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Department of Energy

memorandum

Carlsbad Field Office
Carlsbad, New Mexico 88221

DATE: DEC 12 2013

REPLY TO ATTN OF: CBFO:NTP:JRS:PG:13-0798:UFC 5900.00

SUBJECT: Idaho National Laboratory - Central Characterization Program Expansion of Load Management for S3000

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

The Carlsbad Field Office (CBFO) is expanding the Idaho National Laboratory – Central Characterization Program (hereinafter referred to as INL-CCP) certification memorandum CBFO:NTP:JRS:PG:13-0470:UFC 5900.00 dated April 8, 2013. This expansion reflects the load management of contact-handled (CH) homogeneous solids S3000.

During the repackaging process, the same processing area and equipment at ARP V will be used to repackage both the ID-RF-S3114 waste and the BNINW216 waste. Potential residual ID-RF-S3114 presence in the BNINW216 waste exceeds the waste stream definition for BNINW216. Thus, a new waste stream will be created that would combine both the ID-RF-S3114 and BNINW216 into a single S3000 waste stream. Both waste streams (ID-RF-S3114 and BNINW216) are currently approved for load management and therefore a continuance of load management is granted for this new combined waste stream.

The Carlsbad Field Office (CBFO) has completed the annual Recertification Audit A-12-14 of the INL-CCP Analytical Laboratory and Audit A-12-13 of the INL-CCP contact handled (CH) and remote handled (RH) transuranic (TRU) waste program deployed at the INL. The audits were conducted June 11-14, 2012. The characterization, certification, quality assurance, and transportation elements continue to be adequate, satisfactorily implemented, and effective.

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).

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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 EPA, the CBFO is granting 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 the Director of the Office of the National TRU Program, Mr. J.R. Stroble, at (575) 234-7313.

DC Bryson for
Jose R. Franco, Manager
Carlsbad Field Office

Attachment (4)

CBFO:NTP:JRS:PG:13-0798:UFC 5900.00

cc: w/attachments

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*ED denotes electronic distribution

Table 1
INL-CCP CH Certified Waste Characterization Processes

Characterization Process[4]	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[1]	N/A	APPROVED[1]	APPROVED[1]
Data Validation & Verification (V&V)	APPROVED	APPROVED	APPROVED	N/A	APPROVED	APPROVED
Visual Examination[3]	APPROVED	APPROVED[5]	APPROVED	N/A	APPROVED	N/A
Solids sampling	APPROVED (ARP)	APPROVED[2]	APPROVED (ARP)	N/A	N/A	N/A
Headspace Gas Sampling (SUMMA)	N/A	N/A	N/A	N/A	APPROVED	APPROVED
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
INL LABORATORIES UNDER CCP Program						
Solids Analysis	APPROVED	APPROVED	APPROVED	APPROVED	N/A	N/A
Headspace Gas Analysis (canister)	N/A	N/A	N/A	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]Solids sampling is performed by AMWTP.
[3]VE of Record is not approved by NMED based on August 4, 2009 letter based on A-09-08.
[4]Characterization Processes in this table may not be completely listed in Attachment 2.
[5]Surveillance S-13-19 of the evaluation of the Visual Examination Technique (VET) process for characterizing retrievably stored contact-handled (CH) Summary Category Group (SCG) S3000 homogeneous solids waste at the Radioactive Waste Management Complex Accelerated Retrieval Project V (ARP-V) was approved February 7, 2013.

Table 2
INL-CCP RH Certified Waste Characterization Processes

Characterization Process[12]	RH S3000 Homogeneous Solids		RH S4000 Solis/gravel		RH S5000 Debris	
	Newly Generated	Retrievably-Stored	Newly Generated	Retrievably-Stored	Newly Generated	Retrievably-Stored[1, 5, 6, 7, 8, 9, 10, 11]
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[3]	APPROVED[4]	APPROVED[4]	APPROVED[4]	APPROVED[4]	APPROVED[4]	APPROVED[2,4]
Solids sampling	N/A	APPROVED[8]	N/A	N/A	N/A	N/A
Headspace Gas Sampling (SUMMA)	N/A	N/A	N/A	N/A	N/A	APPROVED
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)[8]	N/A	APPROVED[8]	N/A	N/A	N/A	APPROVED[8]
WIPP Waste Information System (WWIS)	N/A	N/A	N/A	N/A	N/A	APPROVED
INL LABORATORIES UNDER CCP Program						
Solids Analysis	APPROVED	APPROVED	N/A	N/A	N/A	N/A
Headspace Gas Analysis (canister)	N/A	N/A	N/A	N/A	APPROVED	APPROVED

[1]Tier 1 EPA Approval for 605 containers on January 12, 2007. Tier 1 56 waste containers from K Cell debris waste on January 2008.
[2]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
[3]VE of Record is not approved by NMED based on August 4, 2009 letter based on A-09-08.
[4]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.
[5]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.
[6]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.
[7]Tier 1 EPA approval to include RH Waste Stream ID-HFEF-S5400-RH, Lot 1B cans on August 2010.
[8]Tier 1 EPA approvals to include RH Waste Streams Adding ID-RTC-S3000 (solids) and IN-ID-NRF-153 (debris) on November 1, 2010.
[9]Tier 1 EPA approvals to include Lot 4A to Waste Stream ID-HFEF-S5400-RH (Lot 4A) on March 23, 2011.
[10]Tier 1 EPA approval to include the IN-ID-NRF-SPC Waste Stream on March 12, 2012.
[11]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.
[12]Characterization Processes in this table may not be completely listed in Attachment 2.

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 20** - *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
    CBFO:NTP:JRS:GS:11-0351:UFC 5900.00 dated June 15, 2011;
  - **CCP-PO-002, Revision 26** - *CCP Transuranic Waste Certification Plan*
    CBFO:NTP:JRS:ANC:11-0396:UFC 5900.00 dated July 14, 2011;
  - **CCP-PO-003, Revision 12**, *CCP Transuranic Authorized Methods for Payload Control*
    CBFO:NTP:MRB:GS:10-2055:UFC:5900.00 dated December 17, 2010;
  - **CCP-PO-505, Revision 2,** *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control*
    CBFO:NTP:MP:PG:13-0435:UFC 5900.00 dated February 26, 2013.
- Certified Systems – see Attachment 2 List of Processes/Equipment certified and used by CCP at the INL from Table's 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 CCP at the INL (based on EPA Baseline Inspections).

- CCP participated in the following performance demonstration programs (PDPs):
  - **HSG PDP (CCP-INL)** – Headspace gas sampling using SUMMA® canisters is performed by CCP, analysis is performed by INL.
  - **HSG PDP – Cycle 26A approved** for analysis of VOCs in headspace gas samples by using systems GCMS-I (12HE10) and GCMS-J (12HE11) using procedure CCP-TP-175.
    Memo CBFO:NTP:MRB:GL:12-0506:UFC 5822.00 dated June 4, 2012.
  - **NDA PDP – Cycle19A approved** for analysis of TRU waste drums using the SWEPP SGRS (IN04/ING3) using procedure CCP-TP-115, the WAGS (IN03/ING2) using procedure CCP-TP-019, and the SuperHENC (IN05/INN2) using procedure CCP-TP-146.
    Memo CBFO:NTP:MRB:GL:12-0551:UFC 5822.00 dated July 25, 2012.
  - **NDA PDP - Cycle B12A and supplemental Cycle B12B approved** for analysis of TRU standard waste boxes, and by correlation, 100-gallon overpack drums using the SuperHENC (IN05/INN2) using procedure CCP-TP-146.
    Memo CBFO:NTP:MB:GS:13-0446:UFC 5822.00 dated February 28, 2013.
  - **RCRA PDP – Cycle 19B approved** for analyses of wastes intended for transfer to WIPP.
    Memo CBFO:NTP:MRB:GL:12-0625:UFC 5822.00 dated September 19, 2012.
    - **Approved** for the analysis of metals in solidified waste samples by the methods CCP-TP-183 and CCP-TP-182 (for all metals except mercury) and CCP-TP-181 (for mercury).
    - **Approved** for the analysis of aqueous extractable VOCs (including acetone, ethyl ether, methyl ethyl ketone, and pyridine and excluding formaldehyde and hydrazine) in solidified waste samples by the method identified as CCP-TP-186.
    - **Approved** for the analysis of purgeable VOCs in solidified waste samples by the method identified as CCP-TP-184.
    - **Approved** for the analysis of SVOCs (including 1,4-dichlorobenzene, and 1,2 dichlorobenzene) in solidified waste samples by the methods identified as
    - CCP-TP-187 Revision 1 and CCP-TP-185.
    - **Approved** for the analysis using the GC-7 of aqueous extractable volatile organic compounds (VOCs) (including acetone, ethyl ether, methyl ethyl ketone, and pyridine and excluding formaldehyde and hydrazine) in solidified waste samples by the method identified as CCP-TP-186.

- CBFO conducted Recertification Audit A-12-13 of the INL-CCP on June 11-14, 2012.
  - CARs 12-026 and 12-027 were issued on July 2, 2012.
  - CAR12-026 was closed on November 5, 2012.
  - CAR 12-027 was closed on October 17, 2012.
  - Interim Audit Report was issued on July 12, 2012.
  - Final Audit Report was issued on January 23, 2013.
  - NMED issued approval on March 11, 2013.
  - EPA provided concurrence on April 2, 2013.

- CBFO conducted Recertification Audit A-12-14 of the INL Analytical Laboratories using CCP processes on June 11-14, 2012.
  - Interim Audit Report was issued on July 11, 2012.
  - Final Audit Report was issued on December 12, 2012.
  - NMED issued approval on January 25, 2013.
  - EPA provided concurrence on April 2, 2013.

- CBFO conducted Audit A-12-09 of the Quality Assurance Program on March 6, 2012.
  - CAR 12-010 and CAR 12-011 were issued on March 16, 2012.
  - CAR 12-010 was closed on May 10, 2012.
  - CAR 12-011 was closed on April 25, 2012.
  - Final Audit Report was issued on April 4, 2012.

- CBFO conducted CH and RH Transportation Audit A-13-03 for all sites on December 4-6, 2012.
  - Audit Report was issued on January 23, 2013.

- CBFO conducted Surveillance S-13-17 to evaluate the Gas Chromatography Unit 7 (GC-7).
  - Surveillance Report was issued on January 30, 2013.

- CBFO conducted Surveillance S-13-19 to evaluate Visual Examination Technique characterization process for retrievably-stored contact-handled (CH) Summary Category Group (SCG) S3000 homogeneous solids waste.
  - Surveillance Report was issued on February 7, 2013.

- CBFO conducted Surveillance S-13-22 to evaluate CCP-QP-029, Revision 0 for adequacy and effective implementation of the CCP Corrective Action Management Program.
  - Surveillance Report was issued on March 20, 2013.

- CBFO requested a Tier 1 change for a new calibration to the SWEPP SGRS to improve the overall performance of the counter from the replacement of several detectors.
  - EPA approval issued on February 26, 2013 (Docket No: A-98-49; II-A4-172).

- EPA issued concurrence on the recertification of Audits A-12-13 and A-12-14; and Surveillances S-13-17, S-13-19, S-13-22, and the Tier 1 EPA approval for the new calibration of the SWEPP SGRS on April 2, 2013.

- EPA issued concurrence on the currently approved ID-RF-S3114 and BNINW216 into a new combined waste stream on December 3, 2013.

RECOMMENDATION

The recommendation to the CBFO Manager is for CCP at the INL to combine the currently approved ID-RF-S3114 and BNINW216 into a single S3000 waste stream and to continue the authority for TRU waste characterization, certification, and transportation activities of CH and RH homogeneous solids (S3000), soils/gravel (S4000), debris (S5000) 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

D. J. Mikes FOR
Vincent Oba, Acting Director
Office of Quality Assurance

11-14-13
Date

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

11-15-13
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	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**
		reports. 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 CERTIFIED EQUIPMENT AND PROCESSES AT THE INL/CCP ANALYTICAL LABORATORIES

WIPP WWIS #	Site Equipment # or Title	Description	Components	Software	NDA Calibrated and TMU
12HE10	GC/MS-I	Environmental Chemistry Lab (ECL) - Headspace gas volatile organic compounds specified in procedure CCP-TP-175 PDP ID – GC/MS-I	• GC-MS (Method described in CCP-TP-175)	• MSD Productivity Chemstation	N/A
12HE11	GC/MS-J	Environmental Chemistry Lab (ECL) - Headspace gas volatile organic compounds specified in procedure CCP-TP-175 PDP ID – GS/MS-J	• GC-MS (Method described in CCP-TP-175)	• MSD Productivity Chemstation	N/A
8HSG2	HSG	SUMMA Sampling process on selected waste containers from waste stream lots.	As identified in CCP-TP- 093	As identified in CCP-TP-093	N/A
Solids					
12HA8	VOA-4	Analytical Laboratory Department (ALD) – Total purgable volatile organic compound analysis specified in procedure CCP-TP-184	• GC/MS (Method described in CCP-TP-184)	• Agilent Chemstation	N/A
12HA3	GC-1	Analytical Laboratory Department (ALD) – Total non-halogenated volatile organic compounds specified in procedure CCP-TP-186	• GC-FID (Method described in CCP-TP-186)	• Agilent Chemstation	N/A
12HA14	GC-6	Analytical Laboratory Department (ALD) – Total non-halogenated volatile organic compounds specified in procedure CCP-TP-186	• GC-FID (Method described in CCP-TP-186)	• Agilent Chemstation	N/A
12HA15	GC-7	Analytical Laboratory Department (ALD) – aqueous extractable volatile organic compounds specified in procedure CCP-TP-186	• GC-FID (Method described in CCP-TP-186)	• Agilent Chemstation	N/A
12HA10	SV-6	Analytical Laboratory Department (ALD) – Total semi-volatile organic compounds specified in procedure CCP-TP-185	• GC/MS (Method described in CCP-TP-185)	• Agilent ChemStation	N/A
12HA12	SV-8	Analytical Laboratory Department (ALD) – Total semi-volatile organic compounds specified in procedure CCP-TP-185	• GC/MS (Method described in CCP-TP-185)	• Agilent ChemStation	N/A
12HA13	VOA-5	Analytical Laboratory Department (ALD) – Total purgable volatile organic compound analysis specified in procedure CCP-TP-184	• GC/MS (Method described in CCP-TP-184)	• Agilent Chemstation	N/A
12HM11	ICP-7	Analytical Laboratory Department (ALD) – Total metals analysis specified in procedure CCP-TP-182	• Total metals analysis (ICP-AES) specified in procedure	• WinLab 32	N/A

LIST OF CERTIFIED EQUIPMENT AND PROCESSES AT THE INL/CCP ANALYTICAL LABORATORIES

WIPP WWIS #	Site Equipment # or Title	Description	Components	Software	NDA Calibrated and TMU
			CCP-TP-182		
12HM13	ICP-8	Analytical Laboratory Department (ALD) – Total metals analysis specified in procedure CCP-TP-182	• Total metals analysis (ICP-AES) specified in procedure CCP-TP-182	• WinLab 32	N/A
12HM8	CVHG-2	Analytical Laboratory Department (ALD) – Total metals (Hg) analysis specified in procedure CCP-TP-181	• Total metals (Hg) analysis (CVAA) specified in procedure CCP-TP-181	• AA WinLab Analyst	N/A
12HM12	CVHG-3	Analytical Laboratory Department (ALD) – Total metals (Hg) analysis specified in procedure CCP-TP-181	• Total metals (Hg) analysis (CVAA) specified in procedure CCP-TP-181	• AA WinLab Analyst	N/A
12HM9	MW-3	Analytical Laboratory Department (ALD) - Total metals digestion specified in procedure CCP-TP-183	• Microwave digester - Method described in procedure CCP-TP-183	• N/A	N/A
12HM10	MW-4	Analytical Laboratory Department (ALD) – Total metals digestion specified in procedure CCP-TP-183	• Microwave digester - Method described in procedure CCP-TP-183	• N/A	N/A
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	• HPLC Method described in CCP-TP-196 (Formaldehyde) and CCP-TP-197 (Hydrazine)	• Chromeleon	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

List of Deactivated Equipment			
WIPP #	**Site Equipment #**	**Site Description**	**Date Deactivated**
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
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

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 Method 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-008	CCP Quality Assurance Interface with the WTS Quality Assurance Program
7.	CCP-PO-016	CCP Gas Generation Testing Program Quality Assurance Project Plan
8.	CCP-PO-024	CCP/INL Interface Document
9.	CCP-PO-030	CCP/Battelle Energy Alliance Analytical Chemistry & Instrument Department Interface Document
10.	CCP-PO-031	CCP/Idaho Cleanup Project Analytical Laboratories Department Interface Document
11.	CCP-PO-501	CCP/INL RH TRU Waste Interface Document
12.	CCP-PO-505	CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)
13.	CCP-QP-001	CCP Graded Approach
14.	CCP-QP-002	CCP Training and Qualification Plan
15.	CCP-QP-005	CCP TRU Nonconforming Item Reporting and Control
16.	CCP-QP-008	CCP Records Management
17.	CCP-QP-010	CCP Document Preparation, Approval, and Control
18.	CCP-QP-011	CCP Laboratory Logbooks
19.	CCP-QP-014	CCP Quality Assurance Trend Analysis and Reporting
20.	CCP-QP-015	CCP Procurement
21.	CCP-QP-016	CCP Control of Measuring and Testing Equipment
22.	CCP-QP-017	CCP Identification and Control of Items
23.	CCP-QP-018	CCP Management Assessment
24.	CCP-QP-019	CCP Quality Assurance Reporting to Management
25.	CCP-QP-021	CCP Surveillance Program
26.	CCP-QP-022	CCP Software Quality Assurance Plan
27.	CCP-QP-023	CCP Handling, Storage and Shipping
28.	CCP-QP-026	CCP Inspection Control
29.	CCP-QP-027	CCP Test Control
30.	CCP-QP-028	CCP Records Filing, Inventorying, Scheduling, and Dispositioning
31.	CCP-QP-029	CCP Corrective Action Management
32.	CCP-QP-030	CCP Written Practice for the Qualification of CCP Helium Leak Detection Personnel
33.	CCP-TP-001	CCP Project Level Data Validation and Verification
34.	CCP-TP-002	CCP Reconciliation of DQOs and Reporting Characterization Data
35.	CCP-TP-003	CCP Data Analysis for S3000, S4000, and S5000 Characterization
36.	CCP-TP-005	CCP Acceptable Knowledge Documentation
37.	CCP-TP-006	CCP Visual Examination Technique for INL Newly Generated TRU Waste Retrieved from Pits
38.	CCP-TP-008	CCP Solids Sampling Procedure
39.	CCP-TP-010	CCP Waste Assay Gamma Spectrometer (WAGS) & SWEPP Gamma Ray Spectrometer (SRGS) Calibration Procedure
40.	CCP-TP-019	CCP Waste Assay Gamma Spectrometer (WAGS) Operating Procedure
41.	CCP-TP-028	CCP Radiographic Test and Training Drum Construction
42.	CCP-TP-030	CCP CH TRU Waste Certification and WWIS/WDS Data Entry
43.	CCP-TP-033	CCP Shipping of CH TRU Waste
44.	CCP-TP-053	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
45.	CCP-TP-054	CCP Adjustable Center of Gravity Lift Fixture Preoperational Checks and Shutdown
46.	CCP-TP-055	CCP Varian Porta-Test Leak Detector Operations
47.	CCP-TP-056	CCP HSG Performance Demonstration Plan
48.	CCP-TP-058	CCP NDA Performance Demonstration Program
49.	CCP-TP-068	CCP Standardized Container Management
50.	CCP-TP-080	CCP Operating the WMP 610 Real-Time Radiography (RTR) System
51.	CCP-TP-082	CCP Preparing and Handling Waste Containers for Headspace Gas Sampling
52.	CCP-TP-083	CCP Gas Generation Testing

CENTRAL CHARACTERIZATION PROJECT LIST OF CERTIFIED PROCEDURES AT IDAHO NATIONAL LABORATORY		
#	Procedure No.	Procedure Title
53.	CCP-TP-086	CCP TRUPACT-II Shipping Payload Assembly
54.	CCP-TP-093	CCP Sampling of TRU Waste Containers
55.	CCP-TP-106	CCP Headspace Gas Sampling Batch Data Report Preparation
56.	CCP-TP-107	Operating the CCP High Efficiency Newtron Counter Using NDA 2000
57.	CCP-TP-108	Calibrating the CCP High Efficiency Neutron Counter Using NDA 2000
58.	CCP-TP-109	CCP Data Reviewing, Validating, and Reporting Procedure
59.	CCP-TP-113	CCP Standard Contact-Handled Waste Visual Examination
60.	CCP-TP-115	CCP SWEPP Gamma-Ray Spectrometer (SGRS) Operating Procedure
61.	CCP-TP-119	CCP Operating the RTR System #5
62.	CCP-TP-138	CCP Execution of Long-Term Objective for the Unified Flammable Gas Test Procedure
63.	CCP-TP-146	CCP SuperHENC Operating Procedure
64.	CCP-TP-148	CCP SuperHENC Data Reviewing, Validating and Reporting Procedure
65.	CCP-TP-162	CCP Random Selection of Containers for Solids and Headspace Gas Sampling and Analysis
66.	CCP-TP-163	CCP Evaluation of Waste packaging Records for Visual Examination of Records
67.	CCP-TP-170	CCP SuperHENC Calibration Procedure
68.	CCP-TP-173	CCP Analysis of Gas Samples for VOCs by GC/FID
69.	CCP-TP-175	CCP Analysis of Gas Samples for VOCs by GS/MS
70.	CCP-TP-176	CCP Determination of Method Detection Limits for Gas Analysis
71.	CCP-TP-177	CCP Sample Receipt, Custody, and Storage
72.	CCP-TP-178	CCP SUMMA® Canister Cleaning
73.	CCP-TP-179	CCP Gas Transfer Manifold Systems and Sample Compositing
74.	CCP-TP-180	CCP Analytical Sample Management
75.	CCP-TP-181	CCP Determination of Mercury by CVAA for TRU Waste Characterization
76.	CCP-TP-182	CCP Determination of Metals of ICP-AES for TRU Waste Characterization
77.	CCP-TP-183	CCP Microwave Assisted Digestion of Homogenous Solids and Soil/Gravel
78.	CCP-TP-184	CCP Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry
79.	CCP-TP-185	CCP Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry
80.	CCP-TP-186	CCP Determination of Nonhalogenated Volatile Organics by Gas Chromatography
81.	CCP-TP-187	CCP Sample Preparation for Semivolatile Organic Compounds
82.	CCP-TP-188	CCP Analytical Data Recording, Review, and Reporting
83.	CCP-TP-196	CCP Determination of Formaldehyde by High-Performance Liquid Chromatography (HPLC).
84.	CCP-TP-197	CCP Determination of Hydrazine by High-Performance Liquid Chromatography (HPLC)
85.	CCP-TP-500	CCP Remote-Handled Waste Visual Examination
86.	CCP-TP-504	CCP Dose-to-Curie Survey Procedure for Remote-Handled Transuranic Waste
87.	CCP-TP-506	CCP Preparation of the Remote-Handled Transuranic Waste Acceptable Knowledge Characterization Reconciliation Report
88.	CCP-TP-507	CCP Shipping of Remote-Handled Transuranic Waste
89.	CCP-TP-508	CCP RH Standard Real-Time Radiography Inspection Procedure
90.	CCP-TP-509	CCP Remote-Handled Transuranic Container Tracking
91.	CCP-TP-510	CCP Remote-Handled Radiography Test and Training Drum Requirements
92.	CCP-TP-512	CCP Remote-Handled Waste Sampling
93.	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

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 February 2013)

Process Elements	INL-CCP CH Waste Characterization Process – T1 Changes	INL-CCP CH Waste Characterization Process – T2 Changes *
Acceptable Knowledge, including Load Management	Any new waste category Changes to the 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 • The load management status of approved waste streams • Site procedures requiring CBFO approval • Any analysis evaluating the effectiveness of the Waste Identification Process
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: • New equipment or substantive physical modifications** to approved equipment • Substantive modification** to site procedures requiring CBFO approval
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 1. Tiering of RH TRU 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 2012)

RH Waste Characterization Process Elements	INL-CCP RH Waste Characterization Process – T1 Changes	INL-CCP RH Waste Characterization Process – T2 Changes*
Acceptable Knowledge (AK)	Addition of containers to approved waste streams if new or different radionuclide scaling factors are required Any new waste streams not approved under this baseline Substantive modification(s)*** to CCP-AK-INL-5X0 or CCP-AK-INL-5X2 that have the potential to affect the characterization process Load management for any remote-handled (RH) waste stream	Notification to EPA when updates to the following documents have been completed: • All future revisions of AK summary reports (AKSR), and certification confirmation test plans (e.g., CCP-AK-INL-500 and CCP-AK-INL-502) • AK accuracy reports (prepared annually, at a minimum) • Attachment 4 of CCP-TP-005 is generated to reflect the updated AKSR Source Document Reference List • Changes to AK documentation as a result of Waste Characterization Program Implementation Plan revisions [e.g., characterization reconciliation report (CRR)]** • A correlation or surrogate summary form for each of the RH containers in this waste stream identified as contact-handled (CH), based upon measured dose rates that present nondestructive assay results for assayed containers • The waste stream data package for debris waste stream and any modifications to the waste stream profile form, including the CRR and AKSR • Final DTC determination for RH containers numbers 728 through 737, as identified in AK Reference P030 Notification to EPA of the intention to add containers to an approved waste stream, including the approximate number of containers and volume(s) 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 and/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 (DTC)	Application of new scaling factors for isotopic determination other than those documented in CCP-AK-INL-501 Use of any alternate radiological characterization procedure other than DTC with established scaling factors as documented in CCP-TP-504	Notification to EPA when revisions of CCP-AK-INL-501 or CCP-TP-504 that require CBFO approval** are complete Submission of an updated CCP-AK-INL-5X1 documenting that the radiological characterization process(s) used for the additional

Table 1. Tiering of RH TRU 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 2012)

RH Waste Characterization Process Elements	INL-CCP RH Waste Characterization Process – T1 Changes	INL-CCP RH Waste Characterization Process – T2 Changes*
	Substantive modification(s)*** to CCP-AK-INL-5X1 or CCP-TP-504 that have the potential to affect the characterization process Use of any alternate gamma detector with the OSPREY™ system characterization procedure other than the $La_3Br(Ce)$ detector observed in July 2010 Any new waste stream not approved under the baseline and/or subsequent T1 evaluations or addition of containers to an approved waste stream that requires changing the established radionuclide scaling factors	containers is the same as those covered by the baseline and/or subsequent T1 approvals† Submission of DTC batch data reports (BDRs) or calculation packages for containers selected by EPA from a list of fully characterized containers provided by INL-CCP†
Visual Examination of audio/video media (VE)	Use of VE to characterize additional debris waste streams or waste from other Summary Waste Categories	Notification to EPA when changes to VE procedure(s) that require CBFO approval** are complete Submission of VE BDRs for containers selected by EPA from a list of fully characterized containers provided by INL-CCP†
Real-Time Radiography (RTR)	Any new S5000 waste stream other than ID-ANLE-S5000 or wastes from an S3000 or S4000 waste stream Notification to EPA prior to addition of a new RTR unit(s)	Notification to EPA when changes to RTR procedure(s) that require CBFO approval** are complete Submission of RTR BDRs for containers selected by EPA from a list of fully characterized containers provided by INL-CCP†
WIPP Waste Data System (WDS) (previously known as WWIS)	None	Changes made to WDS procedure(s) that require CBFO approval

Notes: The text in this table was modified for consistency with formatting changes made to other T1 reports.

* INL-CCP will report all T2 changes to EPA every 3 months.

** Excluding changes that are editorial in nature or are required to address administrative concerns. New references that are included as part of the document revision may be requested by EPA.

*** *Substantive modification* refers to a change with the potential to affect INL-CCP's RH waste characterization process, e.g., the use of an inherently different type of measurement instrument or the use of the high-range probe as described in CCP-TP-504 for radiological characterization.

† INL-CCP will report this T2 change immediately.