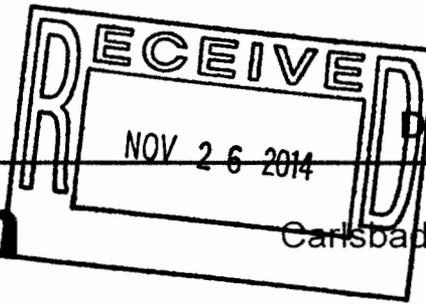


United States Government

memorandum

Department of Energy

Carlsbad Field Office
Carlsbad, New Mexico 88221

DATE: NOV 26 2014

REPLY TO
ATTN OF: CBFO:TSTD:JRS:GL:14-2040:UFC 5900.00

SUBJECT: Expansion to the ORNL-CCP Recertification Audit A-14-03 to include Audit A-14-29 and the EPA Tier 1 Approval for the Mobile ISOCs (In-Situ Object Counting System) Large Container Counter (MILCC2) Nondestructive Assay system and Tier 1 Approval Adding Visual Examination (VE)

TO: Laura Wilkerson, DOE-Oak Ridge
Robert L. McQuinn, Project Manager, Nuclear Waste Partnership LLC

The Carlsbad Field Office (CBFO) is expanding the current recertification memorandum (CBFO:TSTD:JRS:PG;14-1965:UFC 5900.00) dated August 12, 2014 of the Central Characterization Program (CCP) TRU waste program deployed at the Oak Ridge National Laboratory (hereinafter referred to as ORNL-CCP) to reflect the CBFO Audit A-14-29 and the U.S. Environmental Protection Agency (EPA) Tier 1 baseline change requests and approvals for the following:

- The CBFO completed Audit A-14-29 of the ORNL-CCP for the initial certification of the Mobile ISOCs Large Container Counter 2 (MILCC2) non-destructive assay (NDA) system to characterize contact-handled (CH) Summary Category Groups (SCGs) S3000 (homogenous solids), S4000 (soils/gravel), and S5000 (debris) waste were determined to be adequate, satisfactorily implemented, and effective.
- The CBFO received the EPA approval of a Tier 1 change request to add the MILCC2 NDA system at ORNL. The MILCC2 will assay CHSCGs S3000 (homogenous solids), S4000 (soil/gravel) and S5000 (debris) waste in 55-gallon drums. The EPA provided approval on October 21, 2014, DOCKET NO. A-98-49; II-A-192.
- The CBFO received the EPA approval of a Tier 1 change request to add the Visual Examination (VE) process used by ORNL-CCP to characterize S4000 (soils/gravel) and S5000 (debris) of CH waste. The EPA provided approval on November 10, 2014, DOCKET NO: A-98-49; II-A4-193.

The CBFO completed the annual Recertification Audit A-14-03 of the ORNL-CCP Transuranic (TRU) waste characterization activities conducted on January 14-16, 2014. The characterization, certification, quality assurance activities of the CH SCGs S3000, S4000 soils/gravel, and CH S5000 debris, and RH SCG S5000 debris were determined to be adequate, satisfactorily implemented, and effective.

141136

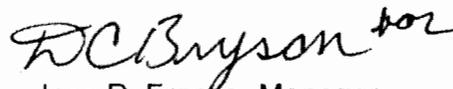


The audit teams determined that the ORNL-CCP TRU programs were in compliance with the Waste Analysis Plan (WAP) of the Waste Isolation Pilot Plant (WIPP) Hazardous Waste Facility Permit (HWFP), the CBFO Quality Assurance Program Document (QAPD), the TRU Waste Acceptance Criteria for the Waste Isolation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

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 the EPA, the CBFO is authorizing the ORNL-CCP to include the initial certification of the MILCC2 NDA system, VE of CH TRU waste SCGs S4000 (soils/gravel) and S5000 (debris) and grants continued authority at the ORNL-CCP for TRU waste characterization, certification, and transportation activities as identified in Tables 1 and 2, Page 4 and 5 of this memorandum.

- Attachment 1 describes the CCP certification program status;
- Attachment 2 contains the list of processes/equipment from Table 1 of this memorandum certified at this site;
- Attachment 3 contains the list of 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 ORNL-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 CBFO TRU Sites and Transportation Division, at (575) 234-7313.


Jose R. Franco, Manager
Carlsbad Field Office

Attachment(s)

cc: w/attachments

G. Basabilvazo, CBFO	*	ED	J. Morrison, NWP	ED
M. Brown, CBFO		ED	W. Most, NWP	ED
N. Castaneda, CBFO		ED	L. Oberbeck, NWP	ED
C. Fesmire, CBFO		ED	S. Offner, NWP	ED
S. McCauslin, CBFO		ED	M. Ramirez, NWP	ED
D. Miehls, CBFO		ED	A. Ray, NWP	ED
M. Navarrete, CBFO		ED	F. Romo, NWP	ED
M. Pinzel, CBFO		ED	R. Romo, NWP	ED
J. R. Stroble, CBFO		ED	B. Schrock, NWP	ED
D. Queen, TWPC		ED	M. F. Sharif, NWP	ED
E. Feltcorn, EPA		ED	P. Schilling Davis, NWP	ED
R. Joglekar, EPA		ED	M. Sensibaugh, NWP	ED
T. Peake, EPA		ED	M. F. Sharif, NWP	ED
S. Holmes, NMED		ED	D. Stegman, NWP	ED
J. Kieling, NMED		ED	M. Strum, NWP	ED
T. Kliphuis, NMED		ED	C. Turner, NWP	ED
R. Maestas, NMED		ED	K. Urquidez, NWP	ED
C. Smith, NMED		ED	D. Wade, NWP	ED
B. Broomfield, NWP		ED	M. Valentine, NWP	ED
V. Cannon, NWP		ED	R. Allen, CTAC	ED
B. Carlsen, NWP		ED	P. Hinojos, CTAC	ED
J. Carter, NWP		ED	P. Martinez, CTAC	ED
R. Chavez, NWP		ED	B. Pace, CTAC	ED
D. Cook, NWP		ED	G. White, CTAC	ED
A. J. Fisher, NWP		ED	M. Carter, LANL	ED
R. Galbraith, NWP		ED	P. Gilbert, LANL	ED
E. Gulbransen, NWP		ED	G. Lyshik, LANL	ED
J. Haschets, NWP		ED	W. Weyerman, LANL	ED
I. Joo, NWP		ED	S. Percy, SM Stoller	ED
C. Kirkes, NWP		ED	WIPP Operating Record	ED
C. Luoma, NWP		ED	CBFO M&RC	
R. McGinnis, NWP		ED	*ED denotes electronic distribution	

Table 1 ORNL-CCP CH Certified Waste Characterization Processes						
Processes	CH S3000 Solids		CH S4000 Soils		CH S5000 Debris	
	Newly Generated	Retrievably Stored	Newly Generated	Retrievably Stored	Newly Generated	Retrievably Stored
Acceptable Knowledge (AK)	N/A	Approved	N/A	Approved	N/A	Approved
Load Management	N/A	N/A	N/A	N/A	N/A	N/A
Project-Level Data Validation and Verification (V&V)	N/A	Approved	N/A	Approved	N/A	Approved
Visual Examination	N/A	N/A	N/A	Approved	N/A	Approved
Nondestructive Assay (NDA)	N/A	Approved	N/A	Approved	N/A	Approved
Real-Time Radiography (RTR)	N/A	Approved	N/A	Approved	N/A	Approved
WIPP Waste Information System/Waste Data System (WWIS/WDS)	N/A	Approved	N/A	Approved	N/A	Approved

NOV 26 2011

Table 2		
ORNL-CCP RH Certified Waste Characterization Processes		
Processes	RH S5000 Debris	
	Newly Generated	Retrievably Stored
Acceptable Knowledge (AK)	N/A	Approved
Load Management	N/A	N/A
Project-Level Data Validation and Verification (V&V)	N/A	Approved
Visual Examination	N/A	Approved
Radiological Characterization	N/A	Approved
Real-Time Radiography (RTR)	N/A	N/A
WIPP Waste Information System/Waste Data System (WWIS/WDS)	N/A	Approved

CENTRAL CHARACTERIZATION PROGRAM AT OAK RIDGE NATIONAL LABORATORY CERTIFICATION PROGRAM STATUS

The Carlsbad Field Office (CBFO) Director of the Office of the CBFO TRU Sites and Transportation Division and the CBFO Quality Assurance Division evaluated the documentation supporting the compliance of the Central Characterization Program (CCP) TRU waste program deployed at the Oak Ridge National Laboratory (ORNL). Attachments 2, 3, and 4 provide complete lists of processes, procedures, documents, and systems at the ORNL-CCP.

PROGRAM STATUS

- 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*
CBFO:NTP:JRS:PG:13-0487:UFC 5900.00 dated April 17, 2013; and
 - **CCP-PO-002, Revision 28** - *CCP Transuranic Waste Certification Plan QAP* - Section 4.0 of CCP-PO-002.
CBFO:NTP:JRS:GL:14-1865:UFC: 5900.00 dated March 17, 2014; and
 - **CCP-PO-003, Revision 13**, *CCP Transuranic Authorized Methods for Payload Control*)
CBFO:NTP:JRS:GL:13-0671:UFC:5900.00 approved July 29, 2013; and
 - **CCP-PO-505, Revision 3**, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control*
CBFO:NTP:JRS:GL:14-1860:UFC 5900.00 dated March 5, 2014.

*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 Equipment/Processes from Table 1 of this Memorandum that was used by the CCP at the ORNL.
- Standard Operating Procedures – See Attachment 3 for the complete list of certified procedures/documents used by the CCP at the ORNL.
- Tiering of Contact-Handled (CH) and Remote-Handled (RH) transuranic (TRU) Waste Characterization Processes – See Attachment 4 for the implementation by the CCP at the ORNL (based on EPA Baseline Inspections).

- The CCP participated in the following performance demonstration programs (PDPs)*:

NDA PDP – Cycle 21A approval for radioassay of TRU waste drums using the IQ3 (OR02/ORG1) and the MILCC2 (OR04/ORG3)
CBFO Memorandum – CBFO:NTP:NC:14-1941:UFC 5900 dated June 25, 2014.

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

- The CBFO conducted the contact-handled (CH) Summary Category Groups S3000 (solids), S4000 (soils/gravel), S5000 (debris), and remote-handled (RH) S5000 (debris) Recertification Audit A-14-03 of the ORNL-CCP on January 14-16, 2014.
 - The Interim Audit Report was issued on February 11, 2014
 - The Audit Report was issued to NMED on March 10, 2014.
 - The NMED issued approval on April 25, 2014.
 - The EPA provided concurrence on June 30, 2014.
- The CBFO conducted Audit A-14-29 for the Mobile ISOCS Large Container Counter 2 (MILCC2) on July 29-30, 2014.
 - The Interim Audit Report was issued on August 19, 2014
 - The Audit Report was issued to NMED on August 25, 2014.
 - The NMED issued approval on October 10, 2014.
- The CBFO performed Audit A-13-11 of the CCP Quality Assurance Program on April 16-18, 2013.
 - CARs 13-024, 13-025, 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-14-05 of the CCP CH and RH transportation activities on December 3-5, 2013.
 - CAR 14-007 was issued on December 12, 2013 and was closed on February 7, 2014.
 - The Audit Report was issued on January 15, 2014.

- The EPA performed a continued compliance inspection of the characterization program and the Tier 1 of the physical modification of the MCS IQ3 on February 4-6, 2014.
 - The EPA provided approval (DOCKET NO: A-98-49; II-A4-186) on June 18, 2014.
 - The EPA provided concurrence on June 30, 2014.

- The CBFO requested a Tier 1 change to add the SCG CH S3000 on January 7, 2014.
 - The EPA provided approval (DOCKET NO: A-98-49; II-A4-189) on July 9, 2014.
 - The EPA provided concurrence on July 28, 2014.

- The CBFO requested a Tier 1 change for the use of the MILCC2 on May 30, 2014.
 - The EPA provided approval (DOCKET NO: A-98-49; II-A4-192) on October 21, 2014.

- The CBFO requested a Tier 1 change to add visual examination (VE) for SCGS4000 (soils/gravel) and S5000 (debris) CH transuranic (TRU) waste on May 30, 2014.
 - The EPA provided approval (DOCKET NO: A-98-49; II-A4-193) on November 10, 2014.

- The EPA issued concurrence on the draft CBFO expansion adding the MILCC2 and VE to the recertification memo on November 19, 2014.

RECOMMENDATION

The recommendation to the CBFO Manager is to authorize CCP at the ORNL to include the MILCC2 NDA system, VE of CH transuranic (TRU) waste SCGs S4000 (soils/gravel) and S5000 (debris), and to continue the authority for TRU waste characterization, certification, and transportation activities of CH SCGs, S3000 solids, S4000 soils/gravel, S5000 debris and RH 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 ORNL.

CONCURRENCE



J.R. Stroble, Director
CBFO TRU Sites and Transportation Division

11/17/14
Date



Michael R. Brown, Director
CBFO Office of Quality Assurance

11/18/2014
Date

CENTRAL CHARACTERIZATION PROGRAM LIST OF CH AND RH EQUIPMENT AND PROCESSES REQUIRING EVALUATION AND CERTIFICATION AT OAK RIDGE NATIONAL LABORATORY					
WIPP WWIS #	Site Equipment # or Title	Description	Components	Software	NDA Calibrated Range, Operating Range and TMU
Nondestructive Assay (NDA)					
16IQ1	IQ3	Canberra Mobile Qualitative and Quantitative Drum Counter with Isotopics (IQ3) Procedure CCP-TP-046, CCP-TP-047, CCP-TP-048	<ul style="list-style-type: none"> • High Sensitivity Gamma Waste Assay System • 3 HPGe Coaxial Detectors • 3 LEGe Detectors 	NDA-2000 Genie 2000	The calibration of the IQ3 is documented in MCS-IQ3-CALIB-2012. Rev. 1, "Calibration Report for the MCS IQ3", MCS-IQ3-TMU-2009. Total Measurement Uncertainty for the MCS IQ3 documents the estimate of total measurement uncertainty.
16MILCC2	MILCC2	Mobile ISOCS Large Container Counter (MILCC) Approved for 55 gallon drums Procedures CCP-TP-076, CCP-TP-077, and CCP-TP-048	<ul style="list-style-type: none"> • ISOCS Characterized Broad Energy Gamma Detectors (2) • ISOCS rails and collimator sets (2) • ISOCS carts (2) • Signal cables • Canberra LYNX Digital Signal Processors (2) 	NDA 2000 Genie 2000	<i>Calibration Report for the Mobile ISOCS Large Container Counter (MILCC) at the Transuranic Waste Processing Center in Oak Ridge, TN;</i> describes the operating ranges and methods. The acceptable range is LLD to limited by dead time. Acceptable density range for gamma is approximately 0.001-2.50 g/cc.
Dose-to-Curie (DTC)					
16DTC1	Dose-to-Curie	Radiological characterization process Procedure CCP-TP-504	As identified in CCP-TP-504	As identified in CCP-TP-504	N/A
Nondestructive Examination (NDE)					
16RR1	MCS RTR #6	Real-Time Radiography Mobile Characterization System RTR #6	<ul style="list-style-type: none"> • Shielded x-ray enclosure with a hydraulic drum loading door and manually opened personnel door 	N/A	N/A

CENTRAL CHARACTERIZATION PROGRAM					
LIST OF CH AND RH EQUIPMENT AND PROCESSES REQUIRING EVALUATION AND CERTIFICATION					
AT OAK RIDGE NATIONAL LABORATORY					
WIPP WWIS #	Site Equipment # or Title	Description	Components	Software	NDA Calibrated Range, Operating Range and TMU
		Procedure CCP-TP-053, CCP-TP-165	<ul style="list-style-type: none"> • 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 		
16RR2	MCS RTR #7	Real-Time Radiography Mobile Characterization System RTR #7 Procedure CCP-TP-053, CCP-TP-164	<ul style="list-style-type: none"> • 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
Visual Examination (VE)					
16RHVE1	Visual Examination	Visual Examination Procedure CCP-TP-500	N/A	N/A	N/A
16VE1	Visual Examination	Visual Examination Procedure CCP-TP-113	N/A	N/A	N/A

CENTRAL CHARACTERIZATION PROGRAM		
CH AND RH LIST OF PROCEDURES AT OAK RIDGE 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-027	CCP/TRU Waste Processing Center/Oakridge National Laboratory Interface Document
6.	CCP-PO-050	CCP TRUPACT-III TRU Waste Authorized Methods for Payload Control (CCP TRUPACT-III TRAMPAC)
7.	CCP-PO-505	CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)
8.	CCP-QP-001	CCP Graded Approach
9.	CCP-QP-002	CCP Training and Qualification Plan
10.	CCP-QP-005	CCP TRU Nonconforming Item Reporting and Control
11.	CCP-QP-008	CCP Records Management
12.	CCP-QP-010	CCP Document Preparation, Approval, and Control
13.	CCP-QP-014	CCP Quality Assurance Trend Analysis and Reporting
14.	CCP-QP-015	CCP Procurement
15.	CCP-QP-016	CCP Control of Measuring and Testing Equipment
16.	CCP-QP-017	CCP Identification and Control of Items
17.	CCP-QP-018	CCP Management Assessment
18.	CCP-QP-019	CCP Quality Assurance Reporting to Management
19.	CCP-QP-021	CCP Surveillance Program
20.	CCP-QP-022	CCP Software Quality Assurance Plan
21.	CCP-QP-023	CCP Handling, Storage and Shipping
22.	CCP-QP-026	CCP Inspection Control
23.	CCP-QP-027	CCP Test Control
24.	CCP-QP-028	CCP Records Filing, Inventorying, Scheduling, and Dispositioning
25.	CCP-QP-030	CCP Written Practice for the Qualification of CCP Helium Leak Detection Personnel
26.	CCP-TP-001	CCP Project Level Data Validation and Verification
27.	CCP-TP-002	CCP Reconciliation of DQOs and Reporting Characterization Data
28.	CCP-TP-005	CCP Acceptable Knowledge Documentation
29.	CCP-TP-028	CCP Radiographic Test Drum and Training Container Construction
30.	CCP-TP-030	CCP CH TRU Waste Certification and WWIS/WDS Data Entry
31.	CCP-TP-033	CCP Shipping of CH TRU Waste
32.	CCP-TP-046	CCP Mobile IQ3 System Calibration Procedure
33.	CCP-TP-047	CCP Mobile IQ3 Gamma Scanner Operation
34.	CCP-TP-048	CCP Mobile IQ3 System Data Reviewing, Validating, and Reporting Procedure
35.	CCP-TP-053	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
36.	CCP-TP-055	CCP Varian Porta-Test Leak Detector Operations
37.	CCP-TP-058	CCP NDA Performance Demonstration Program
38.	CCP-TP-068	CCP Standardized Container Management
39.	CCP-TP-076	CCP Operating the Mobile ISOCS Large Container Counter Using NDA 2000

CENTRAL CHARACTERIZATION PROGRAM		
CH AND RH LIST OF PROCEDURES AT OAK RIDGE NATIONAL LABORATORY		
#	Procedure No.	Procedure Title
40.	CCP-TP-077	CCP Calibrating the Mobile ISOCS Large Container Counter Using NDA 2000
41.	CCP-TP-082	CCP Waste Container Filter Vent Operation
42.	CCP-TP-083	CCP Gas Generation Testing
43.	CCP-TP-086	CCP CH Packaging Payload Assembly
44.	CCP-TP-113	CCP Standard Contact-Handled Waste Visual Examination
45.	CCP-TP-138	CCP Execution of Long-Term Objective for the Unified Flammable Gas Test Procedure
46.	CCP-TP-164	CCP Real-Time Radiography #7 Operating Procedure
47.	CCP-TP-165	CCP Real-Time Radiography #6 Operating Procedure
48.	CCP-TP-500	CCP Remote-Handled Waste Visual Examination
49.	CCP-TP-504	CCP Dose-to-Curie Survey Procedure for Remote-Handled Transuranic Waste
50.	CCP-TP-506	CCP Preparation of the Remote-Handled Transuranic Waste Acceptable Knowledge Characterization Reconciliation Report
51.	CCP-TP-507	CCP Shipping of Remote-Handled Transuranic Waste
52.	CCP-TP-509	CCP Remote-Handled Transuranic Container Tracking
53.	CCP-TP-530	CCP RH TRU Waste Certification and WWIS/WDS Data Entry
54.	WP-15-GM-1002	Issue Management Processing of WIPP Forms

CCP ORNL Deactivated Procedure			
1.	CCP-TP-092	CCP Mobile Gas Generation Testing Sampling System (MGSS) Data Calculation	10/2009
2.	CCP-QP-025	CCP Lessons Learned Program Management Control Procedure	6/2010
3.	CCP-QP-004	CCP Corrective Action Management	2/2013
4.	CCP-QP-006	CCP Corrective Action Reporting and Control	2/2013
5.	CCP-PO-008	CCP Quality Assurance Interface with the WTS Quality Assurance Program	6/2013
6.	CCP-QP-011	CCP Laboratory Logbooks	5/2013
7.	CCP-QP-029	CCP Corrective Action Management	9/2013
8.	CCP-TP-003	CCP Data Analysis for S3000, S4000, and S5000 Characterization	3/2013
9.	CCP-TP-093	CCP Sampling of TRU Waste Containers	5/2013
10.	CCP-TP-106	CCP Headspace Gas Sampling Batch Data Report Preparation	5/2013
11.	CCP-TP-162	CCP Random Selection of Containers for Solids and Headspace Gas Sampling and Analysis	5/2013

Table 1. Tiering of Contact-Handled Transuranic Waste Characterization Processes Implemented by ORNL-CCP
(Based on November 13–15, 2007, Baseline Inspection and Subsequent Inspections and Evaluations, Updated October 2014)

Process Elements	ORNL-CCP CH Waste Characterization Process – T1 Changes	ORNL-CCP CH Waste Characterization Process – T2 Changes*
Acceptable Knowledge, including Load Management	Any new waste category other than retrievably stored debris, soils/gravel and solids (i.e., any type of newly generated waste) Load management	Submission of a list of active ORNL-CCP CH AKEs and SPMs Notification to EPA upon completion of or substantive modification** to: <ul style="list-style-type: none"> • AK accuracy reports (annually, at a minimum) • AK-AK and AK-NDA/NDE Discrepancy Resolution Reports • WSPFs and related attachments (e.g., CIS) for all new or modified waste streams, including change notices • AKSRs (new and updated versions) • CCP-TP-005, Attachments 4, 6, 7 and 8 and/or associated memoranda, including “Add Container” memoranda • Site AK procedures requiring CBFO approval
Nondestructive Assay	New equipment or substantive physical modifications** to approved equipment Extension of or changes to approved calibration range for approved equipment Relocation of MILCC2 onsite or other activities that require system recalibration Addition of new measurement configurations or container types	Submission of a list of ORNL-CCP NDA operators, EAs and ITRs that performed work during the previous quarter Notification to EPA upon substantive modification** to: <ul style="list-style-type: none"> • Software for approved equipment • Operating ranges upon CBFO approval • Site NDA procedures requiring CBFO approval Notification to EPA upon successful calibration verification of MILCC2 following on-site relocation or other equipment changes
Real-Time Radiography	None	Submission of a list of ORNL-CCP RTR operators and ITRs that performed work during the previous quarter Notification to EPA upon: <ul style="list-style-type: none"> • New equipment or substantive physical modifications** to approved equipment • Substantive modification** to site RTR procedures requiring CBFO approval
Visual Examination and Visual Examination Technique	Use of VE to characterize homogenous solid CH TRU waste (SCG 3000)	Submission of a list of ORNL-CCP VE operators, VE Experts and ITRs that performed work during the previous quarter
WIPP Waste Data System	Load management	Notification to EPA upon substantive modification** to site WDS 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.

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

**Table 2. Tiering of Remote-Handled Transuranic Waste Characterization Processes Implemented by ORNL-CCP
 (Based on June 30–July 2, 2008, Baseline Inspection and Subsequent Tier 1 Evaluations, Updated May 2014)**

Process Elements	ORNL-CCP RH Waste Characterization Process – T1 Changes	ORNL-CCP RH Waste Characterization Process – T2 Changes*
Acceptable Knowledge	<p>Any new waste streams not approved under the baseline</p> <p>Modification of the approved population of the OR-REDC-RH-HET wastes to include any containers not included in the CCP-AK- ORNL-501, Revision 3 analysis</p> <p>Substantive modification** to the AKSR (e.g., CCP-AK-ORNL-500), certification test plan (e.g., CCP-AK-ORNL-502), correlation and surrogate summary form, AK accuracy report and waste stream profile form</p> <p>Implementation of load management</p>	<p>Submission of a list of active ORNL-CCP RH AKEs and SPMs</p> <p>Notification to EPA upon availability of or nonsubstantive modification** to:</p> <ul style="list-style-type: none"> • AKSRs and certification test plans (e.g., CCP-AK-ORNL-500, CCP-AK-ORNL-502) • Correlation and surrogate summary form • AK accuracy reports (annually, at a minimum) • The waste stream data package for waste streams and any modifications to the WSPF, including the CRR and CIS <p>Notification to EPA upon availability of or substantive modification** to:</p> <ul style="list-style-type: none"> • CCP-AK-ORNL-002 • Add container memoranda • Documentation of RH sample reclassified as CH and subject to confirmatory analyses via NDA • DRs or data limitation information • Site AK procedures requiring CBFO approval
Radiological Characterization, including Dose-to-Curie	<p>Application of new scaling factors for isotopic determination other than those documented in CCP-AK-ORNL-501, Revision 3</p> <p>Use of any alternate radiological characterization procedure other than DTC, with established scaling factors as documented in CCP- TP-504</p> <p>Any new waste stream not approved under the baseline or addition of containers to Waste Stream OR-REDC-RH-HET that requires changing the established radionuclide scaling factors in CCP-AK-ORNL-501, Revision 3</p> <p>Substantive modification** of EPA-approved procedures or radiological characterization technical reports (e.g., CCP-TP-504, CCP-AK-ORNL-501)</p>	<p>Submission of a list of ORNL-CCP DTC operators, EAs and ITRs that performed work during the previous quarter</p> <p>Notification to EPA upon:</p> <ul style="list-style-type: none"> • Nonsubstantive modification** to procedures or radiological technical reports (e.g., CCP-TP-504, CCP-AK-ORNL-501) requiring CBFO approval • Results from any RH TRU containers that qualify as CH and are subject to NDA
Visual Examination	<p>Implementation of VE by any system other than two operators performing VE (i.e., viewing a previously recorded VE event)</p>	<p>Submission of a list of ORNL-CCP VE operators, VE Experts and ITRs that performed work during the previous quarter</p> <p>Notification to EPA upon:</p> <ul style="list-style-type: none"> • Substantive modification** to site VE procedures requiring CBFO approval • Characterization of SCG S3000 or S4000 RH waste by an approved process

**Table 2. Tiering of Remote-Handled Transuranic Waste Characterization Processes Implemented by ORNL-CCP
 (Based on June 30–July 2, 2008, Baseline Inspection and Subsequent Tier 1 Evaluations, Updated May 2014)**

Process Elements	ORNL-CCP RH Waste Characterization Process-T1 Changes	ORNL-CCP RH Waste Characterization Process-T2 Changes*
Real-time Radiography	Any use of real-time radiography	
WIPP Waste Data System	None	Notification to EPA upon substantive modification** to: <ul style="list-style-type: none"> • Site WDS procedures requiring CBFO approval • The Excel spreadsheet titled WWIS Data Entry Summary Characterization and Certification

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.

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

** "Substantive modification" refers to a change with the potential to affect ORNL-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.