



United States Government

Department of Energy

memorandum

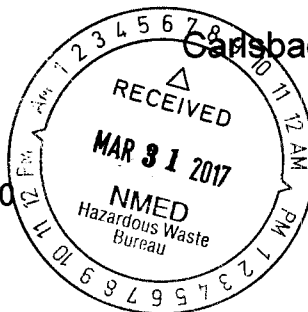
Carlsbad Field Office

Carlsbad, New Mexico 88221

DATE: MAR 31 2017

REPLY TO
ATTN OF: CBFO:NCD:JRS:PG:17-0756:UFC 5900.00

SUBJECT: Recertification for SRS-CCP

TO: Jack Craig, DOE-SR
Mr. Philip Breidenbach, President and Project Manager, Nuclear Waste Partnership LLC

The Carlsbad Field Office (CBFO) has completed annual Recertification Audits A-15-02 of the Savannah River Site (SRS) Central Characterization Program (CCP) transuranic (TRU) waste certification activities conducted November 4-6, 2014, and A-16-02 of the SRS/CCP conducted on December 3-4, 2015. In addition, CBFO completed surveillance S-17-31, SRS-CCP Waste Stream SR-221H-PuOx Readiness to Ship Surveillance.

The assessment teams determined that the SRS-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)*, including the *Enhanced AK Process*, the *WIPP Documented Safety Analysis (DSA)*, the *CH and RH Transuranic Authorized Methods for Payload Control (TRAMPAC)*, and *Certification of Compliance*. The surveillance team determined that the SRS-CCP has successfully and effectively implemented the applicable sections of *WIPP WAC*, Revision 8, Appendices H and I.

Based on the results of the CBFO Audits/Surveillances (See Attachment I), and conditions and limitations provided by the New Mexico Environment Department (NMED) and the US Environmental Protection Agency (USEPA), the CBFO grants continued authority at the SRS-CCP for TRU Waste characterization, certification, and transportation activities as identified in Table 1 of this memorandum, and Audits A-15-02 and A-16-02, subject to the following limitations and conditions:

- This memorandum applies only to the shipment of SR-221H-PuOx waste stream

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 SRS-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 SRS-CCP certified procedures/documents; and

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- Attachment 4 describes specific SRS-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 SRS-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 SRS-CCP shall report Tier 2 changes to the CBFO on a quarterly basis.
- Attachment 5 further describes the Waste Acceptance Criteria, Revision 8, gap analysis performed for and is approved for the initial waste shipment.

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


Todd A. Shrader, Manager
Carlsbad Field Office

Attachments (5)

cc: w/attachments

G. Basabilvazo, CBFO	* ED	R. Kuhn, NWP	ED
G. Birge, CBFO	ED	R. Lee, NWP	ED
M. Brown, CBFO	ED	C. Luoma, NWP	ED
T. Carver, CBFO	ED	S. Martinez, NWP	ED
N. Castaneda, CBFO	ED	R. McGinnis, NWP	ED
H. Cruickshank, CBFO	ED	J. Morrison, NWP	ED
C. Fesmire, CBFO	ED	W. Most, NWP	ED
D. Miehlis, CBFO	ED	L. Oberbeck, NWP	ED
M. Navarrete, CBFO	ED	S. Offner, NWP	ED
J.R. Stroble, CBFO	ED	B. Pace, NWP	ED
D. Ferguson, DOE-SR	ED	M. Ramirez, NWP	ED
J. Ellis, EPA	ED	A. Ray, NWP	ED
E. Feltcorn, EPA	ED	R. Reeves, NWP	ED
R. Joglekar, EPA	ED	F. Romo, NWP	ED
T. Peake, EPA	ED	R. Romo, NWP	ED
J. Kieling, NMED	ED	C. Simmons, NWP	ED
R. Maestas, NMED	ED	F. Sharif, NWP	ED
J. Blankenhorn, NWP	ED	D. Stegman, NWP	ED
J. Britain, NWP	ED	K. Urquidez, NWP	ED
B. Broomfield, NWP	ED	M. Valentine, NWP	ED
B. Carlsen, NWP	ED	R. Allen, CTAC	ED
J. Carter, NWP	ED	P. Hinojos, CTAC	ED
R. Chavez, NWP	ED	P. Martinez, 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. Harvill, NWP	ED	W. Weyerman, LANL	ED
J. Haschets, NWP	ED	S. Percy, TFE, Inc.	ED
R. Kantrowitz, NWP	ED	WIPP Operating Record	ED
C. Kirkes, NWP	ED	CBFO M&RC	
J. Knox, NWP	ED	*ED denotes electronic distribution	

Table 1 – SRS-CCP CH Certified Waste Characterization Processes

Characterization Process ¹	CH S3000 Solids		CH S4000 Soils/Gravel		CH S5000 Debris	
	Newly generated	Retrievably-stored	Newly generated	Retrievably-stored	Newly generated	Retrievably-stored
Acceptable Knowledge (AK)	N/A	Approved	Approved	Approved	Approved	Approved
Chemical Compatibility Evaluation	N/A	N/A	N/A	N/A	SR-221H-PuOx ¹²	N/A
Basis of Knowledge Evaluation	N/A	N/A	N/A	N/A	SR-221H-PuOx ¹²	N/A
Load Management	N/A	Approved	Approved	Approved	Approved	Approved
Data Validation & Verification (V&V)	N/A	Approved	Approved	Approved	Approved	Approved
Non-Destructive Assay (NDA) ⁵	Approved	Approved	Approved	Approved	Approved	Approved
Dose-to-Curie (DTC)	N/A	N/A	N/A	N/A	N/A	N/A
RH Radiological Characterization of Sealed Sources	N/A	N/A	N/A	N/A	N/A	N/A
Real-Time Radiography (RTR) ⁶	Approved	Approved	Approved	Approved	Approved	Approved
Visual Examination (VE) ⁹	N/A	N/A	N/A	N/A	N/A	N/A
WIPP Data System (WDS)	Approved	Approved	Approved	Approved	Approved	Approved

¹Characterization Processes in this Table may not be completely listed in Attachment 2.

⁵EPA Approval of the Tier 1 change to use NABC Five-Foot Setback Configuration for CH waste in SLB2s dated March 24, 2014, DOCKET NO: A-98-49; II-A4-182

⁶EPA Approval of the Tier 1 change to add the 3 sealed source containers of the RH Waste Stream SR-RH-SDD.01 at the SRS dated May 22, 2014, DOCKET NO: A-98-49; II-A4-184. For this waste stream, EPA is approving AK/VE for radiological characterization using simple mass-based isotopic relationships and then applying the OSRP database for non-plutonium radionuclides as an alternative characterization method from that used in CCP-TP-504, WDS Method ID Number 16311. RH VE is only approved for this waste stream.

⁸EPA Continued Compliance Inspection report (DOCKET NO. A-98-49; II-A4-195) which found the RTR process to be adequate was submitted to the CBFO. Submission to EPA of a list of all RTR personnel who performed work during the previous quarter is a new RTR T2 change (See Attachment 4 of this memorandum). Specifically, the list must include all operators and ITRs and must be submitted to the EPA.

⁹EPA Continued Compliance Inspection report (DOCKET NO: A-98-49; II-A4-195) references that SRS-CCP is not currently prepared to use or demonstrate the CH VE process.

¹²The SR-221H-PuOx was determined to have no oxidizing chemicals.

**CENTRAL CHARACTERIZATION PROGRAM DEPLOYED AT
SAVANNAH RIVER SITE
CERTIFICATION PROGRAM STATUS**

The CBFO Directors of the National TRU Program and the Office of Quality Assurance have evaluated the documentation supporting the compliance of the Central Characterization Program (CCP) TRU waste program deployed at the Savannah River Site (hereinafter referred to as SRS-CCP).

PROGRAM STATUS

- All program elements remain complete.
- The following site program documents are current and comply with CBFO requirements*:
 - **CCP-PO-001, Revision 21, CCP Transuranic Waste Characterization Quality Assurance Project Plan,**
CBFO Approval - CBFO:NTP:JRS:PG:13-0487:UFC 5900.00 dated April 17, 2013;
 - **CCP-PO-002, Revision 27, CCP Transuranic Waste Certification Plan,**
CBFO Approval - CBFO:NTP:JRS:PG:13-0593:UFC 5900.00 dated May 31, 2013; and
 - **CCP-PO-003, Revision 13, CCP Transuranic Authorized Method for Payload Control,**
CBFO Approval - CBFO:NTP:JRS:GL:13-0671:UFC 5900.00 dated July 29, 2013; and

*Note that the program documents listed above are the revisions that were audited and may not be the current revisions.

- 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 SRS-CCP certified procedures/documents;
- Attachment 4 describes specific SRS-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 SRS-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 SRS-CCP shall report Tier 2 changes to the CBFO on a quarterly basis; and
- Attachment 5 further describes the Waste Acceptance Criteria, Revision 8, gap analysis performed for initial waste shipment.

- The CCP participated in the following performance demonstration programs (PDPs)*:
 - **NDA PDP – Box Cycle B14A approval** for radioassay of WIPP wastes contained in TRU SWBs using the NABC (SR05/SRN2).
Memorandum CBFO:TSTD:NC:LC:14-2019:UFC 5900.00 dated October 30, 2014.

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

- CBFO conducted the CH Recertification Audit A-15-02 of the SRS-CCP on November 4-6, 2014.
 - CAR 15-011 was issued on November 19, 2014 and closed on February 18, 2015.
 - The Final Audit Report was issued to NMED on February 25, 2015
 - The NMED approval was issued on March 2, 2017.
- CBFO conducted the CH Recertification Audit A-16-02 of the SRS-CCP on December 3-4, 2015.
 - No CARs were issued.
 - The Interim Audit Report was issued on December 30, 2015.
 - The Final Audit Report was issued to NMED on February 29, 2016.
 - The NMED approval was issued on March 2, 2017.
- The CBFO conducted A-15-12 on April 7-9, 2015 of the Nuclear Waste Partnership LLC (NWP)/Central Characterization Program (CCP) Quality Assurance Program.
 - CAR 15-034, 5-035, 15-036, and 15-038 were issued on April 24, 2015.
 - CAR 15-034 was closed on July 9, 2015.
 - CAR 15-035 was closed on August 18, 2015.
 - CAR 15-036 was closed on June 24, 2015.
 - CAR 15-038 was closed on August 19, 2015.
 - The Audit Report was issued on May 1, 2015.
- The CBFO conducted Audit A-16-12 on March 29-31, 2016 of the Nuclear Waste Partnership LLC (NWP)/Central Characterization Program (CCP) Quality Assurance Program.
 - CAR 16-030 was issued on April 5, 2016 and closed on September 6, 2016.
 - CAR 16-031 was issued on April 5, 2016 and closed on May 24, 2016.
 - The Audit Report was issued on April 20, 2016.

- The CBFO conducted Audit A-14-19 at Los Alamos National Laboratory on August 19-21, 2014. During the Recertification audit the activities for transportation Container Management, Flammable Gas Sampling and Analysis and Shipping Documentation was performed and found to be adequately established for compliance with the upper-tier requirements, effectively implemented, and satisfactory.
 - The Interim Audit Report was issued on September 19, 2014.
- The CBFO conducted Surveillance S-16-24 on February 23, 2016 of the All Sites CCP Transportation Training Activities for CH and RH.
 - The Surveillance Report was issued on February 29, 2016.
- The CBFO conducted Surveillance S-17-26 on March 7, 2017 of the Mobile Loading Unit Training at Waste Control Specialists performed for the Nuclear Waste Partnership LLC/Central Characterization Program.
 - The Surveillance Report was issued on March 20, 2017.
- The CBFO conducted Surveillance S-17-31 Readiness to Ship SR-221H-PuOx dated March 31, 2017.
- The EPA issued concurrence on the draft recertification memo on date via email.

RECOMMENDATION

The recommendation to the CBFO Manager is to grant continued authority at the CCP at SRS for TRU Waste characterization, certification, and transportation activities as identified in Table 1 of this memorandum and Surveillance S-17-31, Audits A-15-02 and A-16-02, subject to the following limitations and conditions:

- This recommendation applies only to the shipment of SR-221H-PuOx waste stream.

CONCURRENCE



J. R. Stroble, Director
National TRU Program Compliance Division

3-31-17
Date



Mike Brown, Director
Office of Quality Assurance

3-31-17
Date

CENTRAL CHARACTERIZATION PROGRAM at Savannah River Site List of Processes/Equipment Certified from Table 1 of this Memorandum During Audits A-15-02 and A-16-02					
WDS Method ID#	Site Equipment # or Title	Description	Components	Software	NDA Calibrated and TMU
Non-Destructive Assay					
1NABC1*	NABC – (SR05/SRN5)	<p>Nondestructive Assay Box Counter – 55-gallon drums, standard waste boxes (SWBs), and standard large box 2s (SLB2s)</p> <p>Method identified in CCP-TP-189 and CCP-TP-191</p>	<p>Gamma</p> <ul style="list-style-type: none"> • Two Co-60 Transmission Sources • Two NaI Gamma Detectors for transmission measurements • Four Broad Energy Germanium (BEGe) Detectors for gamma emission measurements • Six Digital Signal Processors Neutron • 320 He-3 Tubes in High Density Polyethylene Liner • Cf-252 Add-A-Source Correction 	<ul style="list-style-type: none"> • NDA-2000 • Genie-2000 	<p>The NABC has two modalities of operation: gamma and neutron. Therefore, two sets of calibration documents exist. For the gamma modality three calibrations are approved:</p> <p>(1) Gamma near-field calibration utilizing multi-curve efficiency-based calibration, in accordance with ASTM Standard C1133/C1133-10 for the Box Segmented Gamma System at the Savannah River Site, CCP-SRS-NABC-2011-01, May 2, 2011. Both 1-hour extended count time and 20-minute reduced count time calibration arrangements are approved for NABC gamma near-field efficiency-based calibration.</p> <p>(2) Gamma near-field calibration utilizing matrix transmission correction-based calibration, in accordance with ASTM Standard C1133/C1133-10 for the Box Segmented Gamma System at the Savannah River Site, CCP-SRS-NABC-2011-01, May 2, 2011. Both 1-hour extended count time and 20-minute reduced count time calibration arrangements are approved for NABC gamma near-field matrix transmission correction-based calibration</p> <p>(3) Gamma [5-foot set-back] far-field calibration utilizing multi-curve efficiency-based calibration, in accordance with ASTM Standard C1133/C1133-10 for the Box Segmented Gamma System at the Savannah River Site, CCP-SRS-NABC-2011-01, May 2, 2011. Both 1-hour extended count time and 20-minute reduced count time calibrations approved for NABC gamma efficiency-based calibration for 55 gallon drums and SWB's. SLB2's[5 foot setback] are approved for one hour counts only and are limited to a two container population. In addition the SLB2 far field configuration may not be used for sorting</p>

<p align="center">CENTRAL CHARACTERIZATION PROGRAM at Savannah River Site List of Processes/Equipment Certified from Table 1 of this Memorandum During Audits A-15-02 and A-16-02</p>					
WDS Method ID#	Site Equipment # or Title	Description	Components	Software	NDA Calibrated and TMU
					<p>TRU waste. CCP-SRS-SRBC001 R7</p> <p>For the passive neutron modality, two calibrations are approved:</p> <p>(1) Passive neutron calibration utilizing high-efficiency coincidence and multiplicity counting technique together with Cf-252 Add-A-Source based-calibration for 1-hour extended count time, in accordance with ASTM Standard C-1207 (Neutron Coincidence Counting) and ASTM Standard C-1500 (Neutron Multiplicity Counting) for the Box Neutron Assay System at the Savannah River Site, CCP-SRS-NABC-2011-01, May 2, 2011. The 1-Hour extended count time calibration arrangement is approved for the NABC Box Neutron Assay System neutron coincidence and multiplicity counting Cf-252 Add-A-Source-based calibrations.</p> <p>(2) Passive neutron calibration utilizing high-efficiency coincidence and multiplicity counting technique together with Cf-252 Add-A-Source based-calibration for 20-minute reduced count time, in accordance with ASTM Standard C-1207 (Neutron Coincidence Counting) and ASTM Standard C-1500 (Neutron Multiplicity Counting) for the Box Neutron Assay System at the Savannah River Site, CCP-SRS-NABC-2011-01, May 2, 2011. The 20-minute reduced count time calibration arrangement is approved for the NABC Box Neutron Assay System neutron coincidence and multiplicity counting Cf-252 Add-A-Source-based calibrations.</p> <p>The determination of the TMU for the NABC is similarly documented for the gamma modality in A40972, "Savannah River Box Gamma Box</p>

CENTRAL CHARACTERIZATION PROGRAM at Savannah River Site List of Processes/Equipment Certified from Table 1 of this Memorandum During Audits A-15-02 and A-16-02					
WDS Method ID#	Site Equipment # or Title	Description	Components	Software	NDA Calibrated and TMU
					Counter Total Measurement Uncertainty Report for Alternatives for Non-Destructive Assay (NDA) of Large Containers to Allow Shipping in TRUPACT-III without Resizing and/or Repackaging," dated October 15, 2007, and for the neutron modality in A41309, "Savannah River Neutron Box Counter Total Measurement Uncertainty Report for Alternatives for Non-Destructive Assay (NDA) of Large Containers to Allow Shipping in TRUPACT-III without Resizing and/or Repackaging," dated October 15, 2007.
Dose-to-Curie					
1DTC1	Dose-to-Curie	Radiological Characterization Method identified in CCP-TP-504	As identified in CCP-TP-504	As identified in CCP-TP-504	N/A
16311	Dose-to-Curie (Sealed Sources)	Radiological Characterization Method identified in CCP-RC-SRS-631	Method identified in CCP-RC-SRS-631	Method identified in CCP-RC-SRS-631	N/A
Sealed Sources					
16311	OSR ACCESS and Excel	Radiological characterization as described in CCP-RC-SRS-631	Mass based isotopic relationships applying OSRP database for non-plutonium radionuclides as described in CCP-RC-SRS-631	OSRP Access and Excel	N/A

CENTRAL CHARACTERIZATION PROGRAM at Savannah River Site List of Processes/Equipment Certified from Table 1 of this Memorandum During Audits A-15-02 and A-16-02					
WDS Method ID#	Site Equipment # or Title	Description	Components	Software	NDA Calibrated and TMU
Non-Destructive Examination					
1RR4	RTR-4	Real-time Radiography Method identified in CCP-TP-053	<ul style="list-style-type: none"> • Shielded x-ray enclosure with a rear container loading door and manually opened personnel door • Conveyer cart • 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
1LCNDE	LCNDE	Real-time Radiography Method identified in CCP-TP-053	<ul style="list-style-type: none"> • X-ray source - Linatron 3 MeV linear accelerator • Linear Diode Array (LDA) - X-ray imaging system which is used to produce a single still image of the container. • Area Detector Array (ADA) - X-ray imaging system which provides real time radioscopic images of the container. • Imaging and control software. • Container manipulation equipment • Video/audio recording equipment 	N/A	N/A
Visual Examination					
VISUAL	Visual Examination	Visual Examination Method identified in CCP-TP-113, CCP-TP-163	N/A	N/A	N/A

**CENTRAL CHARACTERIZATION PROGRAM at Savannah River Site
List of Processes/Equipment Certified from Table 1 of this Memorandum
During Audits A-15-02 and A-16-02**

WDS Method ID#	Site Equipment # or Title	Description	Components	Software	NDA Callbrated and TMU
1RHVE1	Visual Examination Activities for Waste Stream SR-RH-SDD.01 only	CCP-TP-500 CCP-TP-163	N/A	N/A	N/A

*NOTE: Equipment must remain in compliance with the PDP program to certify waste.

CENTRAL CHARACTERIZATION PROJECT at SAVANNAH RIVER SITE			
LIST OF CERTIFIED PROCEDURES/DOCUMENTS			
DURING Audits A-15-02, and A-16-02			
(Items in red represents new procedure/documents)			
#	Procedure No.	Rev No*	Procedure Title
1.	CCP-PO-001	22	CCP Transuranic Waste Characterization Quality Assurance Project Plan
2.	CCP-PO-002	27	CCP Transuranic Waste Certification Plan
3.	CCP-PO-003	13	CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)
4.	CCP-PO-004	35	CCP/SRS Interface Document
5.	CCP-PO-005	27	CCP Conduct of Operations
6.	CCP-PO-050	1	CCP TRUPACT-III TRU Waste Authorized Methods for Payload Control (CCP TRUPACT-III TRAMPAC)
7.	CCP-PO-505	1	CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)
8.	CCP-QP-001	8	CCP Graded Approach
9.	CCP-QP-002	39	CCP Training and Qualification Plan
10.	CCP-QP-005	25	CCP TRU Nonconforming Item Reporting and Control
11.	CCP-QP-008	25	CCP Records Management
12.	CCP-QP-010	25	CCP Document Preparation, Approval, and Control
13.	CCP-QP-014	7	CCP Quality Assurance Trend Analysis and Reporting
14.	CCP-QP-015	12	CCP Procurement
15.	CCP-QP-017	4	CCP Identification and Control of Items
16.	CCP-QP-018	11	CCP Management Assessment
17.	CCP-QP-019	8	CCP Quality Assurance Reporting to Management
18.	CCP-QP-022	16	CCP Software Quality Assurance Plan
19.	CCP-QP-023	4	CCP Handling, Storage and Shipping
20.	CCP-QP-026	14	CCP Inspection Control
21.	CCP-QP-027	6	CCP Test Control
22.	CCP-QP-028	16	CCP Records Filing, Inventorying, Scheduling, and Dispositioning
23.	CCP-TP-001	21	CCP Project Level Data Validation and Verification
24.	CCP-TP-002	26	CCP Reconciliation of DQOs and Reporting Characterization Data
25.	CCP-TP-005	26	CCP Acceptable Knowledge Documentation
26.	CCP-TP-028	9	CCP Radiographic Test Drum and Training Container Construction
27.	CCP-TP-030	34	CCP CH TRU Waste Certification and WWIS/WDS Data Entry
28.	CCP-TP-033	22	CCP Shipping of CH TRU Waste
29.	CCP-TP-053	15	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
30.	CCP-TP-058	6	CCP NDA Performance Demonstration Program
31.	CCP-TP-113	19	CCP Standard Contact-Handled Waste Visual Examination
32.	CCP-TP-163	4	CCP Evaluation of Waste Packaging Records for Visual Examination of Records
33.	CCP-TP-504	17	CCP Dose-to-Curie Survey Procedure for Remote-Handled Transuranic Waste
34.	CCP-TP-506	5	CCP Preparation of the RH TRU Waste AK Characterization Reconciliation Report
35.	CCP-TP-509	6	CCP Remote-Handled Transuranic Container Tracking
36.	CCP-TP-530	12	CCP RH TRU Waste Certification and WWIS/WDS Data Entry

CENTRAL CHARACTERIZATION PROJECT at SAVANNAH RIVER SITE			
LIST OF CERTIFIED PROCEDURES/DOCUMENTS			
DURING Audits A-15-02, and A-16-02			
(Items in red represents new procedure/documents)			
#	Procedure No.	Rev No*	Procedure Title
*Revision in effect at the time of the audit. NOTE: Any changes to procedures that affect performance criteria or data quality, testing procedures, quality assurance objectives, calibration requirements, or QA sample acceptance criteria comply with the WIPP HWFP WAP (Attachment C) and shall not be made without prior approval of the CBFO.			

**Table 1. Tiering of Contact-Handled Transuranic Waste Characterization Processes Implemented by SRS-CCP
(Based on October 31–November 3, 2005, Baseline Inspection and Subsequent Tier 1 Evaluations, Updated February 2015)**

Process Elements	SRS-CCP CH Waste Characterization Processes – T1 Changes	SRS-CCP CH Waste Characterization Processes – T2 Changes*
Acceptable Knowledge, including Load Management	Load management for the S3000 summary category group	<p>Submission of a list of SRS-CCP CH AKEs and SPMs that performed work during the previous quarter</p> <p>Notification to EPA upon completion of or substantive modification** to:</p> <ul style="list-style-type: none"> • AK accuracy reports (annually, at a minimum) • AK-AK and AK-NDA/NDE Discrepancy Resolution Reports • WSPFs and AKSRs and related attachments (e.g., CIS) for all new or modified waste streams, including change notices • CCP-TP-005, Attachments 4, 6 and 7 and associated memoranda • Add Container Memoranda • The load management status of approved waste streams • Site procedures requiring CBFO approval • Any waste identified outside of the waste profiles included in the 2002 Transuranic Waste Baseline Inventory Report • Creation of newly generated soil or debris waste streams through remediation or decontamination and decommissioning activities
Nondestructive Assay	<p>New equipment or substantive physical modifications** to approved equipment</p> <p>Extension of or changes to the approved calibration range for approved equipment</p>	<p>Submission of a list of SRS-CCP NDA operators, EAs and ITRs that performed work during the previous quarter</p> <p>Notification to EPA upon substantive modification** to:</p> <ul style="list-style-type: none"> • Site procedures requiring CBFO approval • Software for approved equipment • Operating ranges upon CBFO approval
Real-Time Radiography	None	<p>Submission of a list of SRS-CCP CH RTR operators and ITRs that performed work during the previous quarter</p> <p>Notification to EPA upon:</p> <ul style="list-style-type: none"> • New equipment or substantive physical modifications** to approved equipment • Substantive modification** to site procedures requiring CBFO approval

**Table 1. Tiering of Contact-Handled Transuranic Waste Characterization Processes Implemented by SRS-CCP
(Based on October 31–November 3, 2005, Baseline Inspection and Subsequent Tier 1 Evaluations, Updated February 2015)**

Process Elements	SRS-CCP CH Waste Characterization Processes – T1 Changes	SRS-CCP CH Waste Characterization Processes – T2 Changes*
Visual Examination and Visual Examination Technique	Any use of visual examination	Notification to EPA upon substantive modification** to site procedures requiring CBFO approval
WIPP Waste Data System	Changes to Waste Data System algorithms specific to load management.	Notification to EPA upon substantive modification** to: <ul style="list-style-type: none"> • Site procedures requiring CBFO approval • The load management status of approved waste streams

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.

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

** “Substantive modification” refers to a change with the potential to affect SRS-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.

Waste Acceptance Criteria, Revision 8, Gap Analysis for Initial Waste Shipment

Based on the recent *Waste Acceptance Criteria* (WAC) Revision 8 (July 2016) and the new Waste Isolation Pilot Plant (WIPP) *Documented Safety Analysis* (DSA) (May 2016), the CBFO is required to verify additional requirements that were not reviewed in the previous audit. The CBFO performed an additional surveillance (S-17-31) to ensure these new requirements have been audited (gap analysis). This gap analysis was specifically limited to only the requirements for shipping and certification of waste stream SR-221H-PuOx.

The following requirements were not audited/ surveilled because they are not required for this waste stream:

- Certified Program approval of *Interface Waste Management Document List* (IWMDL) – this is not required as the subject waste stream is not a new waste stream that mandates an IWMDL verification.
- Generator Site process to ensure changes to IWMDL procedures require Certified Program approval prior to implementation – this is not required as the subject waste stream is not a new waste stream that mandates an IWMDL verification.
- Basis of Knowledge process – this is not required as the subject waste stream does not contain oxidizers.

Based on the prior Recertification audits and this gap analysis surveillance, the characterization, quality assurance, and transportation activities of the contact-handled Summary Category Groups (SCG) S3000 homogeneous solids, S4000 soils/gravel, and S5000 debris wastes were determined to be adequate, satisfactorily implemented, and effective.