

United States Government


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memorandum

Carlsbad Field Office

Carlsbad, New Mexico 88221

DATE: APR 18 2011

REPLY TO
ATTN OF: CBFO:NTP:NC:GS:11-0250:UFC 5900.00

SUBJECT: Certification Expansion at ORNL-CCP Adding Containers to Waste Stream OR-NFS-CH-SOIL

TO: William McMillan, DOE-OR
M. Farok Sharif, Washington TRU Solutions General Manager

The Carlsbad Field Office (CBFO) is expanding the ORNL-CCP Contact-Handled (CH) and Remote-Handled (RH) Certification CBFO:NTP-NC-GS:10-1497:UFC 5900.00 dated September 8, 2010. This expansion reflects the Environmental Protection Agency (EPA) baseline inspection report (Docket No. A-98-49; II-A4-144) which was approved on March 23, 2011, as a Tier 1 change to include containers of waste from the Nuclear Fuel Services (NFS) burial trench soils (S4000) to Waste Stream OR-NFS-CH-SOIL.

The CBFO conducted Recertification Audit A-10-08 of the Central Characterization Project (CCP) CH and RH Transuranic (TRU) waste program deployed at the Oak Ridge National Laboratory (ORNL) (hereinafter referred to as ORNL-CCP) and to include the use of visual examination (VE) to characterize CH TRU debris waste. Audit A-10-08 was conducted February 9-11, 2010. The characterization activities were determined to be adequate, satisfactorily implemented, and effective.

The CCP Quality Assurance Program (QAP) was audited during Audit A-09-10 on February 24-26, 2009, in Carlsbad, New Mexico. The CCP QAP was found to adequately address the upper-tier requirements of the *CBFO Quality Assurance Program Document (QAPD)* and is being effectively implemented. The CCP CH and RH transportation activities were evaluated in Carlsbad, New Mexico on September 29 through October 1, 2009, during Audit A-09-27. Technical and quality assurance aspects of the transportation problem were found to be effectively implemented.

The audit team 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 QAPD, the *TRU Waste Acceptance Criteria for the Waste Isolation Pilot Plant (WIPP WAC)*, and the CH and RH *Transuranic Authorized Methods for Payload Control (TRAMPAC)*, *RH TRU 72B Safety Analysis Report (SAR)*, *TRUPACT-II Certification of Compliance*, and *Remote-Handled TRU Waste Characterization Program Implementation Plan (WCPIP)*. The audit team determined that the procedures/documents were effectively implemented.

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W. McMillan/M.F. Sharif

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Based on the results of Audits A-10-08, A-09-10, A-09-27 and conditions and limitations provided by the New Mexico Environment Department (NMED) and the EPA, the CBFO is authorizing ORNL-CCP to include additional CH retrievably stored soils/gravels (S4000) containers into their certified program and continue authority at the ORNL-CCP for characterization, certification, and transportation activities for CH retrievably stored soils/gravel (S4000), CH retrievably stored debris (S5000) and RH retrievably stored debris waste (S5000) as identified in Table 1, Page 4 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 ORNL-CCP certification program status,
- *Attachment 2* contains the list of equipment certified at the site,
- *Attachment 3* contains the list of CCP procedures, and
- *Attachment 4* describes specific ORNL-CCP waste characterization process elements that must be reported. These process elements are identified as Tier 1 changes and Tier 2 changes.

The ORNL-CCP shall not ship for disposal at WIPP any wastes affected by a Tier 1 process element change without prior CBFO approval, and ORNL-CCP shall report Tier 2 changes to CBFO on a quarterly basis



Edward Ziemianski
Acting Manager

Attachments (4)

cc: w/attachments

- O. Vincent, CBFO * ED
- J. R. Stroble, CBFO ED
- M. Brown, CBFO ED
- N. Castaneda, CBFO ED
- C. Fesmire, CBFO ED
- D. Miehls, CBFO ED
- M. Navarrete, CBFO ED
- G. Basabilvazo, CBFO ED
- S. McCauslin, CBFO ED
- T. Peake, EPA ED
- R. Joglekar, EPA ED
- E. Feltcorn, EPA ED
- J. Bearzi, NMED ED
- M. Percy, WTS ED
- L. Porter, WTS ED
- I. Quintana, WTS ED
- B. Schrock, WTS ED
- C. Kirkes, WTS ED
- J. Harvill, WTS ED
- D. Speed, WTS ED
- C. Luoma, WTS ED
- R. Chatfield, WTS ED
- D. Hofer, WTS ED
- M. Strum, WTS ED
- D. Standiford, WTS ED
- P. Martinez, CTAC ED
- D. Sellmer, CTAC ED
- P. Gilbert, LANL ED
- G. Lyshik, LANL ED

S. Percy, SM Stoller ED

WIPP Operating Record

CBFO M&RC

*ED denotes electronic distribution

Table 1-Approved CH & RH Waste Characterization Processes at ORNL-CCP

Processes	CH S4000 Soils		CH S5000 Debris		RH S5000 Debris	
	Newly generated	Retrievably- Stored	Newly generated	Retrievably- Stored	Newly generated	Retrievably- Stored
Acceptable Knowledge	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
Solids Sampling and Analysis	N/A	N/A	N/A	N/A	N/A	N/A
Soils Sampling and Analysis ¹	N/A	Approved	N/A	N/A	N/A	N/A
Headspace Gas Sampling (SUMMA) ²	N/A	N/A	N/A	Approved	N/A	Approved
Nondestructive assay (NDA) (SGS, DWAS/IPAN, & IQ3)	N/A	Approved	N/A	Approved	N/A	N/A
Radiological Characterization	N/A	N/A	N/A	N/A	N/A	Approved
Real-time Radiography	N/A	Approved	N/A	Approved	N/A	N/A
WIPP Waste Information System	N/A	Approved	N/A	Approved	N/A	Approved

¹Sampling is performed by Advanced Mixed Waste Treatment Project (AMWTP). Analysis is performed by the Idaho National Laboratory (INL), which is approved under a separate certification.

²Analysis performed by the INL, which is approved under a separate certification.

CENTRAL CHARACTERIZATION PROJECT AT OAK RIDGE 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 Oak Ridge National Laboratory (ORNL). Attachments 2, 3, and 4 provide complete lists of certified processes, procedures, documents, and systems deployed at the ORNL-CCP.

PROGRAM STATUS

- All program elements remain complete.
- The following site documents are current and demonstrate how the CCP complies with the CBFO requirements from A-10-08.
 - **QAPjP – CCP-PO-001, Revision 18** - *CCP Transuranic Waste Characterization Quality Assurance Project Plan* (Approved June 29, 2010 – CBFO:NTP:CF:GS:10-1422:UFC 5900.00).
 - **WCP - CCP-PO-002, Revision 24** - *CCP Transuranic Waste Certification Plan* (Approved June 29, 2010 – CBFO:NTP:NC:GS:10-1428:UFC 5900.00).
QAP - Section 4.0 of CCP-PO-002.
 - **TRAMPAC – CCP-PO-003, Revision 11**, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)* (Approved June 3, 2009 – CBFO:NTP:CF:GS:09-0987:UFC:5900.00).
 - **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 used by the CCP at the ORNL
- Standard operating procedures - see Attachment 3 for the complete list of certified procedures used by the CCP at the ORNL
- Tiering of TRU Waste Characterization Processes implemented by CCP at ORNL (based on EPA Baseline Inspections) - see Attachment 4

- CCP participated in the following performance demonstration programs (PDPs) for Audit A-10-08:
 - **HSG PDP (CCP INL)** For CH waste, SUMMA sampling is performed by CCP; analysis is performed by the Idaho National Laboratory, which is approved under a separate certification.
 - **NDA PDP** – Cycle 17A approved for radioanalysis of TRU waste drums using the system identified as IQ3, PDP System Registration OR02/ORG1, and the system identified as DWAS/IPAN/SGS, PDP System Registration OR01/ORN1. Memo CBFO:NTP:MRB:GS:10-1447:UFC 5900.00 dated July 15, 2010.
- CBFO conducted the CH and RH Recertification Audit A-10-08 of the ORNL-CCP on February 9-11, 2010.
 - CARs 10-017 and 10-018 were issued on February 22, 2010.
 - CARs 10-017 and 10-018 were closed on June 24, 2010.
 - NMED Observer Inquiry issued on February 17, 2010.
 - Interim Audit Report was issued March 11, 2010.
 - CBFO Response to Observer Inquiry issued April 16, 2010.
 - Final Audit Report was issued to NMED on June 28, 2010.
- CBFO requested a Tier 1 change to include the IQ3 Gamma Assay System and a Tier 2 change to add VE of CH waste to the ORNL-CCP certification on December 17, 2009.
 - EPA issued a determination that the request of VE of CH waste was a Tier 1 change on January 6, 2010.
 - CBFO requested the Tier 1 change for VE of CH waste on January 27, 2010.
 - CBFO received EPA's approval of the IQ3 and VE of CH waste on March 30, 2010
- CBFO requested a Tier 1 change to include 15 containers of waste from the NFS burial trench soils (S4000) to Waste Stream OR-NFSW-CH-SOIL on July 8, 2010.
- CBFO requested a revised Tier 1 change to include 2 containers of waste from the NFS burial trench soils (S4000) to Waste Stream OR-NFSW-CH-SOIL on February 15, 2011.
 - CBFO received EPA's approval of the Tier 1 change for additional containers to the S4000 (Soils/Gravel) Waste Summary Category Group at ORNL on March 23, 2011.

- CBFO conducted CH and RH Transportation Audit A-09-27 for all sites on September 29-October 1, 2009.
 - Audit Report was issued on October 14, 2009.
- CBFO conducted a Quality Assurance Program Audit A-09-10 on February 24-26, 2009.
 - Audit Report was issued on March 4, 2009.
- EPA issued concurrence on the draft CBFO recertification memo on April 11, 2011.

RECOMMENDATION

The recommendation to the CBFO Manager is for ORNL-CCP to include the additional CH retrievably stored soils/gravels (S4000) containers into their certified program and continue having authority for characterization, certification, and transportation of CH TRU soils/gravel (S4000) and debris (S5000) waste and RH TRU debris (S5000) waste at the ORNL. Attachments 2, 3, and 4 list the systems and procedures that constitute the bounds of this authority.

CONCURRENCE



Dennis Miehls, Acting Director
Quality Assurance

4-8-11

Date



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

April 8, 2011

Date

CENTRAL CHARACTERIZATION PROJECT					
LIST OF CH AND RH CERTIFIED EQUIPMENT AND PROCESSES AT OAK RIDGE NATIONAL LABORATORY					
WIPP WWIS #	Site Equipment # or Title	Description	Components	Software	NDA Calibrated Range, Operating Range and TMU
Headspace Gas (HSG)					
N/A	HSG	SUMMA Sampling process on selected waste containers from waste stream lots. Analysis is performed by the Idaho National Laboratory (INL), which is approved under a separate certification. (12HE4, 12HE5, 12HE6, 12HE9)	As identified in CCP-TP-093	As identified in CCP-TP-093	N/A
Solids Sampling					
N/A	Solids	Solids Sampling process on selected waste containers from waste stream lots. Sampling is performed by the Advanced Mixed Waste Treatment Project. Analysis is performed by the INL, which is approved under a separate certification. (12HA12, 12HA13, 12HA10, 12HA3, 12HA14, 12HA8, 12HM10, 12HM3, 12HM11, 12HM8, 12HM12, and 12HM9)	As identified in CCP-TP-181, CCP-TP-182, CCP-TP-183, CCP-TP-184, CCP-TP-185, CCP-TP-186, CCP-TP-187	As identified in CCP-TP-181, CCP-TP-182, CCP-TP-183, CCP-TP-184, CCP-TP-185, CCP-TP-186, CCP-TP-187	N/A
Nondestructive Assay (NDA)					
16SG1	DWAS/IPAN/SGS-01	Drum Waste Assay System /Imaging Passive/Active Neutron/Segmented Gamma Scanner – 55 gallon drums	<input type="checkbox"/> Coaxial detector with collimator <input type="checkbox"/> LEGe detector with collimator <input type="checkbox"/> Digital signal processors	<input type="checkbox"/> NDA 2000 <input type="checkbox"/> Genie 2000 <input type="checkbox"/> DWAS.exe <input type="checkbox"/> DWASAnalysis.exe	The SGS component is described in MV-SGS-0101-CAL-001, <i>Segmented Gamma Scanner-01 (SGS-01-01) Calibration, Confirmation and Verification Report</i> , with a

CENTRAL CHARACTERIZATION PROJECT					
LIST OF CH AND RH CERTIFIED EQUIPMENT AND PROCESSES AT OAK RIDGE NATIONAL LABORATORY					
WIPP WWIS #	Site Equipment # or Title	Description	Components	Software	NDA Calibrated Range, Operating Range and TMU
		Procedures CCP-TP-166, CCP-TP-167, CCP-TP-168, CCP-TP-169, CCP-TP-172	<input type="checkbox"/> 3 He Neutron detectors <input type="checkbox"/> Neutron generator system <input type="checkbox"/> Shielded assay chamber with turntable	<input type="checkbox"/> DNGI.exe <input type="checkbox"/> DWAS_SGS_QC.exe <input type="checkbox"/> FRAM44.exe	<p>matrix density range of 0.0 to 1.72 g/cm³ and an upper calibration range of 220.4 grams total plutonium. The Total Measurement Uncertainty (TMU) is described in CI-SGS01-TMU, <i>Total Measurement Uncertainty for the MCS Melton Valley Segmented Gamma Scanner</i>.</p> <p>The DWAS IPAN neutron component is described in BII-5183-CVR-001, <i>Calibration and Validation Report DWAS IPAN</i>. For passive mode, the operational range is from lower limit of detection (LLD) to 72.5133 g ²⁴⁰Pu_{EFF} with a MOD index range from 1.045 to 17.572. For active mode, the operational range is from LLD to 14.710 g ²³⁹Pu_{EFF} with an ABSMOD index range from 22.251 to 276.800 in terms of matrix. The TMU is described in BII-TMU-5183-001, <i>Total Measurement Uncertainty Report DWAS IPAN</i>.</p>
16IQ1	IQ3	Canberra Mobile Qualitative and Quantitative Drum Counter with Isotopics (IQ3) Procedure CCP-TP-046,	<input type="checkbox"/> High Sensitivity Gamma Waste Assay System <input type="checkbox"/> 3 HPGe Coaxial Detectors <input type="checkbox"/> 3 LEGe Detectors	<input type="checkbox"/> Gamma Waste Assay System (GWAS) Analysis Software	The calibration of the IQ3 is documented in MCS-IQ3-CALIB-2009, Revision 0, "Calibration Report for the MCS IQ3", MCS-IQ3-TMU-2009, Revision 0. Uncertainty of MCS IQ3

CENTRAL CHARACTERIZATION PROJECT					
LIST OF CH AND RH CERTIFIED EQUIPMENT AND PROCESSES AT OAK RIDGE NATIONAL LABORATORY					
WIPP WWIS #	Site Equipment # or Title	Description	Components	Software	NDA Calibrated Range, Operating Range and TMU
		CCP-TP-047, CCP-TP-048			rewritten for site independence.
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 – 55 gallon drums Procedure CCP-TP-053, CCP-TP-165	<input type="checkbox"/> Shielded x-ray enclosure with a hydraulic drum loading door and manually opened personnel door <input type="checkbox"/> Conveyer cart including drum manipulation equipment <input type="checkbox"/> X-ray imaging system including x-ray tube, image intensifier, and video camera <input type="checkbox"/> Video/audio recording equipment <input type="checkbox"/> 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 PROJECT 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-008	CCP Quality Assurance Interface with the WTS Quality Assurance Program
6.	CCP-PO-016	CCP Gas Generation Testing Program Quality Assurance Project Plan
7.	CCP-PO-026	CCP Configuration Management Plan
8.	CCP-PO-027	CCP/TRU Waste Processing Center/Oakridge National Laboratory 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-004	CCP Corrective Action Management
13.	CCP-QP-005	CCP TRU Nonconforming Item Reporting and Control
14.	CCP-QP-006	CCP Corrective Action Reporting and Control
15.	CCP-QP-008	CCP Records Management
16.	CCP-QP-010	CCP Document Preparation, Approval, and Control
17.	CCP-QP-011	CCP Laboratory Logbooks
18.	CCP-QP-014	CCP Quality Assurance Trend Analysis and Reporting
19.	CCP-QP-015	CCP Procurement
20.	CCP-QP-016	CCP Control of Measuring and Testing Equipment
21.	CCP-QP-017	CCP Identification and Control of Items
22.	CCP-QP-018	CCP Management Assessment
23.	CCP-QP-019	CCP Quality Assurance Reporting to Management
24.	CCP-QP-021	CCP Surveillance Program
25.	CCP-QP-022	CCP Software Quality Assurance Plan
26.	CCP-QP-023	CCP Handling, Storage and Shipping
27.	CCP-QP-025	CCP Lessons Learned Program Management Control Procedure
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-030	CCP Written Practice for the Qualification of CCP Helium Leak Detection Personnel
32.	CCP-QP-036	CCP Qualification of Acceptable Knowledge for Remote-Handled Transuranic Waste Through a Quality Assurance Equivalency Demonstration
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-028	CCP Radiographic Test and Training Drum Construction
38.	CCP-TP-030	CCP CH TRU Waste Certification and WWIS/WDS Data Entry
39.	CCP-TP-033	CCP Shipping of CH TRU Waste
40.	CCP-TP-046	CCP Mobile IQ3 System Calibration Procedure

CENTRAL CHARACTERIZATION PROJECT CH AND RH LIST OF PROCEDURES AT OAK RIDGE NATIONAL LABORATORY		
#	Procedure No.	Procedure Title
41.	CCP-TP-047	CCP Mobile IQ3 Gamma Scanner Operation
42.	CCP-TP-048	CCP Mobile IQ3 System Data Reviewing, Validating, and Reporting Procedure
43.	CCP-TP-053	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
44.	CCP-TP-055	CCP Varian Porta-Test Leak Detector Operations
45.	CCP-TP-058	CCP NDA Performance Demonstration Program
46.	CCP-TP-068	CCP Standardized Container Management
47.	CCP-TP-082	CCP Preparing and Handling Waste Containers for Headspace Gas Sampling
48.	CCP-TP-083	CCP Gas Generation Testing
49.	CCP-TP-086	CCP CH Packaging Payload Assembly
50.	CCP-TP-092	CCP Mobile Gas Generation Testing Sampling System (MGSS) Data Calculation
51.	CCP-TP-093	CCP Sampling of TRU Waste Containers
52.	CCP-TP-106	CCP Headspace Gas Sampling Batch Data Report Preparation
53.	CCP-TP-113	CCP Standard Contact-Handled Waste Visual Examination
54.	CCP-TP-138	CCP Execution of Long-Term Objective for the Unified Flammable Gas Test Procedure
55.	CCP-TP-162	CCP Random Selection of Containers for Solids and Headspace Gas Sampling and Analysis
56.	CCP-TP-163	CCP-Standard Visual Examination of Records
57.	CCP-TP-165	CCP Real-Time Radiography #6 Operating Procedure
58.	CCP-TP-166	CCP Drum Waste Assay System Imaging Passive/Active Neutron Operations
59.	CCP-TP-167	CCP Drum Waste Assay System Imaging Passive/Active Neutron Calibration
60.	CCP-TP-168	CCP Drum Waste Assay System Imaging Passive/Active Neutron/Segmented Gamma Scanner Data Generation Level Validation
61.	CCP-TP-169	CCP Operating the Mobile Segmented Gamma Scanner
62.	CCP-TP-172	CCP Calibrating the Mobile Segmented Gamma Scanner
63.	CCP-TP-180	CCP Analytical Sample Management
64.	CCP-TP-500	CCP Remote-Handled Waste Visual Examination
65.	CCP-TP-504	CCP Dose-to-Curie Survey Procedure for Remote-Handled Transuranic Waste
66.	CCP-TP-506	CCP Preparation of Remote-Handled Transuranic Waste Acceptable Knowledge Characterization Reconciliation Report
67.	CCP-TP-507	CCP Shipping of Remote-Handled Transuranic Waste
68.	CCP-TP-509	CCP Remote-Handled Transuranic Container Tracking
69.	CCP-TP-530	CCP RH TRU Waste Certification And WWIS/WDS Data Entry

Table 1. Tiering of Contact-Handled Transuranic Waste Characterization Processes Implemented by ORNL-CCP
(Updated March 2011)

Waste Characterization Process Elements	ORNL-CCP Waste Characterization T1 Changes	ORNL-CCP Waste Characterization T2 Changes ^a
Acceptable Knowledge and Load Management	Implementation of load management Implementation of AK for wastes other than retrievably stored debris and soils/gravel (i.e., solids or any type of newly generated waste)	The elements listed as T2 changes below apply to all approved ORNL-CCP CH TRU waste streams and waste summary category groups Notification to EPA upon completion of AK accuracy reports and upon completion of new versions or updates/substantive changes ^b of the following: <ul style="list-style-type: none"> - AK-NDA memoranda - Site AK procedure CCP-TP-005 - AK accuracy reports - AK-AK and AK-NDA/NDE Discrepancy Resolution Reports - Attachments 4 and 6 and associated memoranda - WSPFs and AK summaries and related attachments for all new waste streams, including change notices - "Add Container" memoranda
Non-Destructive Assay	New equipment or physical modifications to approved equipment ^c Extension or changes to approved calibration range for approved equipment	Notification to EPA upon completion of changes to software for approved equipment, operating range(s), and site procedures that require CBFO approval
Real-Time Radiography	None	Notification to EPA upon the following: <ul style="list-style-type: none"> - Implementation of new RTR equipment or substantive changes^c to approved RTR equipment - Completion of changes to site RTR procedures requiring CBFO approvals
Visual Examination	None	None
WIPP Waste Data System	Implementation of load management	Notification to EPA upon completion of changes to WDS procedure(s) requiring CBFO approvals

^a ORNL-CCP will report all T2 changes to EPA at the end of each fiscal quarter

^b "Substantive changes" are changes with the potential to impact the site's waste characterization activities or documentation thereof, excluding changes that are solely related to Environment, Safety, and Health; nuclear safety; or *Resource Conservation and Recovery Act* (RCRA), or that are editorial in nature

^c Modifications to approved equipment include all changes with the potential to affect NDA data relative to waste isolation and exclude minor changes, such as the addition of safety-related equipment

Table 1. Tiering of RII TRU WC Processes Implemented by ORNL-CCP, Based on June 30–July 2, 2008 Baseline Inspection

RH WC Process Elements	ORNL-CCP RH WC Process - T1 Changes	ORNL-CCP RH WC Process - T2 Changes*
Acceptable Knowledge (AK)	<p>Addition of any new waste streams not approved under this baseline (AK-1)</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 1 analysis (AK-1)</p> <p>Modification(s) resulting from incorporation of new information specific to the approved RH debris waste (OR-REDC-RH-HET) population to the following documents: CSSF (AK-1 and AK-2); CCP-AK-ORNL-501 (AK-1); CCP-AK-ORNL-500 (AK-2 and AK-9); AKSR (AK-6); CTP (AK-9); AK Accuracy Reports (AK-1 and AK-15); and the WSPF (AK-14)**</p> <p>Implementation of load management (AK-16)</p>	<p>Notification to EPA when updates are made to the documents included in AK-1, AK-2, AK-3, AK-4, AK-6, AK-9, AK-13, AK-14, and AK-15, outside of the specific T1 changes listed in the previous column**</p> <p>Notification to EPA of availability of and/or revisions to Add Container Memoranda (AK-3)</p> <p>Notification to EPA of availability of documentation of RH sample reclassified as CH and subject to confirmatory analyses via NDA (AK-9)</p> <p>Notification to EPA of availability of DRFs or data limitation information pertaining to CCP's assessment of ORNL's original radiological characterization of wastes generated post-1999 (AK-13)</p>
Radiological Characterization, Dose-to-Curie (DTC), and the application of radionuclide-specific scaling factors	<p>Application of new scaling factors for isotopic determination other than those documented in CCP-AK-ORNL-501 (RC-3)</p> <p>Use of any alternate radiological characterization procedure other than DTC, with established scaling factors as documented in CCP-TP-504, Revision 6, or substantive modification of the DTC procedure*** (RC-4)</p> <p>Any new waste stream not approved under this baseline or addition of containers to Waste Stream OR-REDC-RH-HET that requires changing the documented radionuclide scaling factors in CCP-AK-ORNL-501 (RC-4)</p>	<p>Revisions of CCP-AK-ORNL-501 or CCP-TP-504 that require CBFO approval (RC-3), (RC-4), (RC-8)**</p> <p>Results from any RH TRU container(s) that qualify as CH and are subject to NDA (RC-8)</p>
Visual Examination (VE)	Implementation of VE by any system other than two operators performing VE**** (VE-2)	<p>Changes to VE procedure(s) that require CBFO approval (VE-1)**</p> <p>Addition of new Summary Category Groups to the VE process that is subject to this approval (VE-2)</p>
WIPP Waste Information System (WWIS)	None at this time.	<p>Changes to WWIS procedure(s) that require CBFO approval (WWIS-1)**</p> <p>Changes to the Excel spreadsheet titled WWIS Data Entry Summary Characterization and Certification (WWIS-2)</p>

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

** Excluding changes that are editorial in nature or are required to address administrative concerns

*** *Substantive modification* refers to a change with the potential to affect ORNL-CCP's RH WC process, e.g., the use of an inherently different type of measurement instrument system or a gamma probe not described in CCP-TP-504

**** This approval is limited to actual execution of VE using two operators at the TWPC as opposed to viewing a previously recorded VE event