	Debris (S5000) Solids (S3000)	N/A	YES
18SHENC	Super High Efficiency Neutron Counter "A" Platform (SHENC) Procedure – CCP-TP-137	Debris (S5000) Solids (S3000)	N/A	YES
18RTRA	Real-Time Radiography System – 55-gallon drums Procedure – CCP-TP-053	Debris (S5000) Solids (S3000)	YES	YES
18RTRB	Real-Time Radiography System – 55-gallon drums Procedure – CCP-TP-053	Debris (S5000) Solids (S3000)	YES	YES
18HERTR	High-Energy Real-Time Radiography System – 55/85-gallon drums and SWBs Procedure – CCP-TP-053	Debris (S5000) Solids (S3000)	YES	YES
18RLVE	Visual Examination Process – SWB and 55-gallon drums Procedure –CCP-TP-113	Debris (S5000)	YES	YES

WIPP #	Process/Equipment Description	Applicable to the Following Waste Streams/Groups of Waste Streams	Currently Approved by NMED	Currently Approved by EPA
N/A	Solids Sampling and Analysis[1]	Solids (S3000)	YES	YES
N/A	Headspace Gas Sampling [2] Procedure – CCP-TP-093	Debris (S5000)	YES	YES
N/A	Acceptable Knowledge Procedure – CCP-TP-002 and CCP-TP-005	Debris (S5000) Solids (S3000)	YES	YES
N/A	Data Generation and Project Level Validation & Verification (V&V) Procedure – CCP-TP-001	Debris (S5000) Solids (S3000)	YES	YES
N/A	WIPP Waste Information System (WWIS)/Waste Data System (WDS) Procedure – CCP-TP-030	Debris (S5000) Solids (S3000)	YES	YES
N/A	Quality Assurance	Debris (S5000) Solids (S3000)	N/A	YES
NEW PROCESSES OR EQUIPMENT				
NONE				

1 Solids Sampling and Analysis: Coring is performed by Advanced Mixed Waste Treatment Project, core samples are analyzed by the INL/CCP Labs.
2 Headspace Gas Analysis is performed by INL/CCP Labs.

Audit A-12-11
PROCEDURE REVISION MATRIX

Previous Hanford/CCP Audit A-11-10 | Current Hanford/CCP Audit A-12-11

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	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	26 - Revised to incorporate revision 7.1 and 7.2 of DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant*, minor editorial changes, and delete Appendix 11.
3.	CCP-QP-002	CCP Training and Qualification Plan	30	31	31 - Revised based on Revision 2 of the DOE/WIPP 02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan.*
4.	CCP-QP-005	CCP TRU Nonconforming Item Reporting and Control	19	20	20 - Revised to incorporate relevant steps from CCP-QP-004, *CCP Corrective Action Management,* and other editorial changes.
5.	CCP-QP-008	CCP Records Management	17	19	18 - Revised to support corrective action report (CAR)-LANL-0004-10. 19 - Revised to change the number of the form in the definition of retention period. Change to Section 4.8 for clarification.
6.	CCP-QP-021	CCP Surveillance Program	7	7	
7.	CCP-QP-023	CCP Handling, Storage and Shipping	3	3	
8.	CCP-QP-028	CCP Records Filing, Inventorying, Scheduling and Dispositioning	12	14	13 - Revised to correct reference section of the procedure and remove a reference that is no longer active. 14 - Revised to bring into line with the Waste Isolation Pilot Plant (WIPP) Inventory Worksheets and general editing of the procedure.
9.	CCP-TP-001	CCP Project Level Data Validation and Verification	19	19	

No.	Procedure Number	Procedure Title	Revision During Last Annual Audit	Revision During Current Annual Audit	Brief Description of Procedure Changes
10.	CCP-TP-002	CCP Reconciliation of DQOs and Reporting Characterization Data	23	24	24 - Revised to make editorial changes. Replacing Waste Stream Profile Form (WSPF) change notice with revision to WSPF. Revising instructions for completing WSPF package.
11.	CCP-TP-003	CCP Data Analysis for S3000, S4000 and S5000 Characterization	18	18	
12.	CCP-TP-005	CCP Acceptable Knowledge Documentation	21	24	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. 23 - Revised to clarify what constitutes a record as part of the resolution to resolve CBFO CAR11-043. 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.
13.	CCP-TP-028	CCP Radiographic Test Drum and Training Container Construction	6	6	
14.	CCP-TP-030	CCP CH TRU Waste Certification and WWIS/WDS Data Entry	28	29	29 - Revised Attachment 2, WCO Waste Certification Requirements, to include Standard Large Box 2 (SLB2) Waste Certification Official (WCO) Waste Certification Requirements. Also revised Sections 3.1.6, 4.2.6, and Attachment 1 of the Data Sources for the WDS Master Template.
15.	CCP-TP-033	CCP Shipping of CH TRU Waste	18	19	19 - Revised to incorporate TRUPACT-III Shipping Certification
16.	CCP-TP-053	CCP Standard Real-Time Radiography (RTR) Inspection Procedure	10	11	11 - Revised to add checklist question based on agreement with New Mexico Environmental Department (NMED).
17.	CCP-TP-058	CCP NDA Performance Demonstration Program	3	4	4 - Revised to correspond with the recent revisions of the Carlsbad Field Office (CBFO) Performance Demonstration Program plans.

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18.	CCP-TP-068	CCP Standardized Container Management	8	8	
19.	CCP-TP-070	CCP Gamma Energy Assay (GEA) Calibration, Confirmation and Verification Procedure	0	0	
20.	CCP-TP-071	CCP Gamma Energy Assay (GEA) Operating Procedure	1	1	
21.	CCP-TP-072	CCP Gamma Energy Assay (GEA) Data Review, Validation and Reporting Procedure	1	2	2 - Revised in response to Corrective Action Report (CAR)-RL-0003-11 to direct Expert Analyst (EA) to check the Software Inventory List.
22.	CCP-TP-082	CCP Waste Containers Filter Vent Operation	8	8	
23.	CCP-TP-093	CCP Sampling of TRU Waste Containers	15	16	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.
24.	CCP-TP-106	CCP Headspace Gas Sampling Batch Data Report Preparation	7	7	
25.	CCP-TP-113	CCP Standard Contact-Handled Waste Visual Examination	15	16	16 - Revised to remove recording location and clarify transportation packaging requirements.
26.	CCP-TP-137	CCP Operation of the Hanford SuperHENC Assay System	1	2	2 - Minor revision to update step numbering in Section 4.10.
27.	CCP-TP-144	CCP Hanford SuperHENC Calibration Procedure	0	0	
28.	CCP-TP-148	CCP SuperHENC Data Reviewing, Validating, and Reporting Procedure	6	7	7 - Revised in response to Corrective Action Report (CAR)-RL-0003-11 to direct Expert Analyst (EA) to check the Software Inventory List.
29.	CCP-TP-162	CCP Random Selection of Containers for Solids and Headspace Gas Sampling and Analysis	1	1	
30.	CCP-TP-180	CCP Analytical Sample Management	2	2	

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31.	CCP-TP-198	CCP HE-RTR Operating Procedure	2	5	3 - TP-198 is being revised to clarify how to verify the LINAC is de-energized and to include a requirement to check the coolant level on a daily basis. 4 - CCP-TP-198, *CCP HE-RTR Operating Procedure*, is being revised to incorporate changes identified during Los Alamos National Laboratory (LANL) start up activities. 5 - Revised section 4.1.3.
32.	WP 13-QA.03	Quality Assurance Independent Assessment Program	17	18	18 - Added allowance for the Assurance Programs manager to extend the time limit for issuance of an audit report. (6.0)