DOE F 1325.8

United States Government **Department of Energy**

memorandum

Carlsbad Field Office
Carlsbad, New Mexico 88221

DATE: MAR 18 2014

REPLY TO ATTN OF: CBFO:NTP:JRS:GL:14-1856:UFC 5900.00

SUBJECT: INL-CCP Recertification Audit A-13-18 and the INL-CCP Analytical Laboratories Closeout Audit A-13-19

TO: Mr. Benjamine B. Roberts, DOE-ID
M. F. Sharif, President and Project Manager, Nuclear Waste Partnership LLC

The Carlsbad Field Office (CBFO) has completed the annual Recertification Audit A-13-18 of the Central Characterization Program (CCP) Transuranic (TRU) waste characterization activities at the Idaho National Laboratory (INL) (hereinafter referred to as INL-CCP) conducted June 3-6, 2013. The characterization, certification, quality assurance, and transportation activities of the contact-handled (CH) Summary Category Groups (SCGs) S3000 homogeneous solids, S4000 soils/gravel, and S5000 debris wastes and remote-handled (RH) Summary Category Groups (SCGs) S3000 homogeneous solids, and S5000 debris wastes were determined to be adequate, satisfactorily implemented, and effective.

The CBFO conducted Audit A-13-19 on July 9-11, 2013 of the INL-CCP Analytical Laboratories for closeout of characterization and certification activities for *headspace gas analysis* of SCG S5000 debris waste and *solids analysis* of SCGs S3000 homogeneous solids and S4000 soils/gravel waste. The implementing procedures were adequate relative to the flow-down of requirements and the technical requirements were satisfactorily implemented and effective. TRU waste characterization and certification activities have been completed at the INL-CCP Analytical Laboratories and applicable requirements have been verified.

The audit teams determined that the INL-CCP TRU programs were in compliance with the *Waste Analysis Plan* (WAP) of the Waste Isolation Pilot Plant (WIPP) *Hazardous Waste Facility Permit* (HWFP), the CBFO *Quality Assurance Program Document* (QAPD), the *TRU Waste Acceptance Criteria for the Waste Isolation Pilot Plant* (WIPP WAC), *RH TRU Waste Characterization Program Implementation Plan* (WCPIP), the CH and RH *Transuranic Authorized Methods for Payload Control* (TRAMPAC), and the *RH TRU 72B Safety Analysis Report* (SAR) and *Certifications of Compliance*.

Based on the results of the CBFO Audits/Surveillances (See Attachment 1), and conditions and limitations provided by the New Mexico Environment Department (NMED) and Environmental Protection Agency (EPA), the CBFO grants continued authority at the INL-CCP for TRU waste characterization, certification, and transportation activities as identified in Table 1, page 4 and Table 2, page 5 of this memorandum.

TRU waste characterization, certification, or transportation using significantly revised or new processes, procedures, or systems must be evaluated by the CBFO prior to their implementation. Included in this memo are the following attachments:

- *Attachment 1* describes the CCP certification program status;
- *Attachment 2* contains the list of processes/equipment from Table 1 and 2 of this memorandum certified at this site;
- *Attachment 3* contains the list of the CCP certified procedures/documents; and
- *Attachment 4* describes specific CCP waste characterization process elements that must be reported to the EPA. These process elements are identified as Tier 1 changes and Tier 2 changes. The INL-CCP shall not ship for disposal at the WIPP any wastes affected by a Tier 1 process element change without prior CBFO approval, and the CCP shall report Tier 2 changes to the CBFO on a quarterly basis.

If you have any questions, please contact Mr. J.R. Stroble, Director of the Office of the National TRU Program, at (575) 234-7313.

Jose R. Franco

Jose R. Franco, Manager
Carlsbad Field Office

Attachments (4)

CBFO:NTP:JRS:GL:14-1856:UFC 5900.00

cc: w/attachments

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Table 1
INL-CCP CH Certified Waste Characterization Processes

Characterization Process[3]	CH S3000 Homogeneous Solids		CH S4000 Soils/gravel		CH S5000 Debris	
	Newly generated	Retrievably-stored	Newly generated	Retrievably-stored	Newly generated	Retrievably-stored
Acceptable Knowledge	APPROVED	APPROVED	APPROVED	N/A	APPROVED	APPROVED
Load Management	APPROVED[1]	APPROVED[1]	APPROVED	N/A	APPROVED[1]	APPROVED[1]
Data Validation & Verification (V&V)	APPROVED	APPROVED	APPROVED	N/A	APPROVED	APPROVED
Visual Examination[2]	APPROVED	APPROVED	APPROVED	N/A	APPROVED	N/A
Nondestructive assay (NDA)	APPROVED	APPROVED	APPROVED	N/A	APPROVED	APPROVED
Real-time Radiography (RTR)	N/A	APPROVED	N/A	N/A	N/A	APPROVED
Dose-to-Curie (DTC)	N/A	N/A	N/A	N/A	N/A	N/A
WIPP Waste Information System (WWIS)	APPROVED	APPROVED	APPROVED	N/A	APPROVED	APPROVED

[1] Debris and solid waste from AMWTP characterized by INL-CCP may not be load managed with waste characterized by the AMWTP contractor. (Exception – new waste stream "S3000" will be made up of a mix of "ID-RF-S3114" and "BNINW216", which are approved for load management. "S3000" is approved for load management.)

[2] VE of Record is not approved by NMED based on August 4, 2009 letter based on A-09-08.

[3] Characterization Processes in this table may not be completely listed in Attachment 2.

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Table 2
INL-CCP RH Certified Waste Characterization Processes

Characterization Process[4]	RH S3000 Homogeneous Solids		RH S4000 Soils/gravel		RH S5000 Debris	
	Newly Generated	Retrievably-Stored	Newly Generated	Retrievably-Stored	Newly Generated	Retrievably-Stored
Acceptable Knowledge	N/A	N/A	N/A	N/A	N/A	APPROVED
Load Management	N/A	N/A	N/A	N/A	N/A	N/A
Data Validation & Verification (V&V)	N/A	N/A	N/A	N/A	N/A	APPROVED
Visual Examination[2]	APPROVED[3]	APPROVED[3]	APPROVED[3]	APPROVED[3]	APPROVED[3]	APPROVED[1,3]
Nondestructive assay (NDA)	N/A	N/A	N/A	N/A	N/A	N/A
Real-time Radiography (RTR)	N/A	N/A	N/A	N/A	N/A	APPROVED
Dose-to-Curie (DTC)	N/A	APPROVED	N/A	N/A	N/A	APPROVED
WIPP Waste Information System (WWIS)	N/A	N/A	N/A	N/A	N/A	APPROVED

[1] Tier 1 EPA Approval of VE of audio/video media process used for a total of 70 retrievably-stored RH debris waste drums included in batch data reports (BDRs) RHINLVE060001, RHINLVE060002, RHIINLVE060003, and RHINLVE060004 on January 25, 2007

[2] VE of Record is not approved by NMED based on August 4, 2009 letter based on A-09-08.

[3] Tier 1 EPA approval of the visual examination technique (VET) to characterize RH TRU S3000, S4000, and S5000 waste categories at INL on September 2009.

[4] Characterization Processes in this table may not be completely listed in Attachment 2.

- Tier 1 EPA Approval for 605 containers on January 12, 2007. Tier 1 56 waste containers from K Cell debris waste on January 2008.
- Tier 1 EPA approval to include the addition of 12 containers to RH Waste Stream ID-ANLE-S5000; a new RH Waste Stream ID-HFEF-S5400-RH, Lot 1A with 28 casks; and 8 containers of retrievably-stored remote-handled debris waste from Waste Stream ID-MFC-S5400-RH on January 2010.
- Tier 1 EPA approval to include a new RH Waste Stream ID-INTEC-RH consisting of 2 30-gallon drums overpacked into 55-gallon drums and collection and analysis of RH TRU debris samples by INTEC laboratory for the purpose of supporting radionuclide-specific scaling factors on August 2010.
- Tier 1 EPA approval to include RH Waste Stream ID-HFEF-S5400-RH, Lot 1B cans on August 2010.
- Tier 1 EPA approvals to include RH Waste Streams Adding ID-RTC-S3000 (solids) and IN-ID-NRF-153 (debris) on November 1, 2010.
- Tier 1 EPA approvals to include Lot 4A to Waste Stream ID-HFEF-S5400-RH (Lot 4A) on March 23, 2011.
- Tier 1 EPA approval to include the IN-ID-NRF-SPC Waste Stream on March 12, 2012.
- Tier 1 EPA approval to include the Lot 2 Waste from ANL-E as part of INL Waste Stream ID-ANLE-S5000 (Lot 2) on July 25, 2012.

CENTRAL CHARACTERIZATION PROJECT AT IDAHO NATIONAL LABORATORY CERTIFICATION PROGRAM STATUS

The CBFO Director of the Office of the National TRU Program and the CBFO Director of the Office of the Quality Assurance Program have evaluated the documentation supporting the compliance of the Central Characterization Project (CCP) TRU waste program deployed at the Idaho National Laboratory (INL) (hereinafter referred to as INL-CCP).

PROGRAM STATUS

- All program elements remain complete.
- The following site program documents are current and comply with the CBFO requirements*:
  - **CCP-PO-001, Revision 21** - *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
    Memorandum CBFO:NTP:JRS:PG:13-0487:UFC 5900.00 approved April 17, 2013;
  - **CCP-PO-002, Revision 27** - *CCP Transuranic Waste Certification Plan*
    Memorandum CBFO:NTP:JRS:PG:13-0593:UFC 5900.00 approved May 31, 2013;
  - **CCP-PO-003, Revision 13** - *CCP Transuranic Authorized Methods for Payload Control*
    Memorandum CBFO:NTP:JRS:GL:13-0671:UFC:5900.00 approved July 29, 2013; and
  - **CCP-PO-505, Revision 2** - *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control*
    Memorandum CBFO:NTP:MP:PG:13-0435:UFC 5900.00 approved February 26, 2013.

  ***Note that the program documents listed above are the current revision and may not be the revision that was audited.**
- Certified Systems – See Attachment 2 List of Processes/Equipment certified and used by the CCP at the INL from Tables 1 and 2 of this Memorandum.
- Standard Operating Procedures – See Attachment 3 for the complete list of certified procedures/documents used by the CCP at the INL.
- Tiering of CH and RH TRU Waste Characterization Processes – See Attachment 4 for the implementation by the CCP at the INL (based on EPA Baseline Inspections).

- The CCP participated in the following performance demonstration programs (PDPs)*:
  - **NDA PDP – Cycle 20A approval** for radioassay of TRU waste drums using the WAGS (IN03/ING2) and the SGRS (IN04/ING3), and radioassay of TRU waste drums, except sludge in TRU waste drums using the SuperHENC (IN05/INN2). Memorandum CBFO:NTP:MB:CC:13-0644:UFC 5900.00 dated July 10, 2013.
  - **NDA PDP - Cycle B13A approval** for radioassay of TRU waste contained in standard waste boxes using the SuperHENC (IN05/INN2). Memorandum CBFO:NTP:MB:CC:13-0770:UFC 5900.00 dated October 28, 2013.

  ***Note that the PDP cycles listed above are the current revision and may not be the revision that was audited.**

- The CBFO conducted Recertification Audit A-13-18 of the INL-CCP on June 3-6, 2013.
  - The Interim Audit Report was issued on June 28, 2013.
  - The Final Audit Report was issued to the NMED on November 19, 2013.
  - The NMED approval was issued on January 6, 2014.

- The CBFO conducted Audit A-13-19 on July 9-11, 2013 of the INL-CCP Analytical Laboratories for closeout of characterization and certification activities for *headspace gas analysis* of SCG S5000 debris waste and *solids analysis* of SCGs S3000 homogeneous solids and S4000 soils/gravel waste.
  - The Interim Audit Report was issued on August 8, 2013.
  - The Final Audit Report was issued to NMED on November 4, 2013.
  - The NMED approval on Audit A-13-19 was issued on December 10, 2013.

- The CBFO conducted a Quality Assurance Program Audit A-13-11 on April 16-18, 2013.
  - CARs 13-024, 13-025, and 13-026 were issued on April 29, 2013.
  - CAR 13-024 closed on May 30, 2013.
  - CAR 13-025 closed on June 11, 2013.
  - CAR 13-026 closed on June 25, 2013.
  - The Audit Report was issued on May 31, 2013.

- The CBFO conducted Audit A-13-03 of the CCP CH and RH transportation activities on December 4-6, 2012.
  - The Audit Report was issued on January 23, 2013.

- The EPA issued concurrence on the draft recertification memo on February 27, 2014.

RECOMMENDATION

The recommendation to the CBFO Manager is for CCP at the INL to continue the authority for TRU waste characterization, certification, and transportation activities of Contact-Handled and Remote-Handled Summary Categories S3000 homogeneous solids, S4000 soils/gravel, and S5000 debris waste. Attachments 2 and 3 list the systems and procedures that constitute the bounds of this authority. Attachment 4 is the CH and RH Tiering of TRU Waste Characterization Processes implemented by the CCP at INL.

CONCURRENCE

J. R. Stroble, Director
Office of the National TRU Program

2-25-14
Date

Mike Brown, Acting Director
Office of Quality Assurance

2-26-14
Date

CENTRAL CHARACTERIZATION PROJECT
List of Processes/Equipment Certified from Table's 1 and 2 of the Memo at Idaho National Laboratories

WIPP WWIS #	Site Equipment # or Title	Description	Components	Software	NDA Calibrated and TMU
Non-Destructive Assay (NDA)					
14SHC1	SuperHENC	Super High Efficiency Neutron Counter (SuperHENC) Operating Procedure CCP-TP-146 SWBs, 55 gallon drums, 100 gallon drums	• HPGe Detector • (260) ^{3}He Tubes • Neutron Assay Chamber • Gamma Assay Area with rotator • Cf-252 add-a-source assembly	• SUPRHENC.EXE • PC-FRAM (fixed energy response-function analysis with multiple efficiencies • MAESTRO • Neutron Gamma Integration (NGI) • SuperHENC_QC.xls	The calibration of the SuperHENC is documented in BII-5221-SRF-001, "SUPERHENC RFETS Calibration Documentation Package" and BII-5221-CVR-001, "Calibration and Validation Report SuperHENC Mobile Assay System." The TMU for the SuperHENC is documented in BII-5221-CVR-001, Section 4.11.
14WAGS1	WAGS	Waste Assay Gamma Spectrometer (WAGS) Quantitative gamma acquisition system with transmission matrix corrections, multi curve density and gamma isotopic capabilities. Operating Procedure CCP-TP-019 55 gallon drums	• 6 BeGe detectors • Shielded Assay Chamber • 3 Ba-133 transmission sources • 6 Digital Spectrum Analyzers 1000 • Pulser	• NDA 2000, Version 4.0 (MGA.exe and MGA-U.exe are tracked as part of NDA 2000) • Genie 2000, Version 3.0	Calibration for the WAGS is discussed in CCP-INL-WAGS-001, Revision 1 and CCP-INL-WAGS-003, Revision 0. For the WAGS the calibrated range and operational ranges are synonymous. CCP-INL-WAGS-08-002, "Waste Assay Gamma Spectrometer Multi-Curve Efficiency Calibration Extension Addendum" extends the density range. The TMU for the WAGS is documented in CCP-INL-WAGS-002, "Total Measurement Uncertainty for the WAGS System."
14SGRS1	SWEPP SGRS	Stored Waste Examination Pilot Plant (SWEPP) Gamma Ray Spectrometer (SGRS) Quantitative gamma acquisition system with multi-curve density and gamma isotopic capabilities. Operating Procedure CCP-TP-115 55 gallon drums	• 4 BeGe detectors • Shielded Assay Chamber • 1 Pulser • 4 Digital Spectrum Analyzers	• NDA 2000, Version 4.0 (MGA.exe and MGA-U.exe are tracked as part of NDA 2000) • Genie 2000, Version 3.0	The calibration for the SGRS is discussed in CCP-INL-SGRS-001, Revision 1. For the SGRS the calibrated range and operational ranges are synonymous. The TMU for the SGRS is documented in CCP-INL-SGRS-0002, "Total Measurement Uncertainty for the SGRS System."
Dose-to-Curie (DTC)					
14DTC1	Dose-to-Curie	Radiological characterization process using dose-to-curie (DTC) and modeling-derived scaling factors for assigning radionuclide values to RH waste streams for which the scaling factors are applicable, as described in the waste stream specific radiological reports.	As identified in CCP-TP-504	As identified in CCP-TP-504	N/A

CENTRAL CHARACTERIZATION PROJECT
List of Processes/Equipment Certified from Table's 1 and 2 of the Memo at Idaho National Laboratories

WIPP WWIS #	Site Equipment # or Title	Description	Components	Software	NDA Calibrated and TMU
		Dose-rate fractional contribution of Cs-137 and Co-60 using OSPREY™ $La_3Br(Ce)$ gamma detector Procedure CCP-TP-504			
Non-Destructive Examination (NDE)					
14RR2	MCS RTR-5	Real-time Radiography Mobile Characterization System's RTR-5 [built by VJ Technologies] Procedure CCP-TP-053	• Shielded x-ray enclosure with a hydraulic drum loading door and manually opened personnel door • Conveyer cart including drum manipulation equipment • X-ray imaging system including x-ray tube, image intensifier, and video camera • Video/audio recording equipment • Mobile platform	N/A	N/A
14RRH1	RTR-RTR-0659	Real-time Radiography Characterization System [built by VJ Technologies] Procedure CCP-TP-508	• X-ray imaging system including x-ray tube, image intensifier, and video camera • Video/audio recording equipment • Fixed platform	N/A	N/A
Visual Examination (VE)					
14RHVE1	Audio/video review/VE Technique	Visual Examination Technique (VET) to characterize RH TRU SCGs S3000, S4000, and S5000 waste. Procedure CCP-TP-500	N/A	N/A	N/A
14VE1	ARP Packaging Stations	Visual Examination Technique for newly generated waste and repackaging of waste produced from the retrieval of buried waste at the Idaho National Laboratory Procedure CCP-TP-006	N/A	N/A	N/A

List of Deactivated Equipment			
WIPP #	**Site Equipment #**	**Site Description**	**Date Deactivated**
12HM2	ID 356094	INTEC Lab – Total metals digestion specified in procedure ACMM-8909 (Replaced by 12HM9)	May 2005
12HM1	ID322554	INTEC Lab – Total metals digestion specified in procedure ACMM-8909 (Replaced by 12HM10)	November 2005
14RR1	MCS RTR-2	Real-Time Radiography Mobile Characterization System RTR-2 [built by VJ Technologies] – 55-gallon drums – specified in procedure CCP-TP-102	December 2005
12HA5	SV-2	INTEC Lab – Total semi-volatile organic compounds specified in procedure ACMM-9270	March 2006
12HA11	SV-7	INTEC Lab – Total semi-volatile organic compounds specified in procedure ACMM-9270	June 2006
12HA6	SV-3	INTEC Lab – Total semi-volatile organic compounds specified in procedure ACMM-9270	June 2006
12SS1	W0096-0563-EC-00	Materials and Fuel Complex – Core sampling as specified in procedure HFEF-OI-6910	June 2006
12SS2	W0096-0563-EC-00	Materials and Fuel Complex – Small Container Sampling as specified in procedure HFEF-OI-6923	June 2006
12HE7	GC-5	Environmental Chemistry Lab - Headspace gas hydrogen and methane analysis specified in procedure ACMM-9925	May 2007
12HE8	GC-6	Environmental Chemistry Lab - Headspace gas hydrogen and methane analysis specified in procedure ACMM-9925	May 2007
14TGS1	CCP-TGS-1	CCP Tomographic Gamma Scanner, Tomographic gamma imaging system mounted in transportation container, specified in procedure CCP-TP-097.	March 2008
12HE1	GC/MS-E	ECL Headspace gas volatile organic compounds specified in procedure CCP-TP-175	April 2008
12HE3	GC/MS-G	ECL Headspace gas volatile organic compounds specified in procedure CCP-TP-175	April 2008
12HA9	GC-5	Analytical Laboratory Department (ALD) – Total non-halogenated volatile organic compounds specified in procedure CCP-TP-186, GC-FID (Method described in CCP-TP-186)	September 2009
12HM4	ICP-5	Analytical Laboratory Department (ALD) – Total metals analysis specified in procedure CCP-TP-182, Total metals analysis (ICP-AES) specified in procedure CCP-TP-182	September 2009
12HM7	CVHG-1	Analytical Laboratory Department (ALD) – Total metals (Hg) analysis specified in procedure CCP-TP-181	September 2009
12HA1	VOA-1	Analytical Laboratory Department (ALD) – Total purgable volatile organic compound analysis specified in procedure CCP-TP-184, GC/MS (Method described in CCP-TP-184), Finnigan Magnum	September 2009
12HM3	ICP-4	Analytical Laboratory Department (ALD) – Total metals analysis specified in procedure CCP-TP-182	October 2009
12HE2	GC/MS-F	Environmental Chemistry Lab (ECL) – Headspace gas Volatile organic compounds specified in procedure CCP-TP-175	May 2010
12HE5	GC-1	Environmental Chemistry Lab (ECL) - Headspace gas volatile organic compounds specified in procedure CCP-TP-173 PDP ID - GC-1	May 2011
12HE9	GC-7	Environmental Chemistry Lab (ECL) - Headspace gas volatile organic compounds specified in procedure, CCP-TP-173 PDP ID - GC-7	May 2011
14HENC1	CCP-HENC-01	CCP High Efficiency Neutron Counter combined neutron and gamma system - Operating Procedure CCP-TP-107 55 gallon drums	July 13, 2012

List of Deactivated Equipment			
WIPP #	**Site Equipment #**	**Site Description**	**Date Deactivated**
12HE4	GC/MS-H	ECL - Headspace gas volatile organic compounds specified in procedure CCP-TP-175	April 2012
12HE6	GC-2	ECL - Headspace gas volatile organic compounds specified in procedure CCP-TP-173	April 2012
12HE10	GC/MS-I	Environmental Chemistry Lab (ECL) - Headspace gas volatile organic compounds specified in procedure CCP-TP-175 PDP ID – GC/MS-I	March 2013
12HE11	GC/MS-J	Environmental Chemistry Lab (ECL) - Headspace gas volatile organic compounds specified in procedure CCP-TP-175 PDP ID – GS/MS-J	March 2013
8HSG2	HSG	SUMMA Sampling process on selected waste containers from waste stream lots.	March 2013
12HA8	VOA-4	Analytical Laboratory Department (ALD) – Total purgable volatile organic compound analysis specified in procedure CCP-TP-184	March 2013
12HA3	GC-1	Analytical Laboratory Department (ALD) – Total non-halogenated volatile organic compounds specified in procedure CCP-TP-186	March 2013
12HA14	GC-6	Analytical Laboratory Department (ALD) – Total non-halogenated volatile organic compounds specified in procedure CCP-TP-186	March 2013
12HA15	GC-7	Analytical Laboratory Department (ALD) – aqueous extractable volatile organic compounds specified in procedure CCP-TP-186	March 2013
12HA10	SV-6	Analytical Laboratory Department (ALD) – Total semi-volatile organic compounds specified in procedure CCP-TP-185	March 2013
12HA12	SV-8	Analytical Laboratory Department (ALD) – Total semi-volatile organic compounds specified in procedure CCP-TP-185	March 2013
12HA13	VOA-5	Analytical Laboratory Department (ALD) – Total purgable volatile organic compound analysis specified in procedure CCP-TP-184	March 2013
12HM11	ICP-7	Analytical Laboratory Department (ALD) – Total metals analysis specified in procedure CCP-TP-182	March 2013
12HM13	ICP-8	Analytical Laboratory Department (ALD) – Total metals analysis specified in procedure CCP-TP-182	March 2013
12HM8	CVHG-2	Analytical Laboratory Department (ALD) – Total metals (Hg) analysis specified in procedure CCP-TP-181	March 2013
12HM12	CVHG-3	Analytical Laboratory Department (ALD) – Total metals (Hg) analysis specified in procedure CCP-TP-181	March 2013
12HM9	MW-3	Analytical Laboratory Department (ALD) - Total metals digestion specified in procedure CCP-TP-183	March 2013
12HM10	MW-4	Analytical Laboratory Department (ALD) – Total metals digestion specified in procedure CCP-TP-183	March 2013
12HP1	HPLC-1	Analytical Laboratory Department (ALD) – Determination of Formaldehyde and Hydrazine by High-Performance Liquid Chromatography (HPLC) in procedure CCP-TP-196 and CCP-TP-197	March 2013

CENTRAL CHARACTERIZATION PROJECT
LIST OF CERTIFIED PROCEDURES
AT IDAHO NATIONAL LABORATORY

#	Procedure No.	Procedure Title
1.	CCP-PO-001	CCP Transuranic Waste Characterization Quality Assurance Project Plan
2.	CCP-PO-002	CCP Transuranic Waste Certification Plan
3.	CCP-PO-003	CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)
4.	CCP-PO-005	CCP Conduct of Operations
5.	CCP-PO-006	CCP Conduct of Operations Matrix
6.	CCP-PO-016	CCP Gas Generation Testing Quality Assurance Project Plan
7.	CCP-PO-024	CCP/INL Interface Document
8.	CCP-PO-501	CCP/INL RH TRU Waste Interface Document
9.	CCP-PO-505	CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)
10.	CCP-QP-001	CCP Graded Approach
11.	CCP-QP-002	CCP Training and Qualification Plan
12.	CCP-QP-005	CCP TRU Nonconforming Item Reporting and Control
13.	CCP-QP-008	CCP Records Management
14.	CCP-QP-010	CCP Document Preparation, Approval, and Control
15.	CCP-QP-014	CCP Quality Assurance Trend Analysis and Reporting
16.	CCP-QP-015	CCP Procurement
17.	CCP-QP-016	CCP Control of Measuring and Testing Equipment
18.	CCP-QP-017	CCP Identification and Control of Items
19.	CCP-QP-018	CCP Management Assessment
20.	CCP-QP-019	CCP Quality Assurance Reporting to Management
21.	CCP-QP-021	CCP Surveillance Program
22.	CCP-QP-022	CCP Software Quality Assurance Plan
23.	CCP-QP-023	CCP Handling, Storage and Shipping
24.	CCP-QP-026	CCP Inspection Control
25.	CCP-QP-027	CCP Test Control
26.	CCP-QP-028	CCP Records Filing, Inventorying, Scheduling, and Dispositioning
27.	CCP-QP-030	CCP Written Practice for the Qualification of CCP Helium Leak Detection Personnel
28.	CCP-TP-001	CCP Project Level Data Validation and Verification
29.	CCP-TP-002	CCP Reconciliation of DQOs and Reporting Characterization Data
30.	CCP-TP-005	CCP Acceptable Knowledge Documentation
31.	CCP-TP-006	CCP Visual Examination Technique for INL Newly Generated TRU Waste
32.	CCP-TP-008	CCP Solids Sampling Procedure
33.	CCP-TP-010	CCP Waste Assay Gamma Spectrometer (WAGS) & SWEPP Gamma Ray Spectrometer (SRGS) Calibration Procedure
34.	CCP-TP-019	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
35.	CCP-TP-028	CCP Radiographic Test Drum and Training Container Construction
36.	CCP-TP-030	CCP CH TRU Waste Certification and WWIS/WDS Data Entry
37.	CCP-TP-033	CCP Shipping of CH TRU Waste
38.	CCP-TP-053	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
39.	CCP-TP-054	CCP Adjustable Center of Gravity Lift Fixture Preoperational Checks and Shutdown
40.	CCP-TP-055	CCP Varian Porta-Test Leak Detector Operations
41.	CCP-TP-058	CCP NDA Performance Demonstration Program
42.	CCP-TP-068	CCP Standardized Container Management
43.	CCP-TP-080	CCP Operating the WMF 610 Real-Time Radiography (RTR) System
44.	CCP-TP-082	CCP Waste Container Filter Vent Operation
45.	CCP-TP-083	CCP Gas Generation Testing
46.	CCP-TP-086	CCP CH Packaging Payload Assembly
47.	CCP-TP-107	CCP Operating the High Efficiency Neutron Counter #3 (HENC #3) Using NDA 2000
48.	CCP-TP-108	CCP Calibrating the High Efficiency Neutron Counter #3 (HENC #3) Using NDA 2000
49.	CCP-TP-109	CCP Data Reviewing, Validating, and Reporting Procedure
50.	CCP-TP-113	CCP Standard Contact-Handled Waste Visual Examination
51.	CCP-TP-115	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
52.	CCP-TP-119	CCP Operating the Real-Time Radiography (RTR) System #5
53.	CCP-TP-138	CCP Execution of Long-Term Objective for the Unified Flammable Gas Test Procedure
54.	CCP-TP-146	CCP SuperHENC Operating Procedure
55.	CCP-TP-148	CCP SuperHENC Data Reviewing, Validating, and Reporting Procedure

CENTRAL CHARACTERIZATION PROJECT LIST OF CERTIFIED PROCEDURES AT IDAHO NATIONAL LABORATORY		
#	**Procedure No.**	**Procedure Title**
56.	CCP-TP-163	CCP Evaluation of Waste Packaging Records for Visual Examination of Records
57.	CCP-TP-170	CCP SuperHENC Calibration Procedure
58.	CCP-TP-500	CCP Remote-Handled Waste Visual Examination
59.	CCP-TP-504	CCP Dose-to-Curie Survey Procedure for Remote-Handled Transuranic Waste
60.	CCP-TP-506	CCP Preparation of the Remote-Handled Transuranic Waste Acceptable Knowledge Characterization Reconciliation Report
61.	CCP-TP-507	CCP Shipping of Remote-Handled Transuranic Waste
62.	CCP-TP-508	CCP RH Standard Real-Time Radiography Inspection Procedure
63.	CCP-TP-509	CCP Remote-Handled Transuranic Container Tracking
64.	CCP-TP-512	CCP Remote-Handled Waste Sampling
65.	CCP-TP-530	CCP RH TRU Waste Certification and WWIS/WDS Data Entry

CENTRAL CHARACTERIZATION PROJECT
LIST OF DEACTIVATED PROCEDURES AT IDAHO NATIONAL LABORATORY

#	Procedure No.	Procedure Title	Deactivation Date
1.	CCP-PO-025	CCP WIPP/RCRA Field Sampling and Analysis Plan for the Accelerated Retrieval Project for a Described Area within Pit 4	11/16/06
2.	CCP-QP-009	CCP Work Control Process	10/13/06
3.	CCP-TP-090	CCP Headspace Gas Sampling Using the Automated Manifold System	7/31/06
4.	CCP-TP-091	CCP HSG Data Generation and Batch Data Reporting	6/6/06
5.	CCP-TP-097	CCP Operating the CCP Tomographic Gamma Scanner (TGS)	3/12/08
6.	CCP-TP-110	Setup and Calibration of the CCP Tomographic Gamma Scanner (TGS)	3/12/08
7.	CCP-TP-112	CCP Data Reviewing, Validating, and Reporting for the TGS	3/12/08
8.	CCP-TP-102	CCP RTR #2 Radiography Inspection Operating Procedure – incorporated into CCP-TP-053	11/16/06
9.	HFEF-OI-6862	TWCP Sample Storage and Shipment	6/6/06
10.	HFEF-OI-6890	TWCP Visual Examination	6/6/06
11.	HFEF-OI-6910	TWCP Core Drilling Operations	6/6/06
12.	HFEF-OI-6921	TWCP Solid Sample Preparation	6/6/06
13.	HFEF-OI-6923	Small Container Sample Preparation	6/6/06
14.	NT-AP-03	TRU Waste Characterization Program Data Generation-Level Review	6/6/06
15.	NT-AP-09	TWCP Visual Exam Expert (VEE) Functions and Process	6/6/06
16.	ACLP 4.10	Determination of Method Detection Limits for Gas Analysis – incorporated into CCP-TP-176	5/2/07
17.	ACLP 4.25	Sample Receiving, Custody, and Storage – incorporated into CCP-TP-177	5/2/07
18.	ACLP 4.40	Summa® Canister Cleaning – incorporated into CCP-TP-178	5/2/07
19.	ACLP 4.45	Gas Transfer Manifold Systems and Sample Compositing – incorporated into CCP-TP-179	5/2/07
20.	ACMM-2810	Determination of Mercury by CVAA for TRU Waste Characterization - – incorporated into CCP-TP-181	5/2/07
21.	ACMM-2901	Determination of Metals by ICP-AES for TRU Waste Characterization – incorporated into CCP-TP-182	5/2/07
22.	ACMM-8909	Microwave Assisted Digestion of Homogeneous Solids and Soil/Gravel – incorporated into CCP-TP-183	5/2/07
23.	ACMM-9080	Determination of Polychlorinated Biphenyls (PCBs) by Gas Chromatography	4/27/04
24.	ACMM-9260	Volatile Organic Compounds by Gas Chromatography Mass Spectrometry – incorporated into CCP-TP-184	5/2/07
25.	ACMM-9270	Semivolative Organic Compounds by Gas Chromatography/Mass Spectrometry – incorporated into CCP-TP-185	5/2/07
26.	ACMM-9441	Determination of Nonhalogenated Volatile Organics by Gas Chromatography – incorporated into CCP-TP-186	5/2/07
27.	ACMM-9500	Sample Preparation for Semivolative Organic Compounds and Polychlorinated Biphenyls – incorporated into CCP-TP-187	5/2/07
28.	ACMM-9910	Analysis of Gas Samples for VOCs by GC/FID – incorporated into CCP-TP-173	5/2/07
29.	ACMM-9925	Analysis of Gas Samples for Hydrogen and Methane by Micro GC/TCD	5/2/07
30.	ACMM-9930	Analysis of Gas Samples for VOCs by GC/MS – incorporated into CCP-TP-175	5/2/07
31.	MCP-2002	Analytical Sample Management – incorporated into CCP-TP-180	5/2/07
32.	MCP-2008	Analytical Data Recording, Review and Reporting – incorporated into CCP-TP-188	5/2/07
33.	MCP-2009	Analytical Software Control – incorporated into CCP-QP-022	5/2/07
34.	MCP-2610	QA Program Administrative Controls for the TWCP – incorporated into CCP-PO-001, CCP-PO-002, CCP-PO-003, CCP-QP-002, CCP-QP-005, CCP-QP-006, CCP-QP-008, CCP-QP-010, CCP-QP-016 and CCP-QP-022	5/2/07
35.	MCP-2011	CCP Notebooks and Logbooks	5/2/07

CENTRAL CHARACTERIZATION PROJECT LIST OF DEACTIVATED PROCEDURES AT IDAHO NATIONAL LABORATORY			
#	Procedure No.	Procedure Title	Deactivation Date
36.	PLN-1258	Quality Program Plan for the TWCP – incorporated into CCP-PO-002	5/2/07
37.	PLN-600	Analytical Laboratories Quality Assurance Plan for the TWCP – incorporated into CCP-PO-001 and CCP-TP-188	5/2/07
38.	TWCP-CBFO-SOW	CBFO Statement of Work for the INL TRU Waste Characterization Program – incorporated into CCP-PO-001	5/2/07
39.	CCP-TP-160	CCP Random Selection of Containers for Headspace Gas Sampling and Analysis	77/2/09
40.	CCP-TP-161	CCP Random Selection of Containers for Solids Sampling and Analysis	7/2/09
41.	CCP-TP-089	CCP Mobile Gas Generation Testing Sampling System (MGSS) Sampling Operation	10/23/09
42.	CCP-TP-092	CCP Mobile Gas Generation Testing Sampling System (MGSS) Data Calculation	10/23/09
43.	CCP-PO-031	CCP/Idaho Cleanup Project Analytical Laboratories Department Interface Document	7/18/11
44.	CCP-QP-004	CCP Corrective Action Management	2/6/13
45.	CCP-QP-006	CCP Corrective Action Reporting and Control	2/6/13
46.	CCP-PO-008	CCP Quality Assurance Interface with the WTS Quality Assurance Program	6/3/13
47.	CCP-PO-030	CCP/Battelle Energy Alliance Analytical Chemistry & Instrument Department Interface Document	5/14/13
48.	CCP-PO-031	CCP/Idaho Cleanup Project Analytical Laboratories Department Interface Document	7/18/11
49.	CCP-QP-011	CCP Laboratory Logbooks	5/14/13
50.	CCP-QP-029	CCP Corrective Action Management	9/20/13
51.	CCP-TP-003	CCP Data Analysis for S3000, S4000, and S5000 Characterization	6/19/13
52.	CCP-TP-056	CCP HSG Performance Demonstration Plan	5/14/13
53.	CCP-TP-093	CCP Sampling of TRU Waste Containers	5/14/13
54.	CCP-TP-106	CCP Headspace Gas Sampling Batch Data Report Preparation	5/14/13
55.	CCP-TP-162	CCP Random Selection of Containers for Solids and Headspace Gas Sampling and Analysis	5/14/13
56.	CCP-TP-173	CCP Analysis of Gas Samples for VOCs by GC/FID	5/23/12
57.	CCP-TP-175	CCP Analysis of Gas Samples for VOCs by GS/MS	5/14/13
58.	CCP-TP-176	CCP Determination of Method Detection Limits for Gas Analysis	5/14/13
59.	CCP-TP-177	CCP Sample Receipt, Custody, and Storage	5/14/13
60.	CCP-TP-178	CCP SUMMA® Canister Cleaning	5/14/13
61.	CCP-TP-179	CCP Gas Transfer Manifold Systems and Sample Compositing	5/14/13
62.	CCP-TP-180	CCP Analytical Sample Management	5/14/13
63.	CCP-TP-181	CCP Determination of Mercury by CVAA for TRU Waste Characterization	5/14/13
64.	CCP-TP-182	CCP Determination of Metals of ICP-AES for TRU Waste Characterization	5/14/13
65.	CCP-TP-183	CCP Microwave Assisted Digestion of Homogenous Solids and Soil/Gravel	5/14/13
66.	CCP-TP-184	CCP Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry	5/14/13
67.	CCP-TP-185	CCP Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry	5/14/13
68.	CCP-TP-186	CCP Determination of Nonhalogenated Volatile Organics by Gas Chromatography	5/14/13
69.	CCP-TP-187	CCP Sample Preparation for Semivolatile Organic Compounds	5/14/13
70.	CCP-TP-188	CCP Analytical Data Recording, Review, and Reporting	5/14/13
71.	CCP-TP-196	CCP Determination of Formaldehyde by High-Performance Liquid Chromatography (HPLC).	5/14/13
72.	CCP-TP-197	CCP Determination of Hydrazine by High-Performance Liquid Chromatography (HPLC)	5/14/13
73.	CCP-TP-510	CCP Remote-Handled Radiography Test and Training Drum Requirements	4/9/12

Table 1. Tiering of Contact-Handled Transuranic Waste Characterization Processes Implemented by INL-CCP (Based on May 3–5, 2005, Baseline Inspection and Subsequent Evaluations, Updated July 2013)

Process Elements	INL-CCP CH Waste Characterization Processes – T1	INL-CCP CH Waste Characterization Processes – T2
Acceptable Knowledge, including Load Management	Any new waste category Changes to the accelerated retrieval project targeted wastes from what was presented in CCP-AK-INL-001, Revision 7	Notification to EPA upon completion of or substantive modification** to: • AK-NDA memoranda • AK accuracy reports (annually, at a minimum) • AK-AK and AK-NDA/NDE discrepancy resolution reports • WSPFs, including updates or additions to waste streams within an approved waste category • New and revised AK summary reports • The load management status of approved waste streams • Site procedures requiring CBFO approval • Any analysis evaluating effectiveness of the Waste Identification Process Submission of a list of active INL-CCP CH AKEs and SPMs
Nondestructive Assay	New equipment or substantive physical modifications** to approved equipment Extension of or changes to approved calibration range for approved equipment	Notification to EPA upon substantive modification** to: • Software for approved equipment • Operating ranges upon CBFO approval • Site procedures requiring CBFO approval
Real-Time Radiography	None	Notification to EPA upon: • Substantive modification** to site procedures requiring CBFO approval • New equipment or substantive physical modifications** to approved equipment
Visual Examination and Visual Examination Technique	Changes in the vendor performing visual examination or visual examination technique	Notification to EPA upon substantive modification** to site procedures requiring CBFO approval
WIPP Waste Data System	Changes to WDS algorithms specific to load management requiring revisions to the load management provisions of DOE's CH WAC	Notification to EPA upon substantive modification** to: • Site procedures requiring CBFO approval • WDS algorithms corresponding to changes to the load management provisions of the CH WAC

New T1s, T2s and significant modifications to existing T1s or T2s are in bold text; T1s or T2s that were only revised for style are not shown in bold.

* INL-CCP will report all T2 changes to EPA every three months.

** "Substantive modification" refers to a change with the potential to affect INL-CCP's CH waste characterization processes or documentation of them, excluding changes that are solely related to the environment, safety and health; nuclear safety; or the Resource Conservation and Recovery Act; or that are editorial in nature or are required to address administrative concerns. EPA may request copies of new references that DOE adds during a document revision.

Table 2. Tiering of Remote-Handled Transuranic Waste Characterization Processes Implemented by INL-CCP (Based on June 12–16 and August 9 and 26, 2006, Baseline Inspection and Subsequent Tier 1 Evaluations, Updated July 2013)

Process Elements	INL-CCP RH Waste Characterization Process – T1	INL-CCP RH Waste Characterization Process – T2
Acceptable Knowledge	Any new waste stream not approved under the baseline Addition of containers to approved waste streams if new or different radionuclide scaling factors are required Substantive modification** to AKSRs and certification confirmation test plans (e.g., CCP-AK-INL-500, CCP-AK-INL-502) Load management for any RH waste stream	Notification to EPA upon availability or nonsubstantive modification** of AKSRs and certification confirmation test plans (e.g., CCP- AK- INL-500, CCP-AK-INL-502) Notification to EPA upon availability or modification of: • CCP-TP-005, Attachment 4 that reflects the updated AKSR Source Document Reference List • The WSPF or WSPF change notice; current related attachments, including the CRR, CIS and Summation of Aspects, should be provided with each requested WSPF • AK accuracy reports (annually, at a minimum) • Discrepancy resolution reports and nonconformance reports • AK documentation as a result of Waste Characterization Program Implementation Plan revisions (e.g., CRR) • Correlation or surrogate summary forms for each of the RH containers in this waste stream identified as contact-handled, based on measured dose rates that present nondestructive assay results for assayed containers Submission of a list of active INL-CCP RH AKEs and SPMs Notification to EPA of the intention to add containers to an approved waste stream, including the approximate number of containers and volume of waste, the timeframe for waste generation, characterization, and disposal and submission of an updated AKSR documenting that the pedigree of the additional containers is the same as those covered by the baseline or subsequent T1 approvals*** Submission of a list of fully characterized containers from a population of additional containers proposed as a T2 change, above***

Radiological Characterization, including Dose-to-Curie	Any new waste stream not approved under the baseline or subsequent T1 evaluations or addition of containers to an approved waste stream that requires changing the established radionuclide scaling factors Use of any alternate radiological characterization procedure other than DTC with established scaling factors as documented in CCP-TP-504 Use of any alternate gamma detector with the OSPREY™ system	Notification to EPA upon nonsubstantive** modification of procedures or radiological technical reports (e.g., CCP-TP-504, CCP- AK- INL- 501) requiring CBFO approval Submission of an updated radiological technical report (e.g., CCP-AK-INL-501) documenting that the radiological characterization processes used for the additional containers is the same as those
Process Elements	**INL-CCP RH Waste Characterization Process – T1**	**INL-CCP RH Waste Characterization Process – T2**
	characterization procedure other than the $La_3Br(Ce)$ detector observed in July 2010 Application of new (i.e., not EPA-approved) scaling factor development processes for isotopic determination (applies to new RH waste streams and to the addition of containers to an approved waste stream) Substantive modification** to EPA-approved procedures or radiological characterization technical reports (e.g., CCP-TP-504, CCP-AK-INL-501)	Covered by the baseline or subsequent T1 approvals*** Submission of BDRs or calculation packages for containers selected by EPA from a list of fully characterized containers provided by INL-CCP***
Visual Examination	Visual examination by any new process for SCG S3000, S4000 or S5000 waste. Visual examination by review of existing audio/visual recordings for SCG S3000 or S4000 waste.	Notification to EPA upon substantive modification** to site procedures requiring CBFO approval Submission of BDRs for containers selected by EPA from a list of fully characterized containers provided by INL-CCP***
Real-Time Radiography	Any new debris waste stream or waste from SCG S3000 or S4000 Addition of any new RTR units	Notification to EPA upon substantive modification** to site procedures requiring CBFO approval Submission of BDRs for containers selected by EPA from a list of fully characterized containers provided by INL-CCP***
WIPP Waste Data System	None	Notification to EPA upon substantive modification** to site procedures requiring CBFO approval

New T1s, T2s and significant modifications to existing T1s or T2s are in bold text; T1s or T2s that were only revised for style are not shown in bold.

* INL-CCP will report all unmarked T2 changes to EPA every three months.

** "Substantive modification" refers to a change with the potential to affect INL-CCP's RH waste characterization processes or documentation of them, excluding changes that are solely related to the environment, safety and health; nuclear safety; or the Resource Conservation and Recovery Act; or that are editorial in nature or are required to address administrative concerns. EPA may request copies of new references that DOE adds during a document revision.

*** INL-CCP will report this T2 change immediately.