

CCP-PO-027

Revision 3

CCP/TRU Waste Processing Center/Oakridge National Laboratory Interface Document

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APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	10/02/2007	Initial issue.
1	02/17/2010	Revised due to the deployment of the Mobile IQ3 Nondestructive Assay (NDA) system to the transuranic (TRU) Waste Processing Center (TWPC).
2	04/22/2010	Revised to remove the requirement to apply Central Characterization Project (CCP) hold tags to containers which are returned to the host facility as permanent rejects.
3	12/29/2010	Minor revision to update references to the <i>Waste Isolation Pilot Plant Hazardous Waste Facility Permit</i> .

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1.0 PURPOSE

The Central Characterization Project (CCP) is a mobile program designed to characterize, certify, and transport Transuranic (TRU) waste from various U.S. Department of Energy (DOE) sites to the Waste Isolation Pilot Plant (WIPP) in New Mexico. The CCP is operated by Washington TRU Solutions (WTS), at the direction of the DOE Carlsbad Field Office (CBFO).

CBFO has deployed the CCP to the TRU Waste Processing Center (TWPC), located on the Oakridge National Laboratory (ORNL). CCP has been deployed to this site to process both the legacy contact handled (CH) and remote-handled (RH) TRU waste. The Oak Ridge Operations Office (ORO) manages all activities at the ORNL, including waste management, for the DOE.

This document defines the interfaces between the CCP and the Host facility organization(s) necessary to perform this work. This document is intended to clarify and expand on details contained in the Inter-Entity Work Order (IEWO) with its associated upper tier Statement of Work (SOW) and program documents. It is not intended to be used in lieu of a task-specific subcontract.

CCP has primary responsibility for TRU waste characterization activities. CCP services include compilation, reporting, and confirmation of Acceptable Knowledge (AK), Nondestructive Examination (NDE), Nondestructive Assay (NDA), Radiological Characterization (RC), Headspace Gas (HSG) sampling and analysis, Visual Examination (VE), HSG for transportation, data validation and verification, waste certification, WIPP Waste Information System (WWIS) data entry, and transportation activities.

In providing these services, CCP may opt to use other CBFO-certified TRU programs. An example is the Idaho National Laboratory (INL) Environmental Chemistry Laboratory (ECL) for HSG analysis. CCP will accept batch data reports (BDRs) validated through the data generation level (DGL) from these other certified programs, and perform all project office activities in accordance with the CCP program.

These services will be performed with CCP and/or Host facility equipment with appropriate DOE/CBFO-certified procedures. All services provided by CCP will comply with DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant (WAC)*, DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*, *Contact Handled Transuranic Waste Authorized Methods for Payload Control*, *Remote Handled Transuranic Waste Authorized Methods for Payload Control*, and *Waste Isolation Pilot Plant Hazardous Waste Facility Permit*, Attachments C-C6, *Waste Analysis Plan (HWFP)*, requirements, including those pertaining to waste disposal and transportation. This work will be performed under a DOE/CBFO-certified quality

assurance (QA) program that meets the requirements defined in DOE/CBFO 94-1012, *U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document (QAPD)*. CCP will also support TWPC in their mission to dispose of Low Level and Low Level Mixed Waste (LLW/LLMW). This support will be primarily in providing NDE and NDA data for LLW/LLMW waste containers. CCP will work with the TWPC to ensure that the data meets the requirements for TWPC to ship the LLW/LLMW to the Nevada Test Site (NTS).

The Host facility may augment CCP characterization efforts as requested by CCP. Where required, all augmented services provided by the Host facility shall comply with CCP-certified procedures.

The Host facility has primary responsibility for assuring that requirements for safety, (including Radiological Control, Emergency Management, Industrial Safety, and Industrial Hygiene [IS&H]) security, safety basis, environmental permits, and other areas are met for CCP activities, and that CCP activities support the scheduled objectives.

Throughout this document the Host facility Management and Operating (M&O) Contractors' responsibilities are limited to the specific CCP activities being conducted within their facilities.

The CCP will certify DOE TRU waste at the ORNL for disposal in accordance with the certification authority that has been granted by the DOE/CBFO.

This document addresses specific requirements for the following areas:

- Training and qualification
- Container management
- Deficiencies and nonconformances
- VE
- Thermal conditioning unit (TCU)
- NDA
- RC (including sampling and analysis, if required)
- NDE
- HSG sampling and SUMMA[®] analysis

- HSG on-line analysis for transportation requirements
- Performance Demonstration Program (PDP)
- Source control
- AK
- Data validation and reconciliation
- Measuring and Test Equipment (M&TE)
- Work standards
- QA
- Project Control
- Procedures
- Document Transmittals
- Procurements
- Records
- TRU Waste Certification and WWIS data entry
- Transportation
- Configuration Management

The Host facility will report conditions or concerns that have or may have safety, health, QA, security, and operational or environmental implications to the DOE ORO. CCP shall report their similar issues to the Host facility and to DOE/CBFO.

2.0 REQUIREMENTS

This document implements the applicable requirements of the following:

- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)*
- CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)*
- DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*

3.0 RESPONSIBILITIES

3.1 Initial Setup

3.1.1 CCP is responsible for the following during initial setup:

- [A] Providing information and procedures to the Host facility Site Technical Representative (STR)/Designee, who will coordinate facility, QA, and Environmental Safety & Health (ES&H) reviews to determine satisfactory compliance with Host facility safety basis requirements, RC requirements, and other safety and operational requirements.
- [B] Completing readiness activities as needed to support authorization of CCP activities at the Host facility.
- [C] Providing project support to complete administrative reviews and approvals of technical and administrative procedures or processes.
- [D] Mobilization of project staff.

3.2 Operations

3.2.1 CCP is responsible for the following activities to support start-up operations:

- [A] Performing system start-up and calibration of characterization equipment at the Host facility.
- [B] Participating successfully in the PDP, as needed.
- [C] Performing safety walk-downs, management, and laboratory assessments prior to operation.
- [D] Responding to and resolving assessment and surveillance findings for CCP start-up activities.
- [E] Ensuring CCP and Host facility personnel are trained and qualified in accordance with the requirements specified in Section 4.1.
- [F] Successful completion of DOE/CBFO Certification Audit.

- [G] Provides container tracking support for the containers introduced into characterization activities to ensure characterization completion using the CCP container management system.

3.2.2 The Host facility provides the following support for CCP activities:

- [A] Radiological controls as needed to support characterization activities, including:
- Radiological postings.
 - Radiation protection surveys, both initial and routine, on characterization equipment and provide approved survey reports to the CCP Site Project Manager (SPM) as required.
 - Personnel dosimetry.
 - Dose assessments and dosimetry reports.
 - Calibrated and source checked survey instrumentation, as required.
 - Radiological Work Permits (RWP) to support CCP activities, as required.
 - Bioassay sample collection, evaluation, and reports. The CCP ORNL Project Manager or CCP Vendor Project Manager (VPM) will be notified of any positive bioassay results as soon as is reasonably possible.
 - Radiological source controls.
- [B] Provides adequate heated storage space to be used as a TCU as needed for HSG sampling.
- [C] Provides adequate facilities for the safe performance of VE and HSG Sampling.
- [D] Provides site-specific training, as needed, to ensure safe operations within the Host facility.
- [E] Provides IS&H support, as needed.

- [F] Provides Fire Protection and Emergency Management support, as needed.
- [G] Provides Authorization Basis (AB) oversight, including Unreviewed Safety Question (USQ) evaluations.
- [H] Provides environmental impact oversight and support, as needed.
- [I] Provides on-site container transportation.
- [J] Provides container handling, inventory control, and storage location tracking using the TWPC Container Tracking system.
- [K] Provides personnel to be trained and qualified under the CCP program as needed to support CCP activities such as VE.
- [L] Coordinates and obtains document classification reviews as required to allow the public release of documents such as the AK Summary Report.
- [M] Provides calibrated M&TE for use in characterization or obtains calibration service for CCP provided M&TE.
- [N] Provides waste packaging materials and other equipment/materials purchased and inspected in accordance with the Qualified Supplier List (QSL) approved program.
- [O] Provides hazardous waste manifesting, bill of lading, and notifications for transportation.

3.3 CCP Site Project Manager (SPM)

- 3.3.1 Functions as CCP's primary interface and point-of-contact between CCP and the Host facility for all waste characterization and certification activities.
- 3.3.2 Ensures CCP and Host facility personnel are trained and qualified to perform WIPP-compliant TRU waste characterization activities at the Host facility prior to commencement of work activities.
- 3.3.3 Confirms sufficient characterization equipment is available to perform the required characterization activities at the Host facility.

- 3.3.4 Provides the AK Summary Report for DOE waste characterized by the CCP to the Host facility STR/Designee.
- 3.3.5 Works in conjunction with Host facility operations to establish and maintain reasonable and appropriate throughput of waste containers.
- 3.3.6 Ensures that project level verification and validation of BDRs are completed.
- 3.3.7 Provides evidence to the Host facility STR/Designee of PDP participation and successful completion.
- 3.3.8 Provides status on CCP characterization operations to the Host facility STR/Designee.
- 3.4 CCP Quality Assurance (QA) Engineer
 - 3.4.1 Functions as CCP's primary interface and point-of-contact for QA matters between CCP, Host facility, DOE/ORNL, and DOE/CBFO.
 - 3.4.2 Validates the Nonconformance Reports (NCRs) generated by CCP personnel performing characterization activities at the Host facility.
 - 3.4.3 Provides copies of NCRs for information to the Host facility STR/Designee as requested.
 - 3.4.4 Ensures that NCRs are dispositioned in a timely manner in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting, and Control*.
 - 3.4.5 Ensures receipt inspection in accordance with CCP-QP-026, *CCP Inspection Control*, of items and services procured by CCP is performed.
 - 3.4.6 Provides the Host facility STR/Designee with a copy of the semi-annual trending summary reports in accordance with CCP-QP-014, *CCP Data Analysis and Trending*.
- 3.5 Host Facility Subcontract Technical Representative (STR)/Designee (Host Facility Management Position)
 - 3.5.1 Functions as the Host facility primary interface and point-of-contact between the Host facility and CCP.

- 3.5.2 Ensures any USQs that may be needed for proposed modifications to CCP hardware, software, or procedures are prepared and approved by the appropriately qualified Host facility personnel prior to CCP implementing the proposed modification.
 - 3.5.3 Ensures needed site infrastructure support (e.g., Radiological, IS&H) is available for waste characterization.
 - 3.5.4 Ensures documentation of completed Host facility-specific training is delivered to the CCP SPM.
 - 3.5.5 Coordinates review, provides comments, and approves comment resolutions on procedures listed in Section 4.18.3 for the purpose of ensuring facility safety requirements are met.
 - 3.5.6 Provides local personnel to support characterization operations such as VE. Also provides personnel to support the CCP AK Experts (AKE) in the collection of required documents and procedures as needed.
 - 3.5.7 Ensures that periodic QA surveillances of CCP operations by the Host facility are conducted and reported to CCP.
 - 3.5.8 Distributes the CCP documents listed in Section 4.18.3 to Host facility reviewers as required by the Host facility administrative controls.
 - 3.5.9 Reviews and concurs on documents in Section 4.18.3 in accordance with CCP-QP-010, *CCP Document Preparation, Approval and Control*.
 - 3.5.10 Provides facilities, construction services, utilities, phone services, office services, and supplies as defined by the respective CCP and TWPC contracts with DOE.
- 3.6 CCP Vendor Project Manager (VPM)
- 3.6.1 Monitors the List of Qualified Individuals (LOQI) daily to confirm that only qualified personnel perform waste characterization activities.
 - 3.6.2 Functions as CCP's primary interface and point-of-contact between CCP and the Host facility STR/Designee for characterization field operations.

- 3.6.3 Provides daily pre-operations briefing. The daily pre-operations briefing may be combined with the Host facility's pre-operations briefing as agreed between the CCP TWPC Project Manager and Host facility operations management.
- 3.6.4 Ensures that in-process documents and the documents listed in Section 4.19.2 are transmitted to the CCP Project Office as soon as practicable in accordance with CCP-QP-008, *CCP Records Management*.
- 3.6.5 Ensures applicable manufacturers Material Safety Data Sheets (MSDSs) are provided, maintained, and available to support operations and meet the requirements of the TWPC chemicals management program.
- 3.6.6 Provides oversight of field operations to ensure safe, efficient operations.
- 3.6.7 Supervises day-to-day waste characterization activities.
- 3.6.8 Notifies the CCP Manager and the Host facility Facility Manager/Operations Manager of any abnormal events associated with safe operation of CCP characterization activities for reporting purposes.

4.0 INTERFACE

4.1 Training and Qualification

- 4.1.1 CCP personnel or Host facility personnel who perform work under CCP procedures will be trained and qualified to WIPP requirements in accordance with CCP-QP-002, *CCP Training and Qualification Plan*.
- 4.1.2 Administrative work, such as BDR reviews that require no access to characterization activities or processes, may be completed by personnel who have not completed the Host facility required site-specific training. Personnel who have not completed Host facility required site-specific training will not be allowed unescorted access to the characterization activities.
- 4.1.3 CCP and Host facility personnel assigned to field operations must complete the Host facility required site-specific training. The STR will provide the CCP SPM, in writing, a listing of the Host facility required site-specific training for each CCP position.
- 4.1.4 Both the CCP training and Host facility required site-specific training must be completed prior to the individual being assigned to perform independent work at the Host facility.
- 4.1.5 A LOQI will be monitored by the CCP VPM to confirm CCP and Host facility personnel assigned to CCP to perform work are in compliance.

4.2 Container Management

- 4.2.1 The Host facility is responsible for container movement, storage, and Documented Safety Analysis (DSA) compliance.
- 4.2.2 The Host facility provides the dose rate and surface contamination information necessary to certify TRU waste containers for disposal.
- 4.2.3 CCP is responsible for container management throughout the CCP characterization process. CCP will perform container management in accordance with CCP-TP-068, *CCP Standardized Container Management*, or CCP-TP-509, *CCP RH Transuranic Container Management*.

- 4.2.4 CCP AK personnel will maintain a list of characterization-eligible containers from each waste stream identified. When repackaging or VE of a waste container is required, the following container Identification (ID) scheme will be followed as applicable.
- [A] When the waste from one TRU input container results in one TRU output container, the container ID from the Input container is to be used with the addition of an "A" suffix as the ID number on the output container (e.g., input container is X10C0057, the output container will be labeled as X10C0057A). This scheme is also to be applied to re-label waste containers that do not require repackaging or VE.
 - [B] When the waste from one TRU input container results in the creation of two or more TRU output containers, a standard convention of adding a sequential single or, if required, double letter suffix to the input container's ID number is used to label the TRU output containers produced (e.g., input container is X10C0057, the first output container is X10C0057A, and the second output container is X10C0057B).
 - [C] When the waste from two or more TRU input containers from the same waste stream are combined into one output container, the container ID number from the first input container is used with the addition of an "A" suffix as the ID number on the TRU output container (e.g., X10C0057 and X10C0059 are combined into one output container. X10C0059 was the first drum repackaged. The output container is X10C0059A).
 - [D] When prohibited items are segregated and placed into a separate output container from the bulk of the waste, a new container ID is applied to the segregated waste container. Prohibited items from more than one input waste container may be placed into the segregated waste container provided the input containers are from the same waste stream.
 - [E] CCP AK personnel are to be notified as soon as is practical of waste container ID number changes resulting from the actions in steps 4.2.4[A] through [D].

4.3 Deficiencies and Nonconformances

4.3.1 CCP-Identified Deficiencies and Nonconformances

NOTE

The CCP QA Engineer will confirm appropriate closure of the deficiencies that are resolved by CCP.

- [A] If CCP personnel identify a nonconformance condition associated with a waste container during the CCP characterization or certification process, CCP personnel will initiate an NCR in accordance with CCP-QP-005.
- [B] If the deficiency or nonconformance is an issue that will be resolved by CCP, CCP will provide notification (e.g., verbal, or e-mail as required by the Host facility) to the Host facility STR/Designee. The Host facility STR/Designee may request any supporting documentation needed by the Host facility. CCP will ensure appropriate closure of the deficiency. A copy of any CCP NCR related to DOE TRU waste at the TWPC will be provided to the Host facility STR/Designee upon request.
- [C] If the deficiency or nonconformance cannot be resolved by the CCP (e.g., does not meet TRU waste acceptance criteria), then the specific container will be returned with all required documentation to the Host facility for disposition. Once the specific container(s) have been returned to the Host facility, the NCR will remain open if the container will be remediated and returned to CCP or will be closed if the condition is such that the container will not be returned to CCP (e.g., NDA indicates the container is less than 100 nanocuries per gram [nCi/g] TRU alpha activity concentration). CCP will not apply CCP HOLD TAGS to those containers which are returned as permanent rejects from CCP. Instead, CCP will affix a physical indicator (sticker or tag) that the container is returned and not certifiable for shipment to WIPP.
- [D] CCP personnel will immediately notify the CCP VPM of any abnormal event associated with the safe operation of CCP characterization activities. The CCP VPM will notify the CCP Manager and the Host facility Facility Manager/Operations Manager of the abnormal event.

4.3.2 Host Facility-Identified Deficiencies and Nonconformances

- [A] Deficiencies or nonconformances identified by the Host facility during this project which affect waste characterization or certification activities shall be promptly identified to the CCP VPM, who will initiate an NCR in accordance with the existing CCP deficiency reporting process in accordance with CCP-QP-005.

4.4 Visual Examination (VE)

- 4.4.1 CCP will conduct VE Operations in accordance with CCP-TP-113, *CCP Standard Waste Visual Examination (CH)* or CCP-TP-500, *CCP Remote-Handled Visual Examination Technique* using a facility provided by the Host facility.

- 4.4.2 The Host facility will be responsible for all maintenance and repairs to the VE facility.

- 4.4.3 The host facility will provide personnel to qualify and perform VE in accordance with CCP-TP-113 or CCP-TP-500.

4.5 Nondestructive Examination (NDE)

- 4.5.1 CCP will perform NDE using a CCP-provided unit. Containers rejected by NDE will be dispositioned consistent with the requirements of Section 4.3.

- 4.5.2 CCP may perform screening services using a CCP provided unit to provide information on prohibited items for use in TWPC repackaging operations. CCP-TP-066, *CCP Radiography Screening Procedure for Prohibited Items*, will be used for any screening operations. The report provided from CCP-TP-066 will include any NTS prohibited items or conditions, including all liquids identified, during the scan.

- 4.5.3 The Host facility is to support the CCP VPM with the construction of NDE capability demonstration drums as required.

4.6 Nondestructive Assay (NDA)

- 4.6.1 The Host facility will provide support for CCP participation in the PDP. This support includes preparation of the test drums, delivery and pick-up of the drums to/from the CCP NDA equipment, and responsibility for PDP source control.

- 4.6.2 CCP will perform NDA using a CCP-provided unit or multiple units as required. Containers rejected by NDA will be dispositioned consistent with the requirements of Section 4.3.
- 4.6.3 CCP will provide validated BDRs to the TWPC for disposal of LLW/MLLW from the certified program.
- 4.7 Radiological Characterization (RC)
- 4.7.1 The Host Facility will provide technical support for RC efforts based on the use of AK for stored RH TRU waste or sampling and analysis.
- 4.7.2 CCP will provide qualified personnel, including Host facility personnel, to perform RC activities.
- 4.7.3 The Host facility will provide support to the CCP for performing calibration of RC instrumentation. This support includes delivery of surrogate drums and source control as needed.
- 4.8 Headspace Gas (HSG) Sampling and Analysis
- 4.8.1 CCP will perform HSG sampling and analysis using SUMMA[®] canister HSG sampling with analysis of the samples performed in an off-site certified laboratory. In addition, CCP performs HSG and Analysis using a Gas Chromatograph (GC)/Mass Spectrometer (MS) with Thermal Conductivity Detector (TCD) for flammable gas analysis (FGA) to meet transportation requirements.
- 4.8.2 The Host facility will provide personnel and support to ship SUMMA[®] sample canisters to a CBFO-certified TRU waste program for analysis.
- 4.8.3 The Host facility will provide a temperature-controlled environment (i.e., TCU) 18°C (65°F) or greater to equilibrate waste containers for a minimum of 72 hours prior to HSG sampling. The temperature must be maintained until the container is sampled.
- 4.8.4 Either the Host facility or CCP may provide the calibrated instrumentation needed to monitor the temperature requirements with documentation provided.
- 4.8.5 CCP will be responsible to replace the filter vent as needed to support HSG sampling or transportation.

- 4.8.6 CCP may use a separate CBFO-certified TRU Waste Program to perform HSG analysis. This separate program will provide documentation required to meet the requirements of CCP-PO-002, *CCP Transuranic Waste Certification Plan*.
- 4.8.7 CCP will vent waste containers using a CCP-provided drum venting system. The primary purpose of this activity is to vent 55-gallon drums containing 30-gallon unvented drums. Other waste containers may be vented in this system as agreed upon between the Host facility and CCP.
- 4.8.8 The Host facility will provide filters from the CBFO-approved transportation filter list for use in the drum venting system.
- 4.8.9 The Host facility will provide radiological control support for the operation of this system.
- 4.9 Source Control
 - 4.9.1 CCP will provide a list of Special Nuclear Materials (SNM) reference sources required for calibration of CCP-furnished systems.
 - 4.9.2 The Host facility will be responsible for all non-SNM reference sources. Responsibilities consist of inventory control, storage, shipment and usage. The Host facility will provide CCP the number of sources, location, isotopic distribution with activity levels, and the names of the custodian and authorized users, as required.
 - 4.9.3 The Host facility will be responsible for providing radiological control support associated with the non-SNM reference sources. This support consists of maintaining the radioactive materials area (RMA) postings, periodic surveys and performing a semi-annual leak check on the sources as requested by CCP.
 - 4.9.4 The Host facility will be responsible for all SNM reference sources. Responsibilities consist of: inventory control, storage, inspection and handling. The Host facility, as custodian of SNM sources, will provide to CCP the necessary sources. Host facility personnel will load the sources into the matrix drums as requested by CCP. CCP personnel will be trained as users of the sources to the Host facility procedures.
 - 4.9.5 The Host facility will provide support for the CCP participation in the PDP. This support includes maintaining trained PDP coordinators,

preparation of the test drums, delivery and pick-up of the drums to/from the CCP NDA equipment, and responsibility for PDP source control. Host facility support will be coordinated by the Host facility STR/Designee.

4.10 Acceptable Knowledge (AK)

4.10.1 CCP records personnel will maintain the auditable AK record necessary to support the AK Summary Report in accordance with the HWFP, Attachment C, *Waste Acceptance Plan (WAP)*, RHPIP, and the QAPD.

4.10.2 CCP AK personnel will perform and document the AK collection, reporting, and confirmation in accordance with CCP-TP-005, *CCP Acceptable Knowledge Documentation* and/or the RHPIP. CCP shall submit the AK Summary Report for Host facility review and concurrence. As warranted, the Host facility STR/Designee will provide written comments. Upon satisfactory disposition of comments, the Host facility STR/Designee will provide written concurrence of the AK Summary Report.

4.10.3 Host facility personnel will assist CCP AK personnel in support of AK compilation, confirmation, discrepancy resolution, or AK reassessment of source documents.

4.11 Data Validation and Reconciliation

4.11.1 Wherever CCP has obtained the services of another CBFO-certified TRU Waste Program, that program will provide BDRs completed through DGL reviews to CCP in accordance with their own programmatic documents.

4.11.2 CCP will provide project level validated data packages for NDE, NDA, VE, RC, and HSG sampling and analysis.

4.11.3 The CCP SPM, and AKE will perform data reconciliation with applicable data quality objectives (DQOs) using CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data*, and CCP-TP-506, *CCP Preparation of the Remote-Handled Transuranic Waste Acceptable Knowledge Characterization Reconciliation Report*.

4.12 Measuring and Test Equipment (M&TE)

4.12.1 The Host facility will make available National Institute for Standards and Technology (NIST)-traceable calibration services for M&TE to the CCP. The Host facility will maintain records on M&TE calibration in accordance with the Records Inventory and Disposition Schedule (RIDS). Copies of the Certificates of Calibration will be provided to the CCP VPM and CCP M&TE Custodian.

4.12.2 The Host facility STR/Designee will make calibration documentation and processes accessible as needed for internal and external audits.

4.12.3 The CCP VPM notifies the Host facility STR anytime a new piece of M&TE equipment is purchased by CCP that requires calibration. This notification is made by e-mail.

4.13 Work Standards

NOTE

The focus of Section 4.13 is to adequately protect the workers on the equipment at the various facilities.

4.13.1 CCP operations personnel will work under the Host facility Lockout/Tagout procedure.

4.13.2 CCP and Host facility-provided personnel will perform quality-affecting work under CCP procedures for TRU waste characterization and certification activities. Host facility procedures and work packages will be used for non-waste characterization activities (e.g., equipment repairs).

4.13.3 CCP operations personnel will operate in accordance with CCP-PO-005, *CCP Conduct of Operations*.

4.13.4 CCP operations personnel will comply with Host facility procedures as they apply to the retrieval area and other established characterization areas.

4.13.5 CCP personnel will work under the Host facility safety basis and work control standards (e.g., General Employee Radiological Training [GERT]). Maintenance work control activities on Host

facility-supplied equipment will be controlled using Host facility work authorization procedures.

4.13.6 As outlined in CCP-PO-005, it is the responsibility of the CCP VPM to maintain equipment configuration and authorize equipment changes to ensure that Mobile Characterization Equipment (MCE) systems are operated and maintained in accordance with the Host facility safety basis. The VPM will not authorize a change to any MCE until steps 4.13.6 [A] and [B] have occurred:

- [A] The CCP ORNL Project Manager has completed, signed, and dated Section E of CCP-CM-001, *CCP Equipment Change Authorization and Documentation*, Attachment 1, CCP Characterization Equipment Change Authorization, or the evaluation of the screening questions indicate that no further approval is required.
- [B] The Host facility STR/Designee must concur with the proposed change in writing (CCP-CM-001, Attachment 1) and provide a copy of the approved USQ, if required. The Host facility STR/Designee will coordinate the review of the proposed change to ensure AB and Permitting requirements are met.
- [C] Once the existing waste characterization equipment has been turned over to CCP for operation, no change to the configuration will be approved by the Host facility without CCP's concurrence in writing from the CCP VPM. This may be accomplished by e-mail.

4.13.7 CCP personnel will participate in the Host facility bioassay program. CCP personnel involved in VE of waste will provide routine samples at a frequency agreed upon between the Host facility and WTS Radiological Safety organization. All other CCP personnel will provide samples as requested under the routine/random program established by the Host facility. All CCP personnel will submit the bioassay samples required to establish a baseline for activities at the Host facility.

4.13.8 The CCP Manager or VPM will notify the Host facility STR when new CCP personnel, WTS and subcontractors are assigned to work at the TWPC. The CCP Manager or CCP VPM will notify the Host facility STR when CCP personnel, WTS and subcontractors leave the TWPC as a result of reassignment or resignation. This notification will occur as soon as is practical.

The Host facility STR will notify affected organizations to support the arrival or departure of CCP personnel.

- 4.13.9 The CCP Manager or CCP VPM will be notified if any bioassay sample provided by CCP personnel indicates that an uptake of any radioactive isotopes may have occurred as soon as is reasonably possible.
- 4.13.10 Host facility Radiological Controls personnel will perform routine surveys for contamination and radiation as specified in Host facility policies or procedures. The CCP Manager or CCP VPM and appropriate Host facility management personnel will be notified immediately upon the discovery of any loose surface contamination in any CCP-occupied buildings or any of the CCP characterization equipment contained in these buildings. Access to and copies of routine survey results will be made available to CCP upon request.
- 4.13.11 The Host facility will immediately notify the CCP TWPC Project Manager or CCP VPM and appropriate Host facility management personnel of any abnormal continuous or fixed air sample filter analysis results from any area routinely occupied by CCP personnel.
- 4.13.12 CCP will provide historical information on the operation of any CCP equipment deployed at the Host facility for the purpose of lessons learned and the implementation of any mitigating actions from these lessons learned.
- 4.13.13 For Host facility-supplied equipment and facilities, the Host facility is responsible for ensuring the safety basis is adequate to cover the equipment and facilities that are provided. For these instances the Host facility is the Design Authority. It is expected that CCP will participate in review of hazards analysis for this equipment and facilities being provided.
- 4.13.14 For non-Host facility-provided equipment, CCP will provide safety basis input for the Host facility's safety basis. CCP will be the Design Authority for the equipment. In addition, prior to any modification of equipment, these changes will be provided to the Host facility for review and incorporation into their safety basis documents and are subject to the CCP Configuration Management Program. The programmatic limits for the operation of the characterization equipment are the responsibility of CCP as part of their Design Authority responsibilities.

- 4.13.15 CCP will control the procurement, development, maintenance, configuration management and use of software used on all Host facility and non-Host facility-provided equipment used to develop quality-affecting data for waste characterization in accordance with CCP-QP-022.
- 4.13.16 The Host facility and WTS Radiological Safety organizations shall meet on a quarterly basis to discuss the status of radiological conditions and work practices in areas routinely occupied by CCP personnel. This requirement may be met by WTS Radiological Safety personnel visiting the Host facility or by teleconference as agreed to by these organizations. The WTS Radiological Safety organization will provide the CCP Manager and CCP ORNL Project Manager with a summary of the meeting including any issues that require resolution. This summary may be provided by e-mail.
- 4.14 TRU Waste Certification and WIPP Waste Information System (WWIS) Data Entry
- 4.14.1 CCP will prepare Waste Stream Profile Forms (WSPFs) for the subject Host facility waste in accordance with CCP-TP-002.
- 4.14.2 CCP will transmit characterization and certification data using the WWIS and CCP procedures CCP-TP-030, *CCP TRU Waste Certification and WWIS/WDS Data Entry (CH)* or CCP-TP-530, *CCP RH TRU Waste Certification and WWIS/WDS Data Entry (RH)*.
- 4.14.3 CCP shall submit WSPFs to the Host facility for information before submittal to CBFO. The Host facility will provide written concurrence on the basis of continued compliance with procedures and programs, and CBFO-certification of the CCP program.
- 4.14.4 The CCP Waste Certification Officials (WCO) will document and certify that all TRU waste payload containers meet the requirements of the WAC, and submit the data to the WWIS for approval.
- 4.15 Transportation
- 4.15.1 CCP Transportation is responsible for meeting all requirements for loading and shipping TRU waste certified by the CCP as approved in the WWIS.

- 4.15.2 CCP transportation will direct TWPC loading of containers into overpacks according to CCP WCO listings and will provide the CCP WCO with the necessary data to complete the process, if required.
- 4.15.3 The TWPC provides and signs on behalf of DOE the Uniform Hazardous Waste Manifest, bill of lading, notifications, and required markings, labels and placards for each TRU waste shipment.
- 4.16 Quality Assurance (QA)
 - 4.16.1 All work performed in the completion of this waste characterization and certification scope will be in compliance with applicable DOE/CBFO-certified CCP procedures.
 - 4.16.2 CCP will conduct periodic QA surveillances to assess compliance with applicable WIPP requirements.
 - 4.16.3 The Host facility will conduct surveillances to assess compliance with applicable procedures.
- 4.17 Project Control
 - 4.17.1 CCP and the Host facility will provide weekly status for their respective scheduled activities.
 - 4.17.2 CCP will provide the Host facility with an up-to-date accrual schedule and estimates of completion at the end of each month, or as requested.
 - 4.17.3 CCP will maintain and provide the Host facility with an up-to-date organization chart listing CCP personnel, along with associated roles and responsibilities.
 - 4.17.4 CCP will provide the Host facility with invoices reflecting labor, material and supplies, subcontractor and travel cost.
 - 4.17.5 CCP will provide timely cost estimates to the Host facility STR/Designee for any new CCP activities planned.
 - 4.17.6 CCP will provide the Host facility STR/Designee actual cost data for each scheduled CCP Level 3 activity on a monthly basis.

4.18 Procedures

4.18.1 As defined in CCP-QP-010, editorial or minor changes may be made to all CCP documents except CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*, CCP-PO-002 and CCP-PO-003, *CCP Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)* and CCP-QP-001, *CCP Graded Approach* without the same level of review and approval as the original document. CCP will process any required changes in accordance with CCP-QP-010.

4.18.2 New technical operating procedures (procedures that operate equipment) developed by the CCP and scheduled to be used at the Host facility, shall be evaluated by the Host facility STR/Designee to determine if the procedure shall be added to the Host facility review list provided in Section 4.18.3.

4.18.3 The following documents, and all revisions to these documents, will be provided to the Host facility STR/Designee for review:

- CCP ORNL AK Summary Reports
- CCP ORNL WSPFs
- CCP-HSP-011, *CCP Headspace Gas Drum Sampling Health and Safety Plan*
- CCP-CM-001, *CCP Equipment Change Authorization and Documentation*
- CCP-PO-026, *CCP Configuration Management Plan*
- CCP-TP-047, *CCP Mobile IQ3 Gamma Scanner Operation*
- CCP-TP-066, *CCP Radiography Screening Procedure for Prohibited Items*
- CCP-TP-082, *CCP Preparing and Handling Waste Containers for Headspace Gas Sampling*
- CCP-TP-093, *CCP Sampling of TRU Waste Containers*
- CCP-TP-165, *CCP Real-Time Radiography #6 Operating Procedure*

- CCP-TP-166, *CCP Drum Waste Assay System Imaging Passive/Active Neutron Operations*
- CCP-TP-169, *CCP Operating the Mobile Segmented Gamma Scanner*
- CCP-TP-172, *CCP Calibrating the Mobile Segmented Gamma Scanner*
- CCP-TP-194, *CCP Drum Venting and Gas Determination*
- CCP-TP-504, *CCP Dose-to-Curie Survey Procedure for Remote-Handled Transuranic Waste*

4.18.4 The following documents, and all revisions to these documents, will be provided to the Host facility STR/Designee as “Notify Only” during the review process:

- CCP-PO-005, *CCP Conduct of Operations*
- CCP-TP-046, *CCP Mobile IQ3 System Calibration Procedure*
- CCP-TP-048, *CCP Mobile IQ3 System Data Reviewing, Validating, and Reporting Procedure.*
- CCP-TP-053, *CCP Standard Real-Time Radiography (RTR) Inspection Procedure*
- CCP-TP-068, *CCP Standardized Container Management*
- CCP-TP-106, *CCP Headspace Gas Sampling Batch Data Report Preparation*
- CCP-TP-113, *CCP Standard Contact-Handled Waste Visual Examination*
- CCP-TP-167, *CCP Drum Waste Assay System Imaging Passive/Active Neutron Calibration*
- CCP-TP-168, *CCP Drum Waste Assay System Imaging Passive/Active Neutron/Segmented Gamma Scanner Data Generation Level Validation*

- CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*
- CCP-TP-509, *CCP Remote-Handled Transuranic Container Tracking*

4.18.5 Other controlled documents used by CCP are available to the Host facility STR/Designee for information purposes at <ftp://q.wipp.ws/Controlled-Documents>.

4.18.6 The Host facility STR/Designee will review or designate the appropriate reviews of the CCP procedures listed in Section 4.18.3, and forward written comments to CCP Document Control in accordance with CCP-QP-010 for resolution.

4.18.7 The CCP SPM will confirm that the Host facility STR/Designee written comments are resolved with the Host facility STR/Designee concurrence prior to proceeding with CCP operations.

4.19 Document Transmittals

4.19.1 Documents listed in this section, which are provided from one organization to the other as information copies, may be transmitted via memo, fax, e-mail, or formal correspondence. Documents identified as QA records will be transmitted in accordance with CCP-QP-008.

4.19.2 Documents to be provided to the Host facility by CCP include:

- [A] Copies of NCRs and Corrective Action Requests (CARs), as applicable.
- [B] Copies of ORNL AK Summary Reports.
- [C] Copies of ORNL AK source documents and source document summaries, as requested.
- [D] Copies of semi-annual trending summary reports.
- [E] Copies of QA surveillance reports.
- [F] Copies of ORNL WSPFs.
- [G] Copies of VE, NDE, NDA and HSG data, as requested.

- [H] Copies of CCP Source/Receipt Inspection Verification Sheets and associated objective evidence for each shipment.
- [I] Information on chemical usage and copies of applicable MSDSs as requested for inventory or reporting reasons.
- [J] Copies of training requirements and associated training records for Host facility personnel supporting CCP.
- [K] A copy of the RIDS developed by CCP.
- [L] Results of all DOE/CBFO/New Mexico Environment Department (NMED)/U.S. Environmental Protection Agency (EPA) or other regulatory audit or compliance/enforcement actions that may impact its ability to characterize and transport TRU waste.
- [M] Copy of final data package to WIPP via WWIS, as requested.
- [N] Documented evidence of participating in and passing the CBFO PDP.
- [O] NMED and EPA approval of the CBFO Certification Audit Report.

4.19.3 Documents to be provided to CCP by Host facility include:

- [A] Documentation of required training.
- [B] Documentation of training completion for CCP and Host facility personnel for training received from the Host facility.
- [C] Copies of AK source documentation requested by CCP.
- [D] Radiological dose rate and surface contamination results on waste drums as needed to support WWIS data entry.
- [E] Radiological information as described in Section 3.2.2[A].
- [F] Copies of NCRs, deficiency reports, or other nonconformance documentation per Section 4.3.

- [G] Copies of the results of Host facility assessments pertaining to CCP.
- [H] Copies of calibration certifications.
- [I] Copies of QA surveillance reports.
- [J] Copies of the Uniform Hazardous Waste Manifest, bill of lading and Shipment Notifications.

4.20 Authorization Basis (AB) and Configuration Management

- 4.20.1 The Host facility has primary responsibility to ensure that CCP equipment and processes have been appropriately considered within the DOE-approved, Host facility DSA.
- 4.20.2 The Host facility shall provide to CCP Host facility generated AB documentation concerning CCP related activities and equipment, including USQ's, for CCP's review.
- 4.20.3 CCP has primary responsibility to control operations and equipment configurations to ensure compliance with Host facility procedures that protect the personnel, public, and environment.
- 4.20.4 For CCP provided equipment, CCP will provide the documentation necessary for Host facility to perform the evaluation against its safety analysis. This documentation may include health and safety plans, hazard assessments, system descriptions, equipment drawings, or other information deemed necessary through mutual agreement between CCP and the Host facility.
- 4.20.5 For Host facility provided equipment, CCP will review operational and AB documentation, including USQs, to ensure the safety of CCP personnel while operating the equipment.
- 4.20.6 All changes to Host facility equipment operated by CCP will be controlled by the Host facility Configuration Management and Work Control Program to ensure appropriate AB evaluations are conducted and associated controls are established.
- 4.20.7 The Host facility will submit all changes to AB requirements that affect CCP operations for review and concurrence by CCP prior to implementation.

4.21 Notification

4.21.1 The Host facility has primary responsibility to notify CCP when there are changes in the Host facilities used by CCP for characterization activities or changes that may impact operations.

4.21.2 The Host facility has primary responsibility to notify CCP when there are changes to the policies, processes, or procedures that may affect CCP characterization activities or operations.

4.21.3 CCP has primary responsibility to ensure changes to equipment are in accordance with CCP-CM-001, *CCP Equipment Change Authorization and Documentation*.

4.21.4 CCP has primary responsibility to notify the Host facility when there are configuration changes to CCP or CCP vendor-owned equipment.

4.21.5 The Host facility has primary responsibility to notify WTS/Retrieval, Characterization, and Transportation department Radiological Control Technician (RCT) when repairs or modifications are made to transportation trailers or packaging equipment (TRUPACT-II, HalfPACTs, etc.). WTS/RCT will then notify the appropriate Cognizant Engineer at the WIPP site. The Cognizant Engineer will verify the modification. The Host facility may be requested to make the repair or modification by WTS or CBFO if certified services are available. Otherwise, an off-site vendor will normally make needed repairs or modifications to the transportation trailers or packaging equipment.

4.22 Procurement

4.22.1 TWPC is shown as a supplier of procurement services on the WTS Qualified Suppliers List (QSL). TWPC may procure, inspect, and perform receipt inspection of whatever items are listed in the most current WTS QSL for the CCP scope of work. TWPC will perform these activities in accordance with its QSL-accepted program.

4.22.2 TWPC shall use the specifications found on the CCP file transfer protocol (ftp) site when ordering gas standards used for FGA or SUMMA[®] sampling operations.

- 4.23 Occurrence Reporting and Processing System (ORPS) and Price-Anderson Amendments Act (PAAA)
 - 4.23.1 The host site will report all Price-Anderson Amendments Act (PAAA) and Occurrence Reporting and Processing System (ORPS).
 - 4.23.2 CCP shall provide Host site with all information and notifications required.
 - 4.23.3 If CCP is responsible for the deficient condition, CCP will revise/report independently.

5.0 RECORDS

- 5.1 Records generated during the performance of the waste characterization and certification scope are controlled by CCP.
- 5.2 QA records generated by CCP documents referenced in this interface document are maintained in accordance with CCP-QP-008, *CCP Records Management*.
- 5.3 All electronic and/or hard copy QA records generated by CCP documents referenced in this interface document shall be maintained by CCP at a TWPC location provided by the Host facility.
- 5.4 All QA records generated by CCP will be maintained and dispositioned in accordance with CCP-QP-008 and CCP-QP-028, *CCP Records Filing, Inventorying, Scheduling, and Dispositioning*.
- 5.5 The Host facility will maintain the following records in accordance with Host facility requirements. The list includes, but is not limited to, the following:
 - 5.5.1 MSDS
 - 5.5.2 Calibration Certifications

6.0 OVERSIGHT

NOTE

Through the IEWO contract between ORO and WTS, and the associated SOW, the ORO has delegated the authority to characterize and certify TRU waste to be shipped to the WIPP. Nonetheless, the Host facility retains the responsibility for proper disposal as the waste generator on behalf of DOE. Accordingly, the following actions will define the level of oversight of the CCP by Host facility personnel.

- 6.1 The Host facility will accept successful completion of the CBFO certification audit as adequate evidence that the CCP implementation at the Host facility is fully compliant with waste disposal requirements as set forth in the CH and RH WAC and WAP. However, the Host facility may conduct, at their discretion, periodic surveillances of CCP operations.
- 6.2 Following successful completion of the CBFO certification audit, the Host facility QA will conduct periodic surveillances to ensure CCP work is conducted in accordance with CCP procedures. These surveillances will be conducted in accordance with Host facility QA procedures.
- 6.3 The Host facility QA will provide copies of its surveillance reports to the CCP SPM. The CCP SPM and CCP QA will take the following actions:
 - 6.3.1 Review the Host facility surveillance reports for any finding or other deficiencies against the CCP scope of work.
 - 6.3.2 If required, prepare and process CARS in accordance with CCP-QP-006, *CCP Corrective Action Reporting and Control*, for deficiencies identified during the review.
 - 6.3.3 Provide Host facility QA with CCP actions to correct the identified deficiencies, as documented in the CAR.
 - 6.3.4 CCP QA will maintain an information file of the Host facility surveillance reports conducted on the CCP scope of work.

Figure 1 – CCP Organization

