

United States Government

Department of Energy

memorandum

 Carlsbad Field Office
 Carlsbad, New Mexico 88221

DATE: JUN 28 2010

REPLY TO
ATTN OF: CBFO:QA:DSM:MAG:10-0696:UFC 2300.00

SUBJECT: Interim Audit Report A-10-16, INL/CCP for Recertification of Remote-Handled and Contact-Handled Transuranic Waste Characterization Activities

TO: Jerry Wells, DOE-ID



The Carlsbad Field Office (CBFO) conducted Annual Recertification Audit A-10-16 of the Idaho National Laboratory Central Characterization Project (INL/CCP) on June 8-10, 2010. The subject CBFO interim audit report is attached.

The audit team concluded that, overall, the INL/CCP implementing procedures are adequate relative to the flow-down of requirements. The audit team determined that the INL/CCP technical requirements are being satisfactorily implemented and are effective in all areas except those documented in the audit report.

As a result of the audit, one CBFO Corrective Action Report (CAR) was issued. One condition adverse to quality, isolated in nature, was corrected during the audit. The audit team identified no Observations during the audit and offered one Recommendation to INL/CCP management for consideration.

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

Dennis S. Miehls
Senior Quality Assurance Specialist

Attachment

cc: w/attachment

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W. Lattin, DOE-ID	ED	WWIS Database Administrators	ED
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*ED denotes electronic distrib

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U.S. DEPARTMENT OF ENERGY
CARLSBAD FIELD OFFICE

INTERIM AUDIT REPORT

OF THE

IDAHO NATIONAL LABORATORY
CENTRAL CHARACTERIZATION PROJECT

IDAHO FALLS, IDAHO
AND CARLSBAD, NEW MEXICO

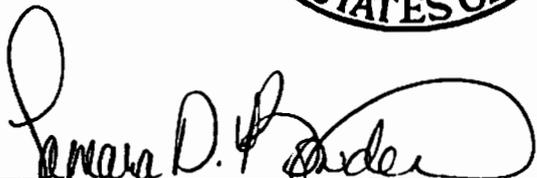
AUDIT NUMBER A-10-16

June 8 – 10, 2010

TRU WASTE CHARACTERIZATION AND CERTIFICATION
OF CONTACT-HANDLED (CH) AND REMOTE-HANDLED (RH)
WASTE ACTIVITIES



Prepared by:



Tamara D. Bowden, CTAC
Audit Team Leader

Date:

6/24/10

Approved by:

 FOR

Ava L. Holland, CBFO
Quality Assurance Director

Date:

6-28-10

1.0 EXECUTIVE SUMMARY

Carlsbad Field Office (CBFO) Recertification Audit A-10-16 was conducted to evaluate the continued adequacy, implementation, and effectiveness of Idaho National Laboratory (INL) transuranic (TRU) waste characterization activities performed for INL by the Washington TRU Solutions (WTS) Central Characterization Project (CCP). 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)*, the *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant (WAC)*, the *RH TRU Waste Characterization Program Implementation Plan (WCPIP)*, the *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*, and the *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)*.

The audit team evaluated contact-handled (CH) Summary Category Groups (SCGs) S3000 homogeneous solids waste, S4000 soils/gravel waste, and S5000 debris waste, and remote-handled (RH) SCGs S3000 homogeneous solids waste and S5000 debris waste, in addition to other technical elements, quality assurance (QA) elements, and transportation activities. The specific items audited are listed in section 2.1.

The audit was conducted at the INL/CCP facility near Idaho Falls, Idaho, and the WTS/CCP facilities in Carlsbad, New Mexico, June 8 through 10, 2010. The audit team concluded that the overall adequacy of the INL/CCP technical and QA programs, as applicable to audited activities, was satisfactory in meeting requirements. The audit team verified that the INL/CCP program for characterization and certification activities related to CH SCGs S3000 homogeneous solids, S4000 soils/gravel, S5000 debris wastes, and RH SCGs S3000 homogeneous solids and S5000 debris wastes continue to be adequate, satisfactorily implemented, and effective.

The audit team also concluded that overall, the defined QA and technical programs for these activities were being satisfactorily implemented in accordance with the *CCP Transuranic Waste Characterization Quality Assurance Project Plan (QAPjP)* and its implementing procedures, and that the processes were effective.

The audit team identified one condition adverse to quality resulting in the issuance of one corrective action report (CAR). The CAR was identified during the evaluation of reportable nonconformances and is discussed in detail in section 6.1.

One deficiency, isolated in nature and requiring only remedial corrective action, was identified and corrected during the audit (CDA). No Observations were identified during the audit, and one Recommendation is being offered for management consideration.

2.0 SCOPE AND PURPOSE

2.1 Scope

The audit team evaluated the continued adequacy, implementation, and effectiveness of the INL/CCP TRU waste characterization and certification activities for CH SCGs S3000

homogeneous solids, S4000 soils/gravel, and S5000 debris wastes, and RH SCG S3000 homogeneous solids and S5000 debris wastes.

The following elements were evaluated:

Quality Assurance

Personnel Qualification and Training
Nonconformance Reporting
Records

Technical

Project-Level Data Validation and Verification (V&V)
Acceptable Knowledge (AK)
Waste Certification (e.g., Waste Stream Profile Form)
WIPP Waste Information System (WWIS)
Real-Time Radiography (RTR)
Visual Examination (VE)
Headspace Gas (HSG) Sampling
Nondestructive Assay (NDA)
Solids/Soil Sampling and Analysis
Performance Demonstration Program (PDP)
Flammable Gas Analysis
Gas Generation Testing Program (GGTP)
Dose-to-Curie (DTC)
Sample Control
Container Management

TRUPACT-II Operations/Waste Certification/Transportation

The evaluation of INL/CCP TRU waste activities and documents was based on current revisions of the following documents:

Waste Isolation Pilot Plant Hazardous Waste Facility Permit (HWFP)

Quality Assurance Program Document, DOE/CBFO-94-1012

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

Remote-Handled TRU Waste Characterization Program Implementation Plan (WCPIP)

TRUPACT-II Safety Analysis Report: TRUPACT-II Authorized Methods for Payload Control (TRAMPAC), and the TRUPACT-II Certification of Compliance NRC 71-9281

RH-TRU 72B Safety Analysis Report: Remote-Handled Transuranic Waste Authorized Methods for Payload Control (RH-TRAMPAC), and the RH-TRU 72B Certification of Compliance NRC 71-9212

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

CCP Transuranic Waste Certification Plan, CCP-PO-002

*CCP TRUPACT-II Authorized Methods for Payload Control (CCP TRAMPAC),
CCP-PO-003*

*CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control
(CCP RH-TRAMPAC), CCP-PO-505*

INL/CCP Interface Document, CCP-PO-024

INL/CCP RH TRU Waste Interface Document, CCP-PO-501

Related technical and quality assurance implementing procedures

2.2 Purpose

Audit A-10-16 was conducted to assess the level of compliance of waste characterization and certification activities for CH SCGs S3000 homogeneous solids, S4000 soils/gravel, and S5000 debris wastes, and RH SCG S3000 homogeneous solids and S5000 debris wastes.

3.0 AUDIT TEAM AND OBSERVERS

AUDITORS/TECHNICAL SPECIALISTS

Tamara Bowden	Audit Team Leader, CBFO Technical Assistance Contractor (CTAC)
Dennis Miehls	Management Representative, CBFO
Pete Rodriguez	Auditor, CTAC
Greg Knox	Auditor, CTAC
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Robbie Morrison	Technical Specialist, WTS

OBSERVERS

Norma Castaneda	CBFO
Kathy Leonard	CTAC
Connie Walker	New Mexico Environment Department (NMED)
Tim Hall	NMED
Ricardo Maestas	NMED

4.0 AUDIT PARTICIPANTS

INL/CCP individuals involved in the audit process are identified in Attachment 1. A preaudit meeting was held at INL/CCP Building WMF-637 near Idaho Falls, ID, and the Skeen-Whitlock Building, in Carlsbad, NM, June 8, 2010. Daily briefings were held with INL/CCP management and staff to discuss issues and potential deficiencies. The audit was concluded with a postaudit meeting held at the INL/CCP WMF-637 building near Idaho Falls, ID, and in the Skeen-Whitlock Building, in Carlsbad, NM, on June 10, 2010.

5.0 SUMMARY OF AUDIT RESULTS

5.1 Program Adequacy, Implementation, and Effectiveness

The audit team concluded that the applicable INL/CCP TRU waste characterization activities, as described in the associated implementing procedures, are adequate, satisfactorily implemented, and effective. Audited activities are described below. Attachment 2 contains a Summary Table of Audit Results. Attachment 3 contains a list of documents that were included in the audit. Attachment 4 contains a list of the processes and equipment evaluated.

The audit team identified one condition adverse to quality resulting in the issuance of CBFO CAR 10-036. One deficiency requiring remedial corrective action was corrected during the audit (CDA) and one Recommendation was presented for management consideration. The CAR, CDA, and Recommendation are described in section 6.

5.2 Quality Assurance Activities

Personnel Qualification and Training

The audit team conducted interviews with responsible personnel and reviewed implementing procedures relative to the training and qualification of personnel to determine the degree to which the procedures adequately address upper-tier HWFP and QAPD requirements. Personnel training records covering both CH and RH activities associated with AK, VE, RTR, HSG, GGTP, NDA, QA, site project manager (SPM), and transportation personnel were examined to verify implementation of associated requirements and to verify that personnel performing characterization activities are appropriately qualified. Record reviews included the CCP List of Qualified Individuals (LOQI) and qualification cards, which included required reading, capability demonstrations, etc. The procedures reviewed and objective evidence assembled and evaluated during the audit concluded that the applicable requirements for personnel qualification and training are adequately established for compliance with upper-tier requirements and are effectively implemented. No concerns were identified.

Nonconformance Reporting

The audit team conducted interviews with responsible personnel and reviewed implementing procedures relative to the control of nonconformances to determine the degree to which procedures adequately address upper-tier HWFP and QAPD

requirements. The procedures reviewed included CCP-QP-004, *CCP Corrective Action Management*; CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*; and CCP-QP-006, *CCP Corrective Action Reporting and Control*. Evidence of the control of nonconformance was verified through the review of nonconformance report (NCR) logs and NCRs, both reportable and non-reportable. The following NCRs were reviewed.

CH NCRs

NCR-INL-0028-09
NCR-INL-0516-09
NCR-INL-0521-09
NCR-INL-0529-09
NCR-INL-0009-10
NCR-INL-0503-10
NCR-INL-0504-10
NCR-INL-0513-10
NCR-INL-0520-10

RH NCRs

NCR-RHINL-0509-09
NCR-RHINL-0502-10
NCR-RHINL-0506-10
NCR-RHINL-0511-10
NCR-RHINL-0512-09

CCP CAR-INL-0006-09 was issued to address administrative concerns associated with NCR-INL-0521-09, which had been evaluated as "Significant." The procedures reviewed and objective evidence assembled and evaluated during the audit concluded that the applicable requirements for control of nonconformances are adequately established for compliance with upper-tier requirements and are effectively implemented. One concern was identified, resulting in issuance of CAR 10-036, to document one case where notification of CBFO had not occurred within the required five-day period (see section 6.1).

Records

The audit team reviewed implementing procedures relative to the control and administration of QA records to determine the degree to which the procedures adequately address upper-tier HWFP and QAPD requirements. The procedures reviewed included CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*; CCP-PO-002, *CCP Transuranic Waste Certification Plan*; CCP-QP-008, *CCP Records Management*; and CCP-QP-028, *CCP Records Filing, Inventorying, Scheduling, and Dispositioning*. The audit team viewed the CCP Records storage areas in the Skeen-Whitlock Building. Facilities and records storage cabinets were locked, with access lists provided and keys stored in locked key boxes. Evidence of the control of QA records was verified through the review of the INL/CCP CH waste Records Inventory and Disposition Schedule (RIDS) dated 6/7/2010, RH waste RIDS dated 6/7/2010, and associated waste characterization process batch data reports (BDRs).

The audit team also verified that a closure package for previously issued CAR 10-021 concerning identification of records storage location on the RIDS had been submitted to the CBFO on June 7, 2010. The closure package was being evaluated at the time of this audit.

The procedures reviewed and objective evidence assembled and evaluated during the audit concluded that the applicable requirements for quality assurance records are adequately established for compliance with upper-tier requirements and are effectively implemented. No concerns were identified.

5.3 Technical Activities

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

5.3.1 Project-Level Verification and Validation

Project-level reviews were performed to assess the data collected using current waste characterization implementing procedures. The ability of the INL/CCP to characterize SCGs S5000 debris, S4000 soils/gravel and S3000 solids wastes was evaluated. Objective evidence was reviewed as part of this assessment and utilized in the completion of Table B6-1, the Waste Analysis Plan (WAP) Checklist. The objective evidence included BDRs completed through the CCP SPM review for nondestructive examination (NDE), VE, HSG sampling and analysis, and solids sampling and analysis. In addition, procedures and objective evidence were reviewed to ensure that INL/CCP could adequately perform data reconciliation and properly prepare a Waste Stream Profile Form (WSPF).

Objective evidence was reviewed to determine the adequacy of the SPM V&V procedures. Evidence included BDRs from each of the waste characterization activities.

The flow of data from the point of generation to inclusion in the WSPF for each characterization technique was reviewed to ensure that all applicable requirements were captured in the site operating procedures. The material in this section is also addressed in more detail in the audit checklists, where the specific procedures audited and the objective evidence reviewed is identified.

Compliance with the characterization requirements of the WAP was assessed through documentation and by demonstrations of characterization activities. The project-level data V&V process was evaluated by reviewing the following BDRs:

NDE

INLRHRTR10004
INRTR5090060

INLRHRTR10006
INRTR5090061

INRTR5090056

VE

RHINLVE090003
IN-ARP-VE-001982

RHINLVE100001
IN-ARP-VE-002001

IN-ARP-VE-001958

HSG Sampling and Analysis

INHSGS090013
INHSGS090012
INHSGS090014

ECL09030G
ECL09028G
ECL09031G

ECL09030M
ECL09028M
ECL09031M

Solids – Soils/Gravel Sampling and Analysis

IDRH0902	IDRH0904	ALD09007V
ALD09007S	ALD09007N	ALD09007M
S3900-LOT-04-04	ALD10009V	ALD10009S
ALD10009N	ALD10009M	

Some of the HSG and solids-soils/gravel BDRs cited above were used to demonstrate confirmation of AK, to reconcile data quality objectives (DQOs), and to prepare WSPFs.

Objective evidence was reviewed to ensure project-level activities were adequately performed to support waste characterization. INL/CCP provided the quarterly repeat of data generation-level data for NDE, HSG, and VE and it was determined to meet the requirements.

The audit team reviewed the WSPF Characterization Information Summary (WSPF/CIS) for S5000, S4000 and S3000 waste streams ID-HFEF-S5000-RH, ID-NTLLNL-S5400, ID-NTS-EG&G-HET, ID-NTLBL-3900, and ID-NTLLLBL-S5400. The random selection of containers for these waste streams was properly completed for each.

INL/CCP performs HSG sampling using SUMMA[®] canisters. Sampling BDRs INHSGS090012, INHSGS090013, and INHSGS090014 for S5000 debris waste were examined. Drum age criteria (DAC), sample COC, and shipment to the analytical laboratory were reviewed and determined to be compliant. The HSG analysis of the SUMMA[®] samples was reviewed by the audit team, as well as the training and qualification of V&V personnel. The analysis and reporting of the Field Reference Standard was determined to be accurate and complete.

The audit team concluded that the INL/CCP HSG sampling and analysis V&V processes were adequate, satisfactorily implemented, and effective.

The INL/CCP project-level NDE and VE processes were evaluated to determine the effectiveness of NDE and VE as characterization methods. BDRs INLRHRTR10004, INLRHRTR10006, INRTR5090056, INRTR5090060, and INRTR5090061 were reviewed. VE BDRs RHINLVE090003, RHINLVE100001, IN-ARP-VE-001958, IN-ARP-VE-001982, and IN-ARP-VE-002001 were also assessed by the team.

The audit team concluded that the INL/CCP NDE and VE V&V processes were adequate, satisfactorily implemented, and effective.

NDA

Project-level NDA V&V was evaluated by the audit team using characterization reports INLRHDTTC10001, INNDA09016, INNDAH090073, INNDAW100062, and INNDA090312.

The audit team concluded that the INL/CCP NDA V&V processes were adequate, satisfactorily implemented, and effective.

5.3.2 Solids Sampling and Analysis

The audit team reviewed solids sampling activities performed by INL/CCP at the Accelerated Retrieval Project (ARP) and INTEC facilities. No sampling activities were being performed during the audit. Sampling is performed by INL/CCP using CCP-TP-008, *CCP Solids Sampling Procedure*, and CCP-TP-512, *CCP Remote-Handled Waste Sampling*.

CH BDRs S3900-LOT-04-04 and S3900-LOT-04-03 were reviewed by the audit team. RH BDR IDRH0904 was also reviewed. The audit team reviewed the CCP Sampling Analysis Plan and CBFO Approval for CCP-AK-INL-525. The spare sampling tools and sample bottles (sampling kits) were provided to audit team. They were packaged in sealed plastic bags and were traceable to the applicable cleaning lot documentation. Training for solids sampling personnel was reviewed.

The audit team concluded the Solids Sampling and Analysis Program at INL/CCP was adequate, satisfactorily implemented and effective.

5.3.3 Acceptable Knowledge

The audit team reviewed AK documentation for all three CH TRU waste SCGs and RH TRU waste SCG S5000. In addition, the team examined the AK record for an RH SCG S3000 solids waste stream in an effort to certify the RH SCG S3000. This recertification audit was based on the requirements of the WIPP Resource Conservation and Recovery Act (RCRA) permit and WAP, and the RH WCPIP. The audit team therefore reviewed documentation to support both sets of requirements, completing WCPIP checklists and WAP B6-3 and B6-1 checklists, and compiling and reviewing objective evidence to demonstrate compliance.

Appropriate documents that supported compliance were reviewed and compiled as objective evidence including AK Summary reports, WSPFs and attachments, numerous AK Source Document Summaries, random container selection reports for HSG sampling and analysis and solids sampling and analysis, BDRs from all certified characterization testing, data reconciliation packages, AK discrepancy resolution documentation and NCRs dealing with the identification and treatment of prohibited items.

Additional supporting documentation for the WCPIP requirements included draft compliant WSPFs, draft AK Accuracy Reports, draft Characterization Reconciliation Reports and supporting documentation, and DTC BDRs. Examples from the AK record were reviewed to assure that all of the DQOs cited in the WCPIP were met. In addition, the audit team examined the AK record regarding the methods for qualification of AK information as required by the WCPIP.

The audit team reviewed specific, complete AK program documentation for the CH debris waste stream ID-NTVERB-S5400 from the decontamination and decommissioning (D&D) of the Nevada Test Site (NTS) VE and repackaging facility, CH

soils stream ID-SDA-SOIL from the excavation of the subsurface disposal area (SDA), CH solids stream ID-NTLLNL-S3900 from Lawrence Livermore National Laboratory (LLNL), RH TRU debris stream ID-MFC-S5400-RH from the Idaho Materials and Fuels Complex, and RH solids stream ID-RTC-S3000 from waste water processes at the Idaho Reactor Technology Complex.

Ten drums, two from each of the five waste streams reviewed, were tracked during the WAP-required traceability exercise. The drums selected provided BDRs for RTR, VE, HSG sampling and analysis, solids sampling and analysis, NDA, and DTC. In addition to this documentation, waste container input data and/or relevant database entries were compiled as part of the traceability effort. Furthermore, the audit team examined requisite WAP AK Accuracy Reports, AK Expert (AKE) and SPM training records and the most recent AK program internal surveillance.

The review resulted in two concerns. The first was determined to be a Recommendation and included several changes for clarification to the AK Summary Reports for the CH waste streams reviewed. These recommended changes were added to freeze files already in place for the current draft of those reports. The second concern addressed discrepancies identified in the AK record regarding the assignment of specific F codes to the LLNL S3900 waste stream and the size of the inner containers of the ID-MFC-S5400-RH waste stream. These discrepancies were resolved and properly documented during the audit (see Recommendation 1 in section 6.4 and CDA 1 in section 6.2).

Overall, the Acceptable Knowledge Program was judged to be adequate in representing the requirements of the WAP, satisfactory in the implementation of these requirements, and effective in achieving the desired results, that is, properly certified waste for shipment.

5.3.4 Headspace Gas Sampling

HSG sampling activities performed by the INL/CCP were evaluated during the audit. The evaluation included examination of sampling BDRs for both CH and RH waste. Review by an Independent Technical Reviewer (ITR) was verified for all BDRs. The BDRs were examined for completeness and correctness and were found to be satisfactory. Personnel were interviewed, sampling areas were examined, and sampling equipment and standards verified to be compliant. Collection of field reference standards (FRS) has been discontinued, as allowed under the permit, and the letter authorizing this was verified. The sample COC procedure was found acceptable. Training for HSG sampling personnel was verified to be current and acceptable.

The audit team concluded that the Headspace Gas Sampling process at INL/CCP for both CH and RH gas sampling was adequate, satisfactorily implemented, and effective.

Measuring and Test Equipment (M&TE) for Headspace Components

Calibration certifications were reviewed for instruments/gages used in characterization activities. Each instrument/gage was determined to have had a proper calibration certificate valid at the time the instrument/gage was used. No concerns were identified. Certifications for the following instruments/gages were evaluated.

	Number	Due Date	Used date
	-----	-----	-----
Pressure Gage	XC0349	3/18/10	7/13/09
Thermometer	XC0716	2/16/10	7/13/09
Min/Max Thermometer	723199	6/25/10	7/13/09
Min/Max Thermometer	723194	12/09/09	7/13/09
Min/Max Thermometer	723206	6/25/10	9/1/09
Min/Max Thermometer	723201	6/25/10	9/1/09
Min/Max Thermometer	723202	8/18/10	9/8/09
Data Logger	XC0710	11/18/09	7/13/09
Data Logger	XC0711	11/18/09	7/13/09
Data Logger	XC0706	10/23/09	9/1/09
Data Logger	XC0713	11/18/09	9/1/09

Sample Control

The audit team evaluated INL/CCP HSG sample control activities and conducted interviews with sampling personnel to determine that sample custody was properly initiated and maintained. The HSG samples are taken at either the CH sampling location at the Radioactive Waste Management Complex/Advanced Mixed Waste Treatment Project (RWMC/AMWTP) facility, Building WMF-635, or at the RH sampling location at the Idaho Nuclear Technology and Engineering Center (INTEC) facility, Building 659. Sample equipment and chain-of-custody (COC) forms were examined. The sample COC procedure was reviewed and deemed acceptable. Training for personnel initiating and maintaining custody was verified to be current and acceptable.

The HSG sample custody process at INL/CCP for both CH and RH gas sampling was determined to be effective and operated under adequate procedures that produce satisfactory results.

5.3.5 Real-Time Radiography

The audit team evaluated the adequacy, implementation, and effectiveness of INL/CCP activities to characterize and certify CH SCG S3000 solids waste and S5000 debris waste and RH SCG S5000 waste using RTR.

The audit team evaluated the following RTR-related procedures: CCP-TP-053, Rev. 7, *CCP Standard Real-Time Radiography (RTR) Inspection Procedure*; CCP-TP-508, Rev. 3, *CCP RH Standard Real-Time Radiography Inspection Procedure*; CCP-TP-119,

Rev. 3, *CCP Operating the Real-Time Radiography (RTR) System #5*; CCP-TP-080, Rev. 1, *CCP Operating the WMF 610 Real-Time Radiography (RTR) System*; CCP-TP-028, Rev. 3, *CCP Radiographic Test and Training Drum Requirements*; and CCP-QP-002, Rev. 27, *CCP Training and Qualification Plan*. The review determined that the procedures adequately address requirements from upper-tier documents.

The audit team evaluated eight CH RTR BDRs, three RH RTR BDRs, and the associated video recordings as follows:

INRTR5090049	INRTR5090060	INRTR5090056	INRTR5090074
INRTR5090062	INRTR5090061	INRTR5100010	INRTR5100015
INLRHRTR10001	INLRHRTR10006	INLRHRTR09007	

The audit team evaluated evidence of RTR operator required capability demonstration records and viewed capability demonstrations audio/video recordings for two CH RTR operators and two RH RTR operators. The audit team also evaluated qualification cards/records for three CH RTR operators, three RH RTR operators, and three SPMs.

INL/CCP was not characterizing CH SCG S3000 solids waste or SCG S5000 debris waste at the time of the audit. Due to maintenance activities, INL/CCP was not characterizing RH SCG S5000 at the time of the audit. The audit team performed a walk-through of CH RTR unit #5 in Building WMF 610 and the RH RTR unit in INTEC Building 659. During the walk-throughs, the audit team verified the acceptability of equipment. The audit team interviewed CH and RH RTR personnel and reviewed operational logbooks, standing work orders, CCP procedures, and AK Summaries. No concerns were identified.

Overall, the audit team determined that INL/CCP Real-time Radiography activities were adequate, satisfactorily implemented, and effective.

5.3.6 Visual Examination

The audit team reviewed VE activities performed by INL-CCP at ARP for CH waste and at INTEC for RH Waste. For CH waste, VE is performed in accordance with CCP-TP-006, *CCP Visual Examination Technique for Idaho National Laboratory (INL) Newly Generated TRU Waste Retrieved From Pits*. For RH waste, VE is performed in accordance with CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*. The audit team reviewed BDRs and training records for VE operators and VE Experts (VEEs). The audit team observed VE operations in Building 1612 airlock 3 at the ARP facility. No RH VE operations were being conducted at the time of the audit. RH VE operations were observed during Surveillance S-10-22 on 3/3/2010. No concerns were identified.

The audit team determined that INL/CCP Visual Examination operations were adequate, satisfactorily implemented and effective.

5.3.7 Nondestructive Assay/Dose-to-Curie

The audit team assessed the adequacy, implementation, and effectiveness of the NDA systems used at INL/CCP to characterize waste from SCGs S3000, S4000, and S5000. The audit team evaluated the Waste Assay Gamma Spectrometer (WAGS), the SWEPP Gamma-Ray Spectrometer (SGRS), the High Efficiency Neutron Counter (HENC), the Super High Efficiency Neutron Counter (SuperHENC), and the DTC measurement system.

The SGRS and WAGS are both gamma spectrometers with multiple high purity germanium (HPGe) detectors. The HENC and SuperHENC are passive neutron counters with integral HPGe gamma-ray spectrometers. DTC measurements are accomplished using two detectors: one to obtain the relative contributions of Co-60 and Cs-137 to the gamma dose rate, and one to take dose measurements. CBFO previously evaluated these NDA systems May 4 – 8, 2009, during Audit A-09-14.

The audit team prepared checklists based on current revisions of INL/CCP procedures, technical documents, and completed BDRs prior to the audit. The checklists were used to evaluate the following:

- System stability as evidenced by the implementation and effectiveness of quality control measurements, 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 since the last audit
- Successful participation in the CBFO-sponsored NDA PDP
- Completed BDRs to ensure data are reported and reviewed as required
- Data storage and retrievability
- Personnel qualification and training
- Continued operability and condition of the WAGS, SGRS, HENC, SuperHENC and DTC since Audit A-09-14

The audit team interviewed NDA personnel, observed equipment and practices, and examined electronic and paper copies of reports and records.

In PDP Cycle 9A, the SuperHENC was used to assay two waste matrices: combustibles and metals. The SuperHENC passed all test criteria. As part of PDP Cycle 16A, the HENC, WAGS, and SGRS were used to perform replicate assays on three matrices: combustibles, glass, and metals. All three instruments passed all test criteria.

DTC is performed in INTEC Building 659. The measurement acquisition control room (Cell 302) contains closed-circuit camera control systems and display units and the

readouts for the dose measurement and the analysis resulting from the Osprey detector measurement. The actual measurements are performed in Cell 306, where the Osprey detector, DTC measurement probes, measurement fixture, and the rotating platform are located. The drums are lowered into the hot cell from a high bay. All three areas were examined, attending personnel were interviewed, data acquisition equipment was examined, and records, logbooks, and procedures were reviewed.

The dose rate measurement is acquired using either a Thermo Electron Corporation Model RO-7 High Range Survey System or a Thermo Electron Corporation Model FH 40 G Dose Rate Measuring Unit, depending on the level of the radiation dose measurement relative to the environmental background.

Since Audit A-09-14 in 2009, INL/CCP has been presented with an RH waste stream that has a significant proportion of the gamma dose rate originating from Co-60 in the waste, as well as Cs-137. With previous waste streams, the contribution from Co-60 was very small and thus neglected. In the case of the current waste stream (ID-HFEF-S5400), the DTC methodology was modified to employ an additional detector (Osprey), electronics, computer, and software system to resolve the relative contributions to the gamma dose from Co-60 versus Cs-137.

The audit team observed the Osprey detector, the enclosure, and shielding, reviewed CCP procedures, and interviewed operators. Data acquisition and preliminary measurement were observed, but not reviewed. DTC data acquired using the additional Osprey detector and analysis had not been reviewed through the site-project level and was thus not available for review during the audit.

The audit team determined that technical and personnel elements of the DTC methodology reviewed were adequate, satisfactorily implemented, and effective. The resulting measurement data, data reduction, and review were deemed indeterminate until measurement data have been through the complete process and reviewed by CBFO auditors. It should be noted that the DTC methodology implemented, absent the Osprey detector, was determined to be adequate, satisfactorily implemented, and effective. No concerns were identified during the course of the audit.

Overall, Nondestructive Assay/Dose to Curie activities, with the exception of the DTC indeterminate status described above, were determined to be adequate, satisfactorily implemented, and effective.

5.3.8 Performance Demonstration Program

The audit team examined PDP documentation and interviewed INL/CCP PDP personnel to verify that PDP activities were performed as required by established procedures and that the results were approved by CBFO. For additional PDP information, see section 5.3.7.

Overall, Performance Demonstration Program activities were determined to be adequate, satisfactorily implemented, and effective.

5.3.9 WIPP Waste Information System (WWIS)

The audit team conducted interviews with responsible personnel and reviewed implementing procedures relative to the use of the WWIS/Waste Data System (WDS) system to determine the degree to which procedures adequately address upper-tier requirements. The procedures reviewed included CCP-TP-030, *CCP CH TRU Waste Certification and WWIS/WDS Data Entry*, and CCP-TP-530, *CCP RH TRU Waste Certification and WWIS/WDS Data Entry*. Evidence for the proper use of the WWIS system was verified through review of CH WWIS Data Shipping Package for Waste Container Numbers ARP19822 and ARP19218, and RH WWIS Data Shipping Package for Canister ID0211 containing Waste Container Numbers IDAWANL820038B, IDAWANL830020A, and IDAWANL830020B. The audit team witnessed CH WWIS/WDS Data Shipping Package data entry into the system. No concerns were identified.

The procedures reviewed, objective evidence assembled, and WWIS/WDS data entry witnessed during the audit indicated that the applicable requirements for use of the WWIS/WDS system were adequately established for compliance with upper-tier requirements and were effectively implemented.

Overall, WIPP Waste Information System activities were determined to be adequate, satisfactorily implemented, and effective.

5.3.10 Flammable Gas Sampling and Analysis

Flammable Gas Testing operations performed by the INL/CCP were evaluated during the audit. The evaluation included examination of Flammable Gas Testing BDRs, Minimum Detection Limit BDRs, Initial Calibration BDRs, verification of ITR activities, examination of GGTP BDRs for completeness and correctness, and evaluation of equipment and standards. Personnel were interviewed, the sampling areas were examined, and sampling equipment was verified to be compliant. Training for all operators and ITRs was verified to be acceptable. No concerns were identified.

Overall, the Flammable Gas Sampling and Analysis process was determined to be adequate, satisfactorily implemented, and effective.

5.3.11 Gas Generation Testing Program

The audit team examined the GGTP operations performed by the INL/CCP. The examination included checking a GGT BDR, examination of a GGT Initial Calibration (ICAL) report, verification of ITR activities, and examination of GGT BDRs for completeness and correctness. Equipment and standards were checked. Personnel were interviewed, the sampling areas were examined, and sampling equipment was verified to be compliant. Training for GGT personnel was determined to be satisfactory. No concerns were identified.

Overall, the Gas Generation Testing Program process was determined to be adequate, satisfactorily implemented, and effective.

5.4 TRUPACT-II Operations/Waste Certification/Transportation

The audit team evaluated transportation activities performed at INL/CCP. Training and qualification were checked for CH and RH waste operations/packaging personnel, leak test personnel, Waste Certification Officials, and Transportation Certification Officials. TRUPACT-II maintenance, container management, ten-drum overpack (TDOP) container integrity verification, payload preparation operations, and previously shipped RH shipping/transportation data packages were also evaluated.

Personnel were interviewed, and work was observed for CH shipments. Evidence of transportation-related records reviewed included the Uniform Hazardous Waste Manifest for CH Shipment Numbers IN100247 and IN100255 and RH Shipment Number INR10011. RH and CH spare parts checked, and M&TE used for CH and RH loading was verified to be within calibration. TDOP payloads were observed being placed in TRUPACT-IIs and a standard waste box in a HalfPACT, and CH shipments IN100295 and IN100294 were observed being built. Waste Certification Official and Transportation Certification Official activities were evaluated.

Load management can be conducted at INL, but none was observed during the audit. The CCP Waste Certification Official interviewed during the audit indicated that CCP has a procedure in place to perform that task if necessary. No concerns were identified.

Overall, TRUPACT-II Operations/Waste Certification/Transportation activities were determined to be adequate, satisfactorily implemented, and effective.

6.0 CORRECTIVE ACTIONS, OBSERVATIONS, AND RECOMMENDATIONS

6.1 Corrective Action Reports

During the audit, the audit team may identify conditions adverse to quality (CAQ) and document such conditions on corrective action reports (CARs).

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

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

One CAR, described below, was issued as a result of Audit A-10-16. The CAR has been transmitted to INL/CCP under separate cover.

CBFO CAR 10-036

Nonconformance report NCR-INL-0028-09 was identified at the SPM-level review and initiated on 8/20/09. No objective evidence was provided indicating that CBFO was notified of the NCR within five calendar days as required.

6.2 Deficiencies Corrected During the Audit

During the audit, the audit team may identify CAQs. The audit team members and the Audit Team Leader (ATL) evaluate the CAQs to determine if they are significant. Once a determination is made that the CAQ is not significant, the audit team member, in conjunction with the ATL, determines if the CAQ is an isolated case requiring only remedial action and therefore can be corrected during the audit (CDA). Deficiencies that can be classified as CDA are those isolated deficiencies that do not require a root cause determination or actions to preclude recurrence, and those for which 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), or one or two individuals have not completed a reading assignment

Upon determination that the CAQ is isolated, the audit team member, in conjunction with the ATL, evaluates/verifies any objective evidence/actions submitted or taken by the audited organization and determines if the condition was corrected in an acceptable manner. Once it has been determined that the CAQ has been corrected, the ATL categorizes the condition as a CDA.

One deficiency, requiring remedial action only, was identified during the audit.

CDA 1

There was a discrepancy in the AK Record with regard to the size of the inner containers for waste stream ID-MFC-S5400-RH. AK Summary Report CCP-AK-INL-540 noted that they were two-gallon containers, while the Radiological Characterization Technical Report for this waste stream identified the containers as one gallon in size, based on RTR and VE data.

Discrepancy resolution DR113 in AK Summary CCP-AK-INL-009 indicated that waste stream ID-NTLLNL-S3900 should carry both the F007 and F009 hazardous waste numbers. These numbers were removed from the stream in revision 6 of the parent AK Summary Report CCP-AK-NTS-001 with accompanying DR13.

These discrepancies were resolved and verified during the audit.

6.3 Observations

During the audit, the audit team may identify potential problems that should be communicated to the audited organization. The audit team members, in conjunction

with the ATL, evaluate these conditions and classify them as Observations using the following definition.

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

Once a determination is made, the audit team member, in conjunction with the ATL, categorizes the condition appropriately.

No Observations were identified during this audit.

6.4 Recommendations

During the audit, the audit team may identify suggestions for improvement that should be communicated to the audited organization. The audit team members, in conjunction with the ATL, evaluate these conditions and classify them as Recommendations using the following definition.

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

Once a determination is made, the audit team member, in conjunction with the ATL, categorizes the condition appropriately.

One Recommendation was presented to INL/CCP management during this audit.

Recommendation 1

The audit team recommends that for clarification, the following changes be made to the AK Summaries for the three CH waste streams reviewed to date.

CCP-AK-INL-017 R0

1. Correct designations of PK reference numbers in table 1.
2. Remove F003 designations from table 6, reexamine the superscripts applied for ignitability, corrosivity, and reactivity, and provide relevant information for trade names entries.

CCP-AK-INL-009 R1

1. Remove F003 designations from table 8, reexamine the superscripts applied for ignitability, corrosivity, and reactivity, and provide relevant information for trade names entries.
2. Clarify the notation of “non-radioactive pyrophorics” identified as a prohibited item in several sections of the AKS.
3. Clarify the description of the inner containers for waste stream S3900 as noted in sections 2.1, 2.2, and 4.6.1.2.
4. Add the chemical 1, 1-Dichloroethylene to Table 8, along with the applicable information for the table fields.

5. Provide information on the fate of nineteen 55-gallon drums shown as projected in S6.2 but listed by container number in AK attachment 8.

CCP-AK-INL-001 R8

1. Add ARP IV description to section 4.2.

7.0 LIST OF ATTACHMENTS

Attachment 1: Personnel Contacted During the Audit

Attachment 2: Summary Table of Audit Results

Attachment 3: Listing of Audited Documents

Attachment 4: Processes and Equipment Reviewed During Audit

PERSONNEL CONTACTED DURING AUDIT A-10-16				
NAME	TITLE/ORG	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST AUDIT MEETING
Abbott, Preston	Site Manager/MCS	X	X	
Allen, Bill	QA Project Integration/WTS	X	X	
Andrews, Sway	RTR/Decon/CCP		X	
Bhatt, Raj	Acting RH TRU STR/CWI	X		X
Billett, Michele	Training Coordinator/CCP		X	
Boland, Corey	NDA Lead/DTC/CCP/MCS	X	X	
Bowden, Jerry	RTR Operator/VJ Tech		X	
Boudreau, Shane	NDA Operator/PSC		X	
Brasier, David	NDA/Canberra	X	X	
Broomfield, Barbara	SPM/WTS/WRES	X	X	X
Carlson, Ted	VPM/Container Management/ WTS/CCP	X	X	X
Christensen, Tyson	RTR/JT	X	X	X
Cummins, Sharon	NDA/SHENC/CCP/MCS		X	
Czyzewski, Robert	QAE/WTS	X		X
Chism, Lea	QA Specialist/CBFO	X		
Davis, Crary	NDA LO/CCP		X	X
Dial, Brent	NDA/SGRS/CCP/MCS		X	
Dover, Dale	GGT Lead/NFT	X	X	X
Devarthonda, Murthy	Observer/WTS	X		
Duffy, Colleen	RTR Operator/CWI		X	
Fisher, A.J.	Senior Technical Advisor/WTS	X	X	X
Frost, Lisa	CWI		X	
Gomez, Chris	CCP QA/WTS	X	X	X
Green, Rick	NDA/MCS	X	X	
Haar, David	CCP/WTS		X	X
Harvill, Joe P.	NDA Tech, Lead/WTS	X	X	
Hensley, Lorraine	WWIS/WDS/WCA/CCP		X	
Hinojos, Felicia	Training Manager/CCP/Stoller			X
Holland, Ava	Director Office of QA/CBFO	X		
Hudston, Lisa	NDA Support/CCP/WTS			X
Johnsen, Tom	CH STR/CWI	X		X
Jones, Laura R.	QA/WTS	X	X	
Jorgensen, Kendall	Shipping/TCO/AMWTP		X	
Kantrowitz, Richard	SPM/CCP/WTS			X
Keathley, Susan	Records Custodian/CCP		X	
Kimmitt, Rod	Engineer/CWI	X		
Kirkes, Creta	Waste Certification/Shipping/ WCO/CCP		X	
Law, Jenifer	NDA/WAGS/CCP/MCS		X	

PERSONNEL CONTACTED DURING AUDIT A-10-16				
NAME	TITLE/ORG	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST AUDIT MEETING
Martin, Linda	Records Custodian/CCP		X	
Martin, Ryan	Records Custodian/CCP		X	
McElharey, Stephanie	PSC NDA EA/CCP	X	X	
Medina, Vincent	SPM/WCO/WTS	X		X
Montoya, Jason	AKE/CCP/LANL		X	X
Morales, Bart	NDA/MCS/Canberra	X	X	
Navarrete, Martin	QA Specialist/CBFO	X		
Neeley, Hillari J.	SPM/CCP/WTS			X
Nelson, Laura	SPM/CCP/WTS			X
Oney, Fred	RTR/VJT	X	X	X
Ott, Derek	Observer/WTS	X	X	
Parker, Tami	Records Custodian/CCP		X	
Pearcy, Mark	Certification Manager/CCP/WTS		X	X
Pearcy, Sheila	CCP Records Manager/Stoller	X	X	
Peterson, Gary	MLV/Transportation/CCP		X	X
Pimentel, Trisha	Records Clerk/Stoller	X		
Ploetz, D. K.	Manager/CCP		X	X
Poirier, Joe	FGA Lead/NFT	X	X	X
Poole, Jeff	VEE/WTS	X	X	X
Quintana, Irene	SPM/WTS	X	X	
Raman, Swami	VE/ITR/CWI		X	
Ramirez, Mike	Waste Certification/Shipping/ WCO/CCP		X	
Rowell, James	NDA Lead Operator/MCS	X		X
Sensibaugh, Michael	CCP Project Manager/WTS	X	X	X
Smith, Greg	RH VPM/WTS	X	X	X
Smith, Scott	AKE/CCP	X	X	X
Stoner, Norm	NDA EA/MCS	X	X	
Verlanic, Bill	INL P.M./WTS	X	X	X
Vernon, Jim	SPM/WTS	X	X	X
Wachter, Joseph	Technical Manager/MCS/ Canberra	X	X	
Valentine, Michael	SPM/WTS	X	X	
Walters, Eddy R.	FGA/HSGS Lead Operator/NFT	X	X	
West, John	NDA/EA/PSC/MCS		X	
Weyerman, C. Wade	TCO-MLV/LANL	X	X	X
Woodbury, Bryce	NDA/MCS/Canberra	X	X	X
Yost, David	SPM/WCO/WTS	X	X	X
Young, Rachel	QAE/WTS	X		X

Summary Table of Audit Results

Documents	Concern Classification				QA Evaluation		Technical
	CARs	CDAs	Obs	Rec	Adequacy	Implementation	Effectiveness
Activity							
Interface/SOW					A	S	E
Acceptable Knowledge		1		1	A	S	E
Reconciliation of DQO's/WSPFs					A	S	E
Project Level V & V					A	S	E
Real-Time Radiography					A	S	E
Headspace Gas Sampling					A	S	E
Visual Examination					A	S	E
Nondestructive Assay					A	S	E
Nonconformance Reporting	1				A	S	E
QA Records					A	S	E
Dose-to-Curie					A	S	*E
Training					A	S	E
Transportation					A	S	E
WWIS					A	S	E
Flammable Gas Analysis					A	S	E
Gas Generation Testing					A	S	E
Solids/Soils Sampling					A	S	E
Container Management					A	S	E
Performance Demonstration Program					A	S	E
Sample Control					A	S	E
TOTALS	1	1	0	1	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

* DTC process using Thermo Electron Corporation Equipment is Effective. DTC process using Osprey Measurement Equipment is Indeterminate.

LISTING OF AUDITED DOCUMENTS

	Document No.	Rev	Document Title
1.	CCP-PO-001	17	CCP Transuranic Waste Characterization Quality Assurance Project Plan
2.	CCP-PO-002	23	CCP Transuranic Waste Certification Plan
3.	CCP-PO-003	11	CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)
4.	CCP-PO-008	8	CCP Quality Assurance Interface with the WTS Quality Assurance Program
5.	CCP-PO-016	4	CCP Gas Generation Testing Program Quality Assurance Project Plan
6.	CCP-PO-024	9	CCP/INL Interface Document
7.	CCP-PO-501	4	CCP/INL RH TRU Waste Interface Document
8.	CCP-PO-505	0	CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (RH-TRAMPAC)
9.	CCP-QP-002	27	CCP Training and Qualification Plan
10.	CCP-QP-005	18	CCP TRU Nonconforming Item Reporting and Control
11.	CCP-QP-008	15	CCP Records Management
12.	CCP-QP-011	10	CCP Laboratory Logbooks
13.	CCP-QP-016	14	CCP Control of Measuring, Testing and Data Collection Equipment
14.	CCP-QP-021	7	CCP Surveillance Program
15.	CCP-QP-028	10	CCP Records Filing, Inventorying, Scheduling, and Dispositioning
16.	CCP-QP-030	8	CCP Written Practice for the Qualification of CCP Helium Leak Detection Personnel
17.	CCP-TP-001	17	CCP Project Level Data Validation and Verification
18.	CCP-TP-002	21	CCP Reconciliation of DQOs and Reporting Characterization Data
19.	CCP-TP-003	17	CCP Data Analysis for S3000, S4000, and S5000 Characterization
20.	CCP-TP-005	18	CCP Acceptable Knowledge Documentation
21.	CCP-TP-006	14	CCP Visual Examination Technique for INL Newly Generated TRU Waste Retrieved from Pits
22.	CCP-TP-008	8	CCP Solids Sampling Procedure
23.	CCP-TP-010	3	CCP Waste Assay Gamma Spectrometer (WAGS) & SWEPP Gamma Ray Spectrometer (SRGS) Calibration Procedure
24.	CCP-TP-019	5	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
25.	CCP-TP-028	3	CCP Radiographic Test and Training Drum Requirements
26.	CCP-TP-030	28	CCP CH TRU Waste Certification and WWIS/WDS Data Entry
27.	CCP-TP-033	16	CCP Shipping of CH TRU Waste
28.	CCP-TP-053	7	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
29.	CCP-TP-054	2	CCP Adjustable Center of Gravity Lift Fixture Preoperational Checks and Shutdown
30.	CCP-TP-055	4	CCP Varian Porta-Test Leak Detector Operations
31.	CCP-TP-058	2	CCP NDA Performance Demonstration Program
32.	CCP-TP-068	6	CCP Standardized Container Management
33.	CCP TP-080	1	CCP Operating the WMF-610 Real-Time Radiography (RTR) System
34.	CCP-TP-082	7	CCP Preparing and Handling Waste Drums for Headspace Gas Sampling
35.	CCP-TP-083	6	CCP Gas Generation Testing
36.	CCP-TP-086	14	CCP CH Packaging Payload Assembly
37.	CCP-TP-093	13	CCP Sampling of TRU Waste Containers
38.	CCP-TP-106	6	CCP Headspace Gas Sampling Batch Data Report Preparation
39.	CCP-TP-107	11	Operating the CCP High Efficiency Neutron Counter Using NDA 2000
40.	CCP-TP-108	6	Calibrating the CCP High Efficiency Neutron Counter Using NDA 2000
41.	CCP-TP-109	6	CCP Data Reviewing, Validating, and Reporting Procedure
42.	CCP-TP-115	4	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
43.	CCP-TP-119	3	CCP Operating the Real-Time Radiography (RTR) System #5

LISTING OF AUDITED DOCUMENTS			
	Document No.	Rev	Document Title
44.	CCP-TP-138	1	CCP Execution of Long-Term Objective for the Unified Flammable Gas Test Procedure
45.	CCP-TP-146	7	CCP SuperHENC Operating Procedure
46.	CCP-TP-148	4	CCP SuperHENC Data Reviewing, Validating and Reporting Procedure
47.	CCP-TP-162	0	CCP Random Selection of Containers for Solids and Headspace Gas Sampling and Analysis
48.	CCP-TP-170	2	CCP SuperHENC Calibration Procedure
49.	CCP-TP-500	8	CCP Remote-Handled Waste Visual Examination
50.	CCP-TP-504	10	CCP Dose-to-Curie Survey Procedure for Remote-Handled Transuranic Waste
51.	CCP-TP-506	2	CCP Preparation of the RH TRU Waste AK Characterization Reconciliation Report
52.	CCP-TP-507	6	CCP Shipping of Remote-Handled Transuranic Waste
53.	CCP-TP-508	3	CCP RH Standard Real-Time Radiography Inspection Procedure
54.	CCP-TP-509	2	CCP Remote-Handled Transuranic Container Tracking
55.	CCP-TP-510	0	CCP Remote-Handled Radiography test and Training Drum Requirements
56.	CCP-TP-512	3	CCP Remote-Handled Waste Sampling
57.	CCP-TP-530	9	CCP RH TRU Waste Certification and WWIS/WDS Data Entry
58.	DOE/WIPP-06-3345	3.2	Waste Isolation Pilot Plant Flammable Gas Analysis
59.	WP 13-QA.03	17	Quality Assurance Independent Assessment Program

Processes and Equipment Reviewed During Audit A-10-16 of the INL/CCP

WIPP #	Process/Equipment Description	Applicable to the Following Waste Streams/Groups of Waste Streams	Currently Approved by NMED	Currently Approved by EPA
NEW PROCESSES OR EQUIPMENT				
N/A	Solids/Soils and Gravel Sampling and Custody for RH	Solids (S3000)	NO	NO
14DTC1	Radiological characterization process using dose-to-curie (DTC) and modeling-derived scaling factors for assigning radionuclide values to RH waste stream Procedure CCP-TP-504	Solids (S3000)	N/A	NO
14RHVE1	Visual Examination Procedure – CCP-TP-500	Solids (S3000)	NO	NO
PREVIOUSLY APPROVED PROCESSES OR EQUIPMENT				
The following were evaluated for recertification during CBFO Audit A-10-16				
14VE1	Visual Examination (VE) Procedure – CCP-TP-006 Description – Visual Examination Technique (VET)	Solids (S3000) Soils (S4000) Debris (S5000)	YES	YES
14RHVE1	Visual Examination Procedure – CCP-TP-500 Description - The VE of audio/video media process used for a total of 70 retrievably stored remote-handled (RH) debris waste drums.	RH Debris (S5000) Waste Stream ID-ANLE-S5000	YES	YES
14RR2	Nondestructive Examination Procedure – CCP-TP-053 Equipment – MCS RTR-5 Description – MCS Real-time Radiography (RTR) Mobile Characterization (RTR-5) System	Solids (S3000) Debris (S5000)	YES	YES
14RRH1	Nondestructive Examination Procedure – CCP-TP-508 Equipment – RTR-RTR-0659 Description – VJ Technologies, Real-time Radiography Characterization (RTR-RTR-0659) System	RH Debris (S5000) Waste Stream ID-ANLE-S5000	YES	YES

Processes and Equipment Reviewed During Audit A-10-16 of the INL/CCP

WIPP #	Process/Equipment Description	Applicable to the Following Waste Streams/Groups of Waste Streams	Currently Approved by NMED	Currently Approved by EPA
14GG1	Gas Generation Testing Procedure – CCP-TP-089 Equipment – MGSS Unit/Cart 1 (GC-14B) Description – Gas Generation Testing 55-gallon drums	Waste Type IV	N/A	N/A
14GG2	Gas Generation Testing Procedure – CCP-TP-089 Equipment – MGSS Unit/Cart 2 (GC-17A) Description – Gas Generation Testing 55-gallon drums	Waste Type IV	N/A	N/A
N/A	Acceptable Knowledge	Solids (S3000) Soils/Gravel (S4000) Debris (S5000) RH Debris (S5000) Waste Stream ID-ANLE-S5000	YES	YES
N/A	Solids/ Soil and Gravel Sampling and Custody	Solids (S3000) Soils (S4000)	YES	YES
N/A	SUMMA® Headspace Gas (HSG) Sampling and Custody	Debris (S5000) RH Debris (S5000) Waste Stream ID-ANLE-S5000	YES	N/A
N/A	Data Verification and Validation	Solids (S3000) Soils (S4000) Debris (S5000) RH Debris (S5000) Waste Stream ID-ANLE-S5000	YES	YES

Processes and Equipment Reviewed During Audit A-10-16 of the INL/CCP

WIPP #	Process/Equipment Description	Applicable to the Following Waste Streams/Groups of Waste Streams	Currently Approved by NMED	Currently Approved by EPA
N/A	WIPP Waste Information System (WWIS)	Solids (S3000) Soils (S4000) Debris (S5000) RH Debris (S5000) Waste Stream ID-ANLE-S5000	YES	YES
14SHC1	Nondestructive Assay Procedure – CCP-TP-146 Description – CCP Super High Efficiency Neutron Counter	Solids (S3000) Debris (S5000)	N/A	YES
14HENC1	Nondestructive Assay Procedure – CCP-TP-107 Description – CCP High Efficiency Neutron Counter	Solids (S3000) Soils (S4000) Debris (S5000)	N/A	YES
14SGRS1	Nondestructive Assay Procedure – CCP-TP-115 Description – Stored Waste Examination Pilot Plant (SWEPP) Gamma Ray Spectrometer (SGRS)	Solids (S3000) Soils (S4000) Debris (S5000)	N/A	YES
14WAGS1	Nondestructive Assay Procedure – CCP-TP-019 Description – Waste Assay Gamma Spectrometer	Solids (S3000) Soils (S4000) Debris (S5000)	N/A	YES
14DTC1	Radiological characterization process using dose-to-curie (DTC) and modeling-derived scaling factors for assigning radionuclide values to RH waste stream Procedure CCP-TP-504	Debris (S5000)	N/A	YES
14HG2	Flammable Gas Analysis DOE/WIPP-06-3345	Solids (S3000) Soils (S4000) Debris (S5000) RH Debris (S5000)	N/A	N/A

Processes and Equipment Reviewed During Audit A-10-16 of the INL/CCP

WIPP #	Process/Equipment Description	Applicable to the Following Waste Streams/Groups of Waste Streams	Currently Approved by NMED	Currently Approved by EPA
14HG5	Flammable Gas Analysis DOE/WIPP-06-3345	Solids (S3000) Soils (S4000) Debris (S5000) RH Debris (S5000)	N/A	N/A
14HG6	Flammable Gas Analysis DOE/WIPP-06-3345	Solids (S3000) Soils (S4000) Debris (S5000) RH Debris (S5000)	N/A	N/A
N/A	Load Management	Solids (S3000) Debris (S5000)	N/A	YES