

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 equipment certified for SRS-CCP,
- *Attachment 3* contains the list of CCP procedures for SRS-CCP, and
- *Attachment 4* describes specific SRS-CCP waste characterization process elements that must be reported. These process elements are identified as Tier 1 changes and Tier 2 changes. The SRS-CCP shall not ship for disposal at WIPP any wastes affected by a Tier 1 process element change without prior CBFO approval, and SRS-CCP shall report Tier 2 changes to CBFO on a quarterly basis.



Edward Ziemianski (for)
Acting Manager

Attachments (4)

D. Moody/M. F. Sharif

-3-

MAR 31 2011

cc: w/attachments

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CBFO QA File

WIPP Operating Record

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CENTRAL CHARACTERIZATION PROJECT DEPLOYMENT AT SAVANNAH RIVER SITE CERTIFICATION PROGRAM STATUS

The CBFO Director of the Office of the National TRU Program and the CBFO Director of Quality Assurance have evaluated the documentation supporting the compliance of the Central Characterization Project (CCP) TRU waste program deployed at the Savannah River Site (SRS). Attachments 2 and 3 provide complete lists of certified processes, procedures, documents, and systems deployed at the SRS-CCP. Attachment 4 is the contact-handled (CH) and remote-handled (RH) Tiering of TRU Waste Characterization Processes Implemented by the CCP at SRS.

STATUS

- All program elements remain complete.
- The following site documents demonstrate how the CCP complies with the CBFO requirements from Audit A-11-01.
 - **QAPJP – CCP-PO-001, Revision 19 - CCP Transuranic Waste Characterization Quality Assurance Project Plan** (Approved December 9, 2010 – CBFO:NTP:CF:GS:10-2048:UFC 5900.00).
 - **WCP - CCP-PO-002, Revision 25 - CCP Transuranic Waste Certification Plan** (Approved December 20, 2010 – CBFO:NTP:NC:GS:10-2076:UFC 5900.00).
QAP - Section 4.0 of CCP-PO-002.
 - **TRAMPAC – CCP-PO-003, Revision 12, CCP Transuranic Authorized Method for Payload Control** (Approved December 17, 2010 - CBFO:NTP:CF:GS:10-2055:UFC 5900.00).
 - **CCP RH-TRAMPAC – CCP-PO-505, Revision 0, CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control** (Approved September 20, 2006 - CBFO:NTP:CF:GS:06-1355:UFC 5900.00).
- Certified Systems - see Attachment 2 for the complete list of certified systems used by the CCP at the SRS.
- Standard operating procedures - see Attachment 3 for the complete list of certified procedures used by the CCP at the SRS.
- Tiering of the CH & RH TRU Waste Characterization Processes – see Attachment 4 for the implementation by CCP at SRS (based on EPA Baseline Inspections)

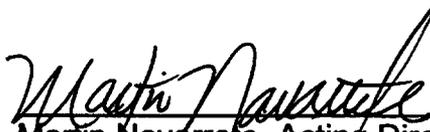
CCP audited and current performance demonstration programs (PDPs):

- **NDA PDP – Cycle B9A approval** for radioassay of WIPP wastes contained in the TRU SWB and TRU *large box* using the NABC (SR05/SRN2).
- **NDA PDP – Cycle 17A approval** for analysis of TRU waste *drums* using the NABC (SR05/SRN2).
- **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. For RH waste, NMED granted exemption by approving an AK Cycle B9A approved for radioassay in the TRU standard waste box using the NABC (SR05/SRN2).
- CBFO conducted the CH and RH Recertification Audit A-11-01 of the SRS CCP on October 26-28, 2010.
 - CAR 11-007 was issued on November 3, 2010.
 - CAR 11007 was closed on January 25, 2011.
 - Interim Audit Report was issued on November 18, 2010.
 - Final Audit Report was issued on February 1, 2011.
 - NMED issued their approval on March 3, 2011.
- CBFO conducted a Quality Assurance Program Audit A-10-11 on March 2-4, 2010.
 - Audit Report was issued on March 16, 2010.
- CBFO conducted CH and RH Transportation Audit A-10-25 for all sites on September 21-23, 2010.
 - Audit Report was issued on October 5, 2010.
- CBFO conducted Surveillance S-10-23 VE of CH S5000 on March 31, 2010.
 - Surveillance Report was issued on May 11, 2010
- CBFO conducted Surveillance S-11-01 LCNDE on November 30-December 1, 2010.
 - CAR 11-014 and CAR 10-015 were issued on December 7, 2010.
 - CAR 11-014 was closed on February 10, 2011.
 - CAR 11-015 was closed on March 11, 2011.
 - Surveillance Report was issued on December 10, 2010
- EPA issued concurrence on the draft CBFO recertification memo on March 31, 2011.

RECOMMENDATION

The recommendation to the CBFO Manager is to continue the CCP for the characterization, certification, and transportation CH solids (S3000), CH soils/gravel (S4000), CH debris (S5000), and RH solids (S3000), RH debris (S5000) at the SRS. 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 SRS.

CONCURRENCE



Martin Navarrete, Acting Director
Office of Quality Assurance

3-30-11
Date



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

3-30-11
Date

SRS CCP CH & RH Certified Equipment and Process List					
WIPP WWIS #	Site Equipment #	Description	Components	Software	NDA Calibrated Range, Operating Range and TMU
Non-destructive Assay					
1NABC1	NABC – (SR05/SRN5)	<p>Nondestructive Assay Box Counter (55-gallon drums, SWBs)</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 <p>Neutron</p> <ul style="list-style-type: none"> • 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 the calibration of the NABC is documented in CCP-SRS-SRBC001, "Nondestructive Assay Box Counter Calibration Validation and Confirmation Report for the Gamma Modality," dated October 23, 2008. Further documentation for the gamma modality delineating an extension of the calibration range is contained in CCP-SRS-SRBC003, "Nondestructive Assay Box Counter Calibration Confirmation Report for the Gamma Modality utilizing 20-Minute Count Assay Time," dated May 4, 2010. For the neutron modality the calibration of the NABC is documented in CCP-SRS-SRBC002, "Nondestructive Assay Box Counter Calibration Validation and Confirmation Report for the Neutron Modality," dated July 29, 2009.</p> <p>The determination of the TMU for the NABC is similarly documented for the gamma modality in A40972, "Savannah River Box Gamma 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, and for the neutron modality in A41309, "Savannah River Neutron Box Counter Total Measurement Uncertainty Report for Alternatives for Non-Destructive Assay (NDA) of</p>

SRS CCP CH & RH Certified Equipment and Process List					
WIPP WWIS #	Site Equipment #	Description	Components	Software	NDA Calibrated Range, Operating Range and TMU
					Large Containers to Allow Shipping in TRUPACT-III without Resizing and/or Repackaging," dated October 15, 2007.
Non-destructive Examination					
1RR3	RTR-15 (owned by SRS)	Real-time Radiography Built by Marietta X-Ray – 55 gallon drums Method identified in CCP-TP-053	<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
1RR4	RTR-4	Real-time Radiography – 55 gallon drums and standard waste boxes (SWBs), and standard large box 2s (SLB2s) 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

SRS CCP CH & RH Certified Equipment and Process List					
WIPP WWIS #	Site Equipment #	Description	Components	Software	NDA Calibrated Range, Operating Range and TMU
1LCNDE	LCNDE	Real-time Radiography – standard waste boxes (SWBs) and standard large box 2s (SLB2s) 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 radiosopic images of the container. • Imaging and control software. • Container manipulation equipment • Video/audio recording equipment 	N/A	N/A
Visual Examination					
1RHVE1	Visual Examination	Visual Examination Technique Method identified in CCP-TP-500	N/A	N/A	N/A
VISUAL	Visual Examination	Visual Examination Method identified in CCP-TP-113	N/A	N/A	N/A
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

SRS CCP CH & RH Certified Equipment and Process List					
WIPP WWS #	Site Equipment #	Description	Components	Software	NDA Calibrated Range, Operating Range and TMU
Headspace Gas					
N/A	HSG	SUMMA Sampling process on selected waste containers from waste stream lots.	As identified in CCP-TP-093	As identified in CCP-TP-093	N/A

List of Deactivated Equipment

WIPP #	Site Equipment #	Site Description	Date Deactivated
1IP1	MCS IPAN/GEA – MC-01, Group MC-N1	Mobile Characterization Systems (MCS) Imaging Passive-Active Neutron/Gamma Energy Analysis (IPAN/GEA) [Built by BNFL] – 55 gallon drums	May 2006
1HG1	NUCFIL HSG DVS2	NucFil headspace gas system DVS2 – VOCs and hydrogen and methane analysis	March 2008
1IQ1	IQ3 - SR03/SR-G2	Canberra Mobile Qualitative and Quantitative Drum Counter with Isotopics (IQ3) Method identified in CCP-TP-047	July 2009
1SG1	MCS SGS – (SR04/SRG3)	Mobile Characterization Systems (MCS) Segmented Gamma Scanner (SGS) – 55 gallon drums	July 2010

CCP SRS Certified Procedures		
#	Procedure #	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-004	CCP/SRS Interface Document
5.	CCP-PO-005	CCP Conduct of Operations
6.	CCP-PO-006	CCP Conduct of Operations Matrix
7.	CCP-PO-008	CCP Quality Assurance Interface with the WTS Quality Assurance Program
8.	CCP-PO-505	CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)
9.	CCP-QP-001	CCP Graded Approach
10.	CCP-QP-002	CCP Training and Qualification Plan
11.	CCP-QP-004	CCP Corrective Action Management
12.	CCP-QP-005	CCP TRU Nonconforming Item Reporting and Control
13.	CCP-QP-006	CCP Corrective Action Reporting and Control
14.	CCP-QP-008	CCP Records Management
15.	CCP-QP-010	CCP Document Preparation, Approval, and Control
16.	CCP-QP-011	CCP Laboratory Logbooks
17.	CCP-QP-014	CCP Quality Assurance Trend Analysis and Reporting
18.	CCP-QP-015	CCP Procurement
19.	CCP-QP-016	CCP Control of Measuring and Testing Equipment
20.	CCP-QP-017	CCP Identification and Control of Items
21.	CCP-QP-018	CCP Management Assessment
22.	CCP-QP-019	CCP Quality Assurance Reporting to Management
23.	CCP-QP-021	CCP Surveillance Program
24.	CCP-QP-022	CCP Software Quality Assurance Plan
25.	CCP-QP-023	CCP Handling, Storage and Shipping
26.	CCP-QP-025	CCP Lessons Learned Program Management Control Procedure
27.	CCP-QP-026	CCP Inspection Control
28.	CCP-QP-027	CCP Test Control
29.	CCP-QP-028	CCP Records Filing, Inventorying, Scheduling, and Dispositioning
30.	CCP-QP-030	CCP Written Practice for the Qualification of CCP Helium Leak Detection Personnel
31.	CCP-TP-001	CCP Project Level Data Validation and Verification
32.	CCP-TP-002	CCP Reconciliation of DQOs and Reporting Characterization Data
33.	CCP-TP-003	CCP Data Analysis for S3000, S4000, and S5000 Characterization
34.	CCP-TP-005	CCP Acceptable Knowledge Documentation
35.	CCP-TP-028	CCP Radiographic Test and Training Drum Construction
36.	CCP-TP-030	CCP CH TRU Waste Certification and WWIS/WDS Data Entry

CCP SRS Certified Procedures		
#	Procedure #	Procedure Title
37.	CCP-TP-033	CCP Shipping of CH TRU Waste
38.	CCP-TP-035	CCP Container Management
39.	CCP-TP-053	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
40.	CCP-TP-054	CCP Adjustable Center of Gravity Lift Fixture Preoperational Checks and Shutdown
41.	CCP-TP-055	CCP Varian Porta-Test Leak Detector Operations
42.	CCP-TP-056	CCP HSG Performance Demonstration Plan
43.	CCP-TP-058	CCP NDA Performance Demonstration Plan
44.	CCP-TP-066	CCP Radiography Screening Procedure for Prohibited Items
45.	CCP-TP-074	CCP Large Container Non-Destructive Examination (LCNDE) Operating Procedure
46.	CCP-TP-082	CCP Preparing and Handling Waste Containers for Headspace Gas Sampling
47.	CCP-TP-083	CCP Gas Generation Testing
48.	CCP-TP-086	CCP CH Packaging Payload Assembly
49.	CCP-TP-087	CCP Scale Operations
50.	CCP-TP-093	CCP Sampling of TRU Waste Containers
51.	CCP-TP-098	CCP Installation of the NucFil HSG Sample Port
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-120	CCP Container Management
55.	CCP-TP-136	CCP Standardized Prohibited Item Remediation
56.	CCP-TP-138	CCP Execution of Long-Term Objective for the Unified Flammable Gas Test Procedure
57.	CCP-TP-139	CCP In Situ Object Counting System Nondestructive Assay Operating Procedure
58.	CCP-TP-145	CCP RTR #4 Operating Procedure
59.	CCP-TP-162	CCP Random Selection of Containers for Solids and Headspace Gas Sampling and Analysis
60.	CCP-TP-163	CCP Evaluation of Waste Packaging Records for Visual Examination of Records
61.	CCP-TP-180	CCP Analytical Sample Management
62.	CCP-TP-189	CCP Box Segmented Gamma System (BSGS) Operating Procedure
63.	CCP-TP-190	CCP Box Segmented Gamma System (BSGS) Calibration Procedure
64.	CCP-TP-191	CCP Box Neutron Assay System (BNAS) Operating Procedure
65.	CCP-TP-192	CCP Box Neutron Assay System (BNAS) Calibration Procedure
66.	CCP-TP-193	CCP Data Reviewing, Validating, and Reporting Procedure for the Nondestructive Assay Box Counters
67.	CCP-TP-500	CCP Remote-Handled Waste Visual Examination
68.	CCP-TP-504	CCP Dose-to-Curie Survey Procedure for Remote-Handled Transuranic Waste
69.	CCP-TP-505	CCP Removable Lid Canister Loading
70.	CCP-TP-506	CCP Preparation of the RH TRU Waste AK Characterization Reconciliation Report
71.	CCP-TP-507	CCP Shipping of Remote-Handled Transuranic Waste

CCP SRS Certified Procedures		
#	Procedure #	Procedure Title
72.	CCP-TP-509	CCP Remote-Handled Transuranic Container Tracking
73.	CCP-TP-530	CCP RH TRU Waste Certification and WWIS/WDS Data Entry

CCP SRS Deactivated Procedures			
#	Procedure #	Procedure Title	Deactivation Date
1.	CCP-QP-007	CCP Document Control	December 2001
2.	CCP-QP-009	CCP Work Control Process	October 2006
3.	CCP-QP-012	CCP Indoctrination Plan	March 2002
4.	CCP-QP-013	CCP QAPD Matrix	May 2003
5.	CCP-QP-020	CCP Independent Assessments	September 2003
6.	CCP-QP-024	CCP Certification of CCP Audit Personnel	September 2003
7.	CCP-TP-007	CCP Single Sample Manifold Headspace Gas Sampling and Analysis Procedure	January 2008
8.	CCP-TP-009	CCP Single Sample Manifold Data Handling Procedure	January 2008
9.	CCP-TP-011	CCP Radiography Inspection Operating Procedure	May 2007
10.	CCP-TP-022	CCP Mobile IPAN/GEA Maintenance Procedure	November 2007
11.	CCP-TP-023	CCP Mobile IPAN/GEA System Mobilization, Power Up, and Demobilization Procedure	November 2007
12.	CCP-TP-024	CCP Mobile IPAN/GEA Operating and Data Generation Level Validation Procedure	November 2007
13.	CCP-TP-025	CCP Mobile IPAN/GEA Expert Analysis Procedure	November 2007
14.	CCP-TP-026	CCP Mobile IPAN/GEA Calibration Procedure	May 2007
15.	CCP-TP-029	CCP Single Sample Manifold Headspace Gas Sampling and Analysis Methods and Equipment Calibration	January 2008
16.	CCP-TP-032	CCP Single Sample Manifold Data Validation Procedure	January 2008
17.	CCP-TP-046	CCP Mobile IQ3 System Calibration Procedure	July 2009
18.	CCP-TP-047	CCP Mobile IQ3 Gamma Scanner Operation	July 2009
19.	CCP-TP-048	CCP-TP-048, CCP Mobile IQ3 System Data Reviewing, Validating, and Reporting Procedure	July 2009
20.	CCP-TP-050	CCP Mobile Segmented Gamma Scanner Calibration Procedure	December 2010
21.	CCP-TP-051	CCP Mobile Segmented Gamma Scanner Operation	December 2010
22.	CCP-TP-052	CCP Mobile Segmented Gamma Scanner Data Reviewing, Validating and Reporting	December 2010
23.	CCP-TP-057	CCP Project Level Data Validation and Verification for Headspace Gas Sampling and Analysis	September 2002
24.	CCP-TP-084	CCP Removal of Prohibited Items Within Transuranic Visual Examination Facility	May 2004
25.	CCP-TP-085	CCP TRU Visual Examination Facility Operations	November 2005
26.	CCP-TP-088	CCP Disposal Program Data Generation Level Review for Visual Examination	November 2005
27.	CCP-TP-089	CCP Mobile Gas Generation Testing Sampling System (MGSS) Sampling Operation	October 2009
28.	CCP-TP-092	CCP Mobile Gas Generation Testing Sampling System (MGSS) Data Calculation	October 2009
29.	CCP-TP-094	GGTP Drum Screening and Batching	October 2009
30.	CCP-TP-160	CCP Random Selection of Containers for Headspace Gas Sampling and Analysis	June 2009
31.	CCP-TP-161	CCP Random Selection of Containers for Solids Sampling and Analysis	June 2009

**Table 1. Revised Tiering of TRU Waste Characterization Processes Implemented by SRS for CH TRU Wastes
(Based on July 2006 Tier 1 Evaluation)**

Waste Characterization Process Elements	SRS-CCP Waste Characterization T1 Changes	SRS-CCP Waste Characterization T2 Changes ^a
Acceptable Knowledge and Load Management	Implementation of load management for the S3000 Summary Category Group ^d	<p>The elements listed as T2 changes below apply to all approved SRS-CCP CH TRU waste streams and waste summary category groups.</p> <p>Notification to EPA upon completion of AK accuracy reports and, upon completion of new versions or updates/substantive changes^b of the following:</p> <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	<p>New equipment or physical modifications to approved equipment^c</p> <p>Extension or changes to approved calibration range for approved equipment</p>	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	N/A	<p>Notification to EPA upon the following:</p> <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 and Visual Examination Technique	Changes in vendor performing VE and/or VET	Notification to EPA upon completion of changes to site VE/VET procedures that require CBFO approval.
WIPP Waste Information System	N/A	Notification to EPA upon completion of changes to WWIS procedure(s) requiring CBFO approval and other changes including algorithms specific to load management.

^a T2 changes have been updated from those presented in the baseline inspection report, which addressed only the WSPF and procedural changes, to include new AK requirements as a result of this inspection and other EPA baseline approvals to ensure consistent reporting requirements. SRS-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 ES&H, nuclear safety, or 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.

^d New T1 change specific to the S3000 SCG as discussed in this report.