



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 ANL-CCP certification program status,
- Attachment 2 contains the equipment certified at the site,
- Attachment 3 contains the certified CCP procedures, and
- Attachment 4 specific ANL-CCP waste characterization process elements that must be reported. These process elements are identified as Tier 1 changes and Tier 2 changes. The ANL-CCP shall not ship for disposal at WIPP any wastes affected by a Tier 1 process element change without prior CBFO approval, and ANL-CCP shall report Tier 2 changes to CBFO on a quarterly basis. ANL-CCP procedures shall be revised as necessary to incorporate this reporting and approval process.

David C. Moody  
Manager

Attachment(s)

cc: w/attachments

V. Daub, CBFO	* ED	C. Kirkes, WTS	ED
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L. Porter, WTS	ED	CBFO M&RC	

## CENTRAL CHARACTERIZATION PROJECT AT ARGONNE NATIONAL LABORATORY CERTIFICATION PROGRAM STATUS

The CBFO Director of the Office of the National TRU Program and the CBFO Quality Assurance Manager have evaluated the documentation supporting the compliance of the Central Characterization Project (CCP) TRU waste program deployed at the Argonne National Laboratory (ANL). Attachments 2, 3, and 4 provide complete lists of certified processes, procedures, documents, and systems deployed at the ANL-CCP.

### PROGRAM STATUS

- The following site documents are current and demonstrate how the CCP complies with the CBFO requirements.
  - **QAPJP – CCP-PO-001, Revision 16** - *CCP Transuranic Waste Characterization Quality Assurance Project Plan* (CBFO:NTP:DCG:GS:07-1824:UFC 5900.00 dated October 30, 2007).
  - **WCP - CCP-PO-002, Revision 20** - *CCP Transuranic Waste Certification Plan* (CBFO:NTP:DCG:GS:07-1826:UFC:5900 dated November 1, 2007).
  - **RH TRAMPAC – CCP-PO-505, Revision 0**, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)* (CBFO:NTP:CF:GS:06-1355:UFC 5900.00 dated September 20, 2006)
- Certified Systems - see Attachment 2 for the complete list of certified systems and processes used by the CCP at the ANL
- Standard operating procedures - see Attachment 3 for the complete list of certified CCP procedures used at the ANL
- Tiering of TRU Waste Characterization Processes implemented by CCP at ANL (based on EPA Baseline Inspections) - see Attachment 4
- CCP participated in the following performance demonstration program (PDP):
  - **HSG PDP** – Cycle 22A approved INL ECL for analysis of VOCs in headspace gas samples using the GC/MS and the GC methanol (GCMS-F, GCMS-H, GC-1, GC-2 and GC-7). - Memo CBFO:NTP:MRB:MAG-0728:UFC 5822.00 dated May 14, 2008.
- CBFO conducted Audit A-08-03 on May 28-29, 2008.
  - The Final Audit Report was issued to NMED on June 16, 2008.
- NMED approval on Audit A-08-03 was issued on July 31, 2008.

- EPA Approval of Tier 1 request for RH VE activities was on issued July 9, 2008.
- The EPA concurred with the CBFO draft certification letter on August 26, 2008.
- Amended the Attachment 4, Pages 1 and 2, RH Tiering of the certification for the Remote-Handled Central Characterization Project TRU Waste Program deployed at the Argonne National Laboratory for Audit A-08-03 (Memo CBFO:NTP:JRS:GS:08-0831:UFC 5900.00 dated August 27, 2008).
  - CBFO submittal to EPA for review and concurrence on September 10, 2008 (Memo CBFO:NTP:JRS:GS:08-0875:UFC 5900.00).
  - EPA concurrence of the Amendment to Attachment 4, Pages 1 and 2, RH Tiering issued on October 7, 2008.
  - Amended Certification Letter issued on October 14, 2008 (Memo CBFO:NTP:JRS:GS:08-0911:UFC 5900.00).

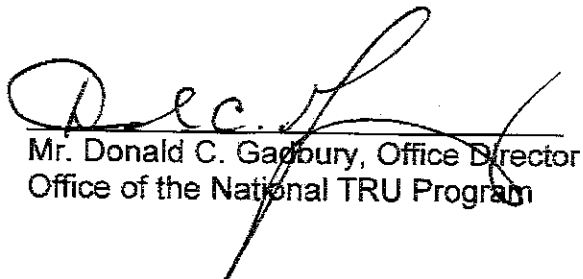
**RECOMMENDATION**

The recommendation to the CBFO Manager is to grant the CCP authority for characterization, certification, and transportation of remote-handled debris (S5000) waste at the ANL-CCP as identified in Table 1 of the memorandum. Attachments 2, 3, and 4 list the systems and procedures that constitute the bounds of this authority.

**CONCURRENCE**

  
Ms. Ava Holland  
Quality Assurance Manager

10-14-08  
Date

  
Mr. Donald C. Gabbury, Office Director  
Office of the National TRU Program

10-14-08  
Date

**CENTRAL CHARACTERIZATION PROJECT**  
**LIST OF CERTIFIED EQUIPMENT AND PROCESSES AT ARGONNE NATIONAL LABORATORY**

WIPP WWIS #	Site Equipment # or Title	Description	Components	Software	NDA Calibrated Range, Operating Range and TMU
<b>Dose-to-Curie</b>					
8DTC1	Dose-to-Curie	Radiological characterization process using dose-to-curie (DTC) and modeling-derived scaling factors for assigning radionuclide values to RH waste stream AERHDM for which the scaling factors are applicable, as described in CCP-AK-ANLE-501.  Procedure CCP-TP-504	<input type="checkbox"/> As identified in CCP-TP-504	<input type="checkbox"/> As identified in CCP-TP-504	N/A
<b>Visual Examination</b>					
8RHVE1	Audio/video review	The VE of audio/video media process used for retrievably-stored RH debris waste drums.  Procedure CCP-TP-500	<input type="checkbox"/> None	N/A	N/A
8RHVE2	Visual Examination activities	VE of newly packaged RH debris waste drums  CCP-TP-500	<input type="checkbox"/> None	N/A	N/A
<b>Headspace Gas</b>					
8HSG2	HSG	SUMMA® Sampling process of each waste stream lot upon completion of packaging	<input type="checkbox"/> As identified in CCP-TP-093	<input type="checkbox"/> As identified in CCP-TP-093	N/A

**CENTRAL CHARACTERIZATION PROJECT  
LIST OF CERTIFIED PROCEDURES AT ARGONNE 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-008	CCP Quality Assurance Interface with the WTS Quality Assurance Program
4.	CCP-PO-500	CCP/ANL RH-TRU Waste interface Document
5.	CCP-PO-505	CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)
6.	CCP-QP-001	CCP Graded Approach
7.	CCP-QP-002	CCP Training and Qualification Plan
8.	CCP-QP-004	CCP Corrective Action Management
9.	CCP-QP-005	CCP TRU Nonconforming Item Reporting and Control
10.	CCP-QP-006	CCP Corrective Action Reporting and Control
11.	CCP-QP-008	CCP Records Management
12.	CCP-QP-010	CCP Document Preparation, Approval and Control
13.	CCP-QP-011	CCP Notebooks and Logbooks
14.	CCP-QP-015	CCP Procurement
15.	CCP-QP-016	CCP Control of Measuring, Testing, and Data Collection Equipment
16.	CCP-QP-018	CCP Management Assessment
17.	CCP-QP-019	CCP Quality Assurance Reporting to Management
18.	CCP-QP-021	CCP Surveillance Program
19.	CCP-QP-022	CCP Software Quality Assurance Plan
20.	CCP-QP-028	CCP Records Filing, Inventorying, Scheduling, and Dispositioning
21.	CCP-TP-001	CCP Project Level Data Validation and Verification
22.	CCP-TP-002	CCP Reconciliation of DQOs and Reporting Characterization Data
23.	CCP-TP-003	CCP Data Analysis for S3000, S4000, and S5000 Characterization
24.	CCP-TP-005	CCP Acceptable Knowledge Documentation
25.		
26.	CCP-TP-093	CCP Sampling of TRU Waste Containers
27.	CCP-TP-106	CCP Headspace Gas Sampling Batch Data Report Preparation
28.	CCP-TP-160	CCP Random Selection of Containers for Headspace Gas Sampling and Analysis
29.	CCP-TP-163	CCP Standard Visual Examination of Records
30.	CCP-TP-500	CCP Remote-Handled Waste Visual Examination
31.	CCP-TP-505	CCP Removable Lid Canister Loading
32.	CCP-TP-504	CCP Dose-to-Curie Survey Procedure for Remote-Handled Transuranic Waste
33.	CCP-TP-506	CCP Preparation of the Remote-Handled Transuranic Waste Acceptable Knowledge Characterization Reconciliation Report
34.	CCP-TP-507	CCP Shipping of Remote-Handled Transuranic Waste
35.	CCP-TP-509	CCP Remote-Handled Transuranic Container Tracking
36.	CCP-TP-530	CCP RH TRU Waste Certification and WWIS Data Entry

**Deactivated Procedures**

#	Deactivated Procedure No.	Deactivated Procedure Title	Deactivation Date
1.	CCP-TP-043	CCP Chain of Custody for SUMMA® Canister Sampling Using the INL Analytical Lab – Incorporated in CCP-TP-093	9/11/07



**RH Tiering of TRU Waste Characterization Processes Implemented by CCP at ANL  
(Based on EPA Baseline Inspection No. EPA-ANL-CCP-RH-9.06-8)  
DOCKET # A-98-49; II-A4-73**

RH WC Process Elements	ANL-CCP RH WC Process – T1 Changes	ANL-CCP RH WC Process – T2 Changes
Acceptable Knowledge (AK)	<p>Any new waste streams not approved under this baseline.</p> <p>Modification of the approved waste stream AERHDM to include additional containers beyond the approximately 145 included in CCP-AK-ANLE-500, Revision 3.</p> <p>Substantive modification(s) that have the potential to affect the characterization process: CCP-AK-ANLE-500, CCP-AK-ANLE-501 or CCP-AK-ANLE-502.</p> <p>Load management for any RH waste stream.</p>	<p>Notification to EPA that the final DTC determination is complete for RH containers in the approved waste stream.</p> <p>Notification to EPA when updates are made to AK documentation as a result of WCPIP revisions.</p> <p>Notification that updates have been completed to the following documents:</p> <ul style="list-style-type: none"> <li>• All future revisions of CCP-AK-ANLE-500 and CCP-AK-ANLE-501</li> <li>• Listing of the references that document the assembly of fuel pin data and review process</li> <li>• All future revisions of CCP-AK-ANLE-502</li> <li>• CCP-AK-ANLE-500 and CCP-AK-ANLE-502 to address freeze file changes.</li> </ul> <p>Notification to EPA that the data package for debris waste stream is completed, including any modifications to the WSPF including the CRR and AK Summary and AK.</p> <p>Notification to EPA when AK accuracy reports are completed, prepared annually at a minimum.</p>
Radiological Characterization, including Dose-to-Curie (DTC)	<p>Use of any alternate radiological characterization procedure other than DTC with established scaling factors as documented in CCP-TP-504 and CCP-AK-ANLE-501, Revision 0, respectively, or substantive modification thereof.</p> <p>Any new waste stream not approved under this baseline or addition of containers to Waste Stream AERHDM that require changing the established radionuclide scaling factors.</p> <p>Application of new scaling factors for isotopic determination other than those documented in CCP-AK-ANLE-501.</p>	<p>Notification to EPA that revisions of CCP-AK-ANLE-501 or CCP-TP-504 that require CBFO approval are complete.</p>
Visual Examination (VE)	<p>VE by reviewing existing audio/visual recordings for Summary waste category not covered by this approval.</p> <p>VE by any new process for S5000 debris wastes</p>	<p>Notification to EPA that revisions of any VE procedure that require CBFO approval are complete.</p> <p>Addition of new S5000 debris waste streams.</p>
Real-Time Radiography (RTR)	<p>Any use of RTR requires EPA approval.</p>	<p>None</p>
WIPP Waste Information System (WWIS)	<p>None</p>	<p>Changes made to WWIS procedure(s) that require CBFO approval</p>



**RH AK Tiers**

**Tier 1 AK changes** that will require EPA review and approval prior to implementation and apply to any new waste category not evaluated during the baseline inspection include the following:

- Any new waste streams not approved under this baseline
- Modification of the approved waste stream AERHDM to include additional containers beyond the approximately 145 included in CCP-AK-ANLE-500, Revision 3.
- Substantive modifications\* that have the potential to affect the characterization process: CCP-AK-ANLE-500; CCP-AK-ANLE-501; or CCP-AK-ANLE-502
- Implementation of load management for any RH waste stream

**Tier 2 AK changes** that do not require EPA approval prior to implementation but require a brief description of the changes to the documents along with the notification, include the following:

- Notification to EPA that the final DTC determination is complete for RH containers in the approved waste stream
- Notification to EPA when updates are made to AK documentation as a result of WCPIP revisions
- Notification that updates have been completed to the following documents:
  - All future revisions of CCP-ANLE-AK-500, CCP-ANLE-AK-501
  - Listing of the references that document the assembly of fuel pin data and review process
  - All future revisions of CCP-ANLE-AK-502
  - CCP-AK-ANLE-500 and CCP-AK-ANLE-502 to address freeze file changes
- Notification to EPA that the data package for debris waste stream is completed, including any modifications to the WSPF including the CRR and AK Summary
- Completion of AK accuracy reports, prepared annually at a minimum

**RH Radiological Characterization Tiers**

**Tier 1 Radiological characterization** changes that will require EPA review and approval prior to implementation and apply to any waste stream not evaluated during the baseline inspection include the following:

- Use of an alternate radiological characterization procedure other than DTC with established scaling factors as documented in CCP-TP-504 and CCP-AK-ANLE-501, Revision 0, respectively, or substantive modification thereof
- Any new waste stream not approved under this baseline or addition of containers to waste stream AERHDM that require changing the established radionuclide scaling factors

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

- Application of new scaling factors for isotopic determination other than those documented in CCP-AK-ANLE-501

**Tier 2 Radiological characterization** changes that do not require EPA approval prior to implementation but require a brief description of the changes to the documents along with the notification, include the following:

- Notification to EPA that revisions of CCP-AK-ANLE-501 or CCP-TP-504 that require CBFO approval are complete

### **RH VE Tiers**

**Tier 1 VE** changes that require EPA approval prior to implementation:

- VE by reviewing existing audio/visual recordings for Summary waste category not covered by this approval
- VE by any new process for S5000 debris wastes

**Tier 2 VE** changes that do not require EPA approval prior to implementation but require a brief description of the changes to the documents along with the notification, include the following:

- Notification to EPA that revisions of any VE procedure that require CBFO approval are complete
- Addition of new S5000 debris waste streams

### **RH RTR Tiers**

- None

### **RH WWIS Tiers**

**Tier 2 WWIS** changes that do not require EPA approval prior to implementation but require reporting and a brief description of the changes to the documents, include the following:

- Changes made to WWIS procedure(s) that require CBFO approval