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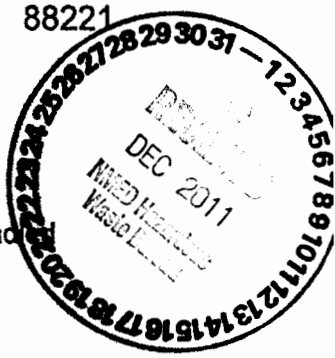
memorandum

Carlsbad Field Office
Carlsbad, New Mexico 88221



DATE: DEC 1 2011

REPLY TO ATTN OF: CBFO:NTP:JRS:PG:11-2031:UFC 5900.00

SUBJECT: Sandia National Laboratory - Central Characterization Project Initial Remote-Handled Certification Audit A-11-23

TO: James W. Todd, DOE-SNL
Farok Sharif, General Manager, WTS

The Carlsbad Field Office (CBFO) has completed the initial Certification Audit A-11-23 of the Central Characterization Project (CCP) Transuranic (TRU) waste characterization activities deployed at the (SNL) Site (hereinafter referred to as SNL-CCP) conducted on July 13-15, 2011. CBFO certified Remote-Handled (RH) Summary Category Group (SCG) S5000 debris. The characterization, certification and quality assurance activities were determined to be adequate, satisfactorily implemented and effective.

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

Based on the result of audits, surveillances, conditions and limitations provided by the New Mexico Environment Department (NMED) and the U.S. Environmental Protection Agency (EPA), CBFO is granting authority at the SNL-CCP for TRU waste characterization, certification, and transportation activities as identified in Table 1, page 3 of this memo.

TRU waste characterization, certification, or transportation activities using significantly revised or new processes, procedures, or systems must be evaluated by CBFO prior to their implementation. Included in this memo are the following attachments:

- *Attachment 1* describes the CCP certification program status,
- *Attachment 2* contains the list of processes/equipment from Table 1 of this memorandum certified at the site,
- *Attachment 3* contains the list of CCP certified procedures/documents, and

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Table 1 – SNL-CCP RH Certified Waste Characterization Processes		
Characterization Process	**RH S5000 Debris** (waste group PKE00044)	
	Newly generated	**Retrievably Stored**
Acceptable Knowledge	N/A	Approved
Load Management	N/A	N/A
Data Validation & Verification (V&V)	N/A	Approved
Visual Examination	N/A	Approved
RH Waste Sampling & Analysis	N/A	Approved
Headspace Gas Sampling & Analysis (Summa®)[1]	N/A	Approved
Nondestructive assay (NDA)	N/A	N/A
Real-time Radiography (RTR)	N/A	N/A
Dose-to-Curie (DTC)	N/A	Approved
WIPP Waste Information System (WWIS)/Waste Data System (WDS)	N/A	Approved

[1] Analysis is performed by the CCP INL Laboratories.

CENTRAL CHARACTERIZATION PROJECT
CERTIFICATION PROGRAM STATUS
AT Sandia National Laboratory

The CBFO Director of the Office of the National TRU Program and the CBFO Director of Quality Assurance Program have evaluated the documentation supporting the compliance of the Central Characterization Project (CCP) TRU waste program deployed at the Sandia National Laboratory (SNL) site (hereinafter referred to as SNL-CCP).

STATUS

- All program elements remain complete.
- The following site documents are *current* and demonstrate how the CCP complies with the CBFO requirements for Audit A-11-23.
  - **CCP-PO-001, Revision 18,** *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
    (CBFO Memo-CBFO:NTP:CF:GS:10-1422:UFC 5900.00 dated June 29, 2010).
  - **CCP-PO-002, Revision 25,** *CCP Transuranic Waste Certification Plan*
    QAP – Section 4.0 of CCP-PO-002
    (CBFO Memo-CBFO:NTP:JRS:MDA:10-2076:UFC 5900.00 dated December 21, 2010).
  - **CCP-PO-505, Revision 0,** *CCP Remote-Handled Transuranic Waste Authorized Methods For Payload Control*
    (CBFO Memo-CBFO:NTP:CF:GS:06-1355:UFC 5900.00 dated September 20, 2006).
- Certified Systems – see Attachment 2 List of Processes/Equipment from Table 1 of this Memorandum that is certified and used by the CCP at the SNL.
- Standard Operating Procedures – see Attachment 3 for the complete list of certified procedures/documents used by the CCP at the SNL.
- Tiering of the RH TRU Waste Characterization Processes – see Attachment 4 for the implementation by CCP at SNL (based on EPA Baseline Inspections).

- CCP participated in the following performance demonstration program (PDP):
  - **HSG PDP (CCP-INL)** - SUMMA sampling is performed by CCP, analysis is performed by the Idaho National Laboratory, which is approved under a separate certification.
- CBFO conducted RH Initial Certification Audit A-11-23 of the SNL/CCP on July 13-15, 2011.
  - The Interim Audit Report was issued on August 8, 2011.
  - The Final Audit Report was issued to NMED on September 28, 2011.
  - NMED approval on Audit A-11-23 was issued on November 10, 2011.
  - EPA issued the Baseline Approval on November 23, 2011, DOCKET NO: A-98-49, II-A4-155.
- CBFO conducted Surveillance S-12-04 of the SNL/CCP Dose-to-Curie analysis program on November 9, 2011 as a follow-up to CBFO Audit A-11-23 and issued the Surveillance Report on November 9, 2011.
- CBFO conducted Surveillance S-11-20 of the SNL/CCP Visual Examination, Headspace Gas Sampling and Dose-to-Curie Survey characterization process on May 16, 2010 and issued the Surveillance Report on October 7, 2010.
- CBFO conducted Surveillance S-11-15 of the SNL/CCP Visual Examination and Remote-Handled Waste Sampling Processes on March 30-31, 2011 and issued the Surveillance Report on April 18, 2011.
- CBFO conducted Audit A-11-06 of the CCP Quality Assurance Program (QAP) on March 1-3, 2011 and issued the Audit Report on March 28, 2011.
- CBFO conducted Audit A-10-25 of the CCP Transportation Activities for all sites on September 21-23, 2010 and issued the Audit Report on October 5, 2010.
- The EPA concurred on the draft initial certification memo on November 30, 2011.

RECOMMENDATION

The recommendation to the CBFO Manager is to grant CCP at SNL the authority for TRU waste characterization, certification, and transportation activities of remote-handled (RH) debris (S5000) waste. Attachments 2, 3 and 4 list the systems and procedures that constitute the bounds of this authority.

CONCURRENCE

/ Courtland Fesmire — 1 Dec 2011

Randy Unger, Director
CBFO Quality Assurance

Date

J. R. Stroble — 12-1-11

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

Date

CENTRAL CHARACTERIZATION PROJECT
List of Processes/Equipment Certified from Table 1 of Memo at Sandia National Laboratories

WIPP WWIS #	Site Equipment # or Title	Description	Components	Software	NDA Calibrated Range, Operating Range and TMU
Dose-to-Curie					
20DTC1	Dose-to-Curie	Radiological characterization process using dose-to-curie (DTC) and modeling-derived scaling factors for assigning radionuclide values to RH hot cell debris waste stream for which the scaling factors are applicable, as described in CCP-AK-SNL-501. Procedure CCP-TP-504	As identified in CCP-TP-504	As identified in CCP-TP-504	N/A
Visual Examination					
20RHVE1	Visual Examination activities	VE of RH debris waste drums CCP-TP-500	N/A	N/A	N/A
Headspace Gas					
N/A	HSG	SUMMA® Sampling process of each waste stream lot upon completion of packaging	As identified in CCP-TP-093	As identified in CCP-TP-093	N/A

CENTRAL CHARACTERIZATION PROJECT
LIST OF CERTIFIED PROCEDURES
AT Sandia National Laboratories

#	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-005	*CCP Conduct of Operations*
4.	CCP-PO-008	CCP Quality Assurance Interface with the WTS Quality Assurance Program
5.	CCP-PO-505	CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)
6.	CCP-PO-510	CCP/SNL RH-TRU Waste Interface Document
7.	CCP-QP-001	CCP Graded Approach
8.	CCP-QP-002	CCP Training and Qualification Plan
9.	CCP-QP-004	CCP Corrective Action Management
10.	CCP-QP-005	CCP TRU Nonconforming Item Reporting and Control
11.	CCP-QP-006	CCP Corrective Action Reporting and Control
12.	CCP-QP-008	CCP Records Management
13.	CCP-QP-010	CCP Document Preparation, Approval and Control
14.	CCP-QP-011	CCP Laboratory Logbooks
15.	CCP-QP-014	CCP Quality Assurance Trend Analysis and Reporting
16.	CCP-QP-015	CCP Procurement
17.	CCP-QP-016	CCP Control of Measuring, Testing, and Data Collection Equipment
18.	CCP-QP-017	CCP Identification and Control of Items
19.	CCP-QP-018	CCP Management Assessment
20.	CCP-QP-019	CCP Quality Assurance Reporting to Management
21.	CCP-QP-021	CCP Surveillance Program
22.	CCP-QP-022	CCP Software Quality Assurance Plan
23.	CCP-QP-023	CCP Handling, Storage and Shipping
24.	CCP-QP-025	CCP Lessons Learned
25.	CCP-QP-026	CCP Inspection Control
26.	CCP-QP-027	CCP Test Control
27.	CCP-QP-028	CCP Records Filing, Inventorying, Scheduling, and Dispositioning
28.	CCP-QP-030	CCP Written Practice for the Qualification of CCP Helium Leak Detection Personnel
29.	CCP-TP-001	CCP Project Level Data Validation and Verification
30.	CCP-TP-002	CCP Reconciliation of DQOs and Reporting Characterization Data
31.	CCP-TP-003	CCP Data Analysis for S3000, S4000, and S5000 Characterization
32.	CCP-TP-005	CCP Acceptable Knowledge Documentation
33.	CCP-TP-093	CCP Sampling of TRU Waste Containers
34.	CCP-TP-106	CCP Headspace Gas Sampling Batch Data Report Preparation
35.	CCP-TP-162	CCP Random Selection of Containers for Solids and Headspace Gas Sampling and Analysis
36.	CCP-TP-163	CCP Evaluation of Waste Packaging Records for Visual Examination of Records
37.	CCP-TP-500	CCP Remote-Handled Waste Visual Examination
38.	CCP-TP-504	CCP Dose-to-Curie Survey Procedure for Remote-Handled Transuranic Waste
39.	CCP-TP-506	CCP Preparation of the Remote-Handled Transuranic Waste Acceptable Knowledge Characterization Reconciliation Report
40.	CCP-TP-509	CCP Remote-Handled Transuranic Container Tracking
41.	CCP-TP-512	CCP Remote-Handled Waste Sampling
42.	CCP-TP-530	CCP RH TRU Waste Certification and WWIS/WDS Data Entry

EPA Tiering of Remote-Handled Transuranic Waste Characterization Processes Implemented by SNL-CCP

(Based on June 6-8, 2011 Baseline Inspection)

RH Waste Characterization Process Elements	SNL-CCP RH Waste Characterization Process - T1 Changes	SNL-CCP RH Waste Characterization Process - T2 Changes*
Acceptable Knowledge (AK)	Two remaining waste groups (PKE00047 and PKE00027/54) belonging to a debris waste stream SNL-HCF-S5400-RH and any new RH waste stream not approved to date or modification of an approved waste stream to include additional containers if new or different radionuclide scaling factors are required (AK1) Substantive modification(s)** that have the potential to affect the characterization process to CCP-AK-SNL-500 or CCP-AK-SNL-502 (AK2, AK6)	Notification to EPA: • Upon completion of revisions of CCP-AK-SNL-500, CCP-AK-SNL-502, CCP-TP-005, or nonconformance and corrective action procedures that require CBFO approval*** (AK2, AK5, AK6, AK14) • When the final or revised WSPF, CRR, and related attachments are available (AK10) • When AK accuracy reports are completed, prepared annually at a minimum (AK11) • When Attachment 4 of CCP-TP-005 is generated to reflect the updated AKSR Source Document Reference List (AK6) • When Add Container Memoranda have been prepared (AK5) • When additional Discrepancy Resolution Reports have been prepared (AK4) • If a CSSF is prepared (AK11)
Radiological Characterization (RC), including Dose-To-Curie (DTC)	Application of new scaling factors for isotopic determination other than those documented in CCP-AK-SNL-501 (RC4, RC5) Use of any alternate radiological characterization procedure other than DTC with established scaling factors as documented in CCP-TP-504 and CCP-AK-SNL-501, Revision 1, respectively, or substantive modification** thereof (RC4, RC5) Any new RH waste stream not approved to date or the addition of containers to an approved waste stream that requires changing the established radionuclide scaling factors or radiological characterization process (RC1)	Notification to EPA upon completion of revisions of CCP-AK-SNL-501 or CCP-TP-504 that require CBFO approval*** (RC1, RC8) Notification to EPA of availability of a revised radiological characterization report, if required for the addition of containers to the approved waste streams (RC5)
Visual Examination (VE)	VE by reviewing existing audio/visual recordings for Summary Waste Category not covered by this approval (VE2) VE by any new process for S5000 debris wastes (VE2)	Notification to EPA upon completion of changes to VE procedure(s) that require CBFO approval*** (VE1) Addition of new S5000 debris waste streams (VE2)

Notes:

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

** *Substantive modification* refers to a change with the potential to affect SNL-CCP's RH waste characterization process, e.g., the use of an inherently different type of measurement instrument or the use of probes not described in CCP-TP-504, excluding changes related to solely to safety or to address administrative concerns

*** EPA Notification is not necessary when document updates are editorial or address administrative concerns