

CCP-PO-501

Revision 5

CCP/INL RH TRU Waste Interface Document

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APPROVED FOR USE

RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	02/09/2006	Initial issue.
1	08/07/2006	Revised to add a section for Authorization Safety Basis and Configuration Management and to update certain procedures identified in the Procedures Section.
2	11/16/2006	Revised to implement the Waste Isolation Pilot Plant Hazardous Waste Facility Permit requirements resulting from the Section 311/Remote-Handled (RH) Permit Modification Request (PMR).
3	04/23/2008	Updated to include RCRA sampling and analysis and clarification of training roles and responsibilities.
4	04/30/2010	Revised to include Flammable Gas Sampling in section 4.7; section 4.18.3 to include all AK reports, CCP-TP-512 and CCP-TP-505; section 4.21 radiochemistry sampling. Added Waste Data System (WDS).
5	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 Idaho Nuclear Technology and Engineering Center (INTEC) and Reactor Technology Complex (RTC), located on the Idaho National Laboratory (INL). CCP has been deployed to this site to process remote-handled (RH) TRU waste.

This document defines the interfaces between the CCP and the Host site organization(s) necessary to perform this work. This document is invoked via an Affiliate Agreement and a Statement of Work (SOW) between the Host site organization and WTS. This document is intended to clarify and expand on details contained in the SOW and program documents. It is not intended to be used in lieu of a task-specific SOW.

CCP has primary responsibility for waste characterization activities. CCP services include compilation, reporting, and confirmation of Acceptable Knowledge (AK), Nondestructive Examination (NDE), Radiological Characterization, Headspace Gas (HSG) Sampling and Analysis, Visual Examination (VE), Data Validation and Verification, Waste Certification, WIPP Waste Information System (WWIS)/Waste Data System (WDS) Data Entry, and Waste Transportation Packaging and Shipment.

In providing these services, CCP may opt to use other CBFO-certified TRU programs. CCP will accept batch data reports (BDRs) validated through the data generation level 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 site equipment with appropriate DOE/CBFO-certified procedures. All services provided by CCP will comply with RH TRU requirements delineated in DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan* (WCPIP); DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant* (WAC); and *Waste Isolation Pilot Plant Hazardous Waste Facility Permit*, Attachments C-C6, *Waste Analysis Plan*, including those requirements pertaining to waste disposal and transportation. This work will be performed under a DOE/CBFO-certified quality assurance (QA) program that meets requirements defined in DOE/CBFO Quality Assurance Program Document (QAPD).

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

The Host site has primary responsibility for assuring that requirements for safety, (including Radiological Control, Emergency Management, Industrial Safety, and Industrial Hygiene [IH]), 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 site contractors' responsibilities are limited to the specific CCP activities being conducted within their facilities.

The CCP will certify RH TRU waste at the INL 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
- Radiological Characterization (includes dose-to-curie methodology)
- NDE
- HSG Sampling and SUMMA[®] Analysis
- AK
- Data Validation and Reconciliation
- Measuring and Test Equipment (M&TE)
- Work Standards
- QA
- Project Control
- Procedures
- Document Transmittals
- Procurements
- Records
- Waste Certification and WWIS/WDS Data Entry
- Transportation
- Authorization Safety Basis and Configuration Management

The Host site will report conditions or concerns that have or may have safety, health, QA, security, operational, or environmental implications to the Department of Energy-Idaho (DOE-ID). CCP shall report their similar issues to the Host site and to DOE/CBFO.

2.0 REQUIREMENTS

This document implements the applicable requirements of the following:

DOE/WIPP-02-3214, *Remote-Handled TRU Waste Characterization Program Implementation Plan*

CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*

CCP-PO-002, *CCP Transuranic Waste Certification Plan*

CCP-PO-026, *CCP Configuration Management Plan*

CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)*

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

3.2 Operations

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

- [A] Performing system start-up and calibration of characterization equipment at the Host site.
- [B] Performing safety walk-downs, management, and laboratory assessments prior to operation.
- [C] Responding to and resolving assessment and surveillance findings for CCP startup activities.
- [D] Ensuring CCP and Host site personnel are trained and qualified in accordance with the requirements specified in Section 4.1.
- [E] Successful completion of DOE/CBFO Certification Audit.
- [F] Providing drum tracking support for the drums introduced into characterization activities.
- [G] CCP, through WTS-established programs, maintains the responsibility for reporting potential Price-Anderson

Amendments Act (PAAA) issues resulting from the certification of TRU waste by CCP at INL. This includes filing any Occurrence Reporting and Processing System (ORPS) reports resulting from the certification of TRU waste by CCP at INL. CCP shall allow the Host site to participate in the investigation of any waste certification event that results in an ORPS or PAAA report.

- [H] CCP shall support and participate in Host site investigations when CCP characterization activities result in a Host site initiated ORPS or PAAA report.
- [I] CCP shall maintain records in accordance with CCP-QP-008, *CCP Records Management*, and CCP-QP-028, *CCP Records Filing, Inventorying, Scheduling, and Dispositioning*.

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

- [A] Radiological controls as needed to support characterization activities, including:
 - Radiological postings.
 - Radiation protection surveys, both initial, routine and demobilization, 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. Bioassay reports will be provided to the CCP Vendor Project Manager (VPM) within 60 days of sample collection.
 - Radiological source controls.

- Radiological Technicians for monitoring.
 - Responsible for secondary generated waste.
 - Personal Protective Equipment (PPE), as necessary.
 - Personnel facilities to accommodate the characterization and loading process.
- [B] Provides adequate heated space to be used for HSG sampling.
- [C] Provides site-specific training as needed to ensure safe operations within the facility.
- [D] Provides ES&H support, as needed.
- [E] Provides Fire Protection and Emergency Management support, as needed.
- [F] Provides Authorization basis oversight, including Unreviewed Safety Question (USQ) evaluations.
- [G] Provides environmental impact oversight and support, as needed.
- [H] Provides on-site sample and drum transportation.
- [I] Provides drum handling, inventory control, and storage location tracking.
- [J] Provides personnel to be trained and qualified under the CCP program as needed to support CCP activities (e.g., AK, VE, radiological characterization).
- [K] Performs document classification reviews as required to allow the public release of documents such as the AK Summary Report.
- [L] The Host site maintains the responsibility for reporting PAAA issues resulting from issues with safe operation of CCP characterization activities (e.g., Technical Safety Requirements, Radiation Safety, Industrial Safety, IH, Maintenance, Lockout/Tagout, Conduct of Operations, etc.) at INL. This includes filing any ORPS reports resulting from issues with safe operation of CCP characterization activities at INL. The Host site shall allow CCP to participate in

investigations resulting from ORPS or PAAA reports from issues with safe operation of CCP characterization activities at INL.

[M] The Host site will be allowed to participate in CCP investigations when a waste certification event results in a CCP initiated ORPS or PAAA report.

[N] Provides adequate space and file storage capacity for CCP personnel to maintain records.

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 site for all waste characterization, certification, and transportation activities.

3.3.2 Ensures CCP and Host site personnel are trained and qualified to perform WIPP-compliant TRU waste characterization and transportation activities at the Host site prior to commencement of work activities.

3.3.3 Confirms sufficient characterization equipment is available to perform the required characterization activities at the Host site.

3.3.4 Provides the AK Summary Report for DOE waste characterized by the CCP to the Host site STR/Designee.

3.3.5 Works in conjunction with Host site 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 status on CCP characterization operations to the Host site STR/Designee.

3.3.8 Reviews required software QA per CCP-QP-022, *CCP Software Quality Assurance Plan*.

- 3.4 CCP Quality Assurance (QA)
 - 3.4.1 Functions as CCP's primary interface and point-of-contact for QA matters between CCP, Host site, DOE-ID, and DOE/CBFO.
 - 3.4.2 Validates the Nonconformance Reports (NCRs) generated by CCP personnel performing characterization activities at the Host site.
 - 3.4.3 Notifies the Host site STR/Designee of any potential ORPS or Noncompliance Tracking System-Reportable PAAA issues resulting from the certification of TRU waste by CCP at INL.
 - 3.4.4 Provides copies of NCRs for information to the Host site STR/Designee, as requested.
 - 3.4.5 Ensures that nonconformances are dispositioned in a timely manner in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*.
 - 3.4.6 Ensures receipt inspection per CCP-QP-026, *CCP Inspection Control*, of procured items and services is performed.
 - 3.4.7 Provides the Host site STR/Designee with a copy of the semi-annual trending summary reports per CCP-QP-014, *CCP Quality Assurance Trend Analysis and Reporting*.
- 3.5 Host Site Subcontract Technical Representative (STR)/Designee (Host Site Management Position)
 - 3.5.1 Functions as the Host site primary interface and point-of-contact between the Host site 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 site personnel prior to CCP implementing the proposed modification.
 - 3.5.3 Ensures needed site infrastructure support, such as radiological, industrial safety, and IH is available for waste characterization.
 - 3.5.4 Ensures documentation of completed Host site-specific training is delivered to the CCP SPM.
 - 3.5.5 Coordinates review, provides comments, and approves comment resolutions on procedures listed in step 4.19.3 for the purpose of ensuring facility safety requirements are met.

- 3.5.6 Provides local support to CCP including but not limited to VE, radiological characterization and sampling personnel to support characterization operations as needed. Also provides personnel to support the CCP AK Experts in the collection of required documents and procedures as needed.
 - 3.5.7 Ensures that periodic QA surveillances of CCP operations by the Host site are conducted and reported to CCP.
 - 3.5.8 Distributes the CCP documents listed in step 4.19.3 to Host site reviewers as required by the Host site administrative controls.
 - 3.5.9 Reviews and concurs in accordance with CCP-QP-010, *CCP Document Preparation, Approval and Control*, on documents in step 4.19.3.
 - 3.5.10 Provides facilities, construction services, utilities, phone services, office services, and supplies.
- 3.6 CCP Vendor Project Manager (VPM)
- 3.6.1 Monitors the List of Qualified Individuals (LOQI) daily (when characterization activities are being performed) 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 site STR/Designee for characterization field operations.
 - 3.6.3 Provides pre-operation briefings when activities are being conducted.
 - 3.6.4 Ensures that in-process documents are transmitted to the CCP Site Project Office as soon as practicable.
 - 3.6.5 Ensures applicable Material Safety Data Sheets (MSDSs) are maintained and available to support operations.
 - 3.6.6 Provides oversight of field operations to ensure safe, efficient operations.
 - 3.6.7 Supervises day-to-day TRU waste characterization activities.
 - 3.6.8 Notifies the CCP Project Manager and the Nuclear Facility Manager of any abnormal events associated with safe operation of CCP characterization activities for reporting purposes.

4.0 PROCEDURE

4.1 Training and Qualification

- 4.1.1 CCP personnel or Host site 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 site required site-specific training. Personnel who have not completed site-specific training will not be allowed unescorted access to the characterization activities.
- 4.1.3 CCP and Host site personnel assigned to field operations must complete the Host site site-specific training. The STR will provide the CCP SPM, in writing, a listing of the site-specific training required for each CCP position.
- 4.1.4 Both the CCP and Host site site-specific training must be completed prior to the individual being assigned to perform independent work at the Host site.
- 4.1.5 An LOQI will be approved by the CCP SPM and will be monitored by the CCP VPM to confirm CCP and Host site personnel assigned to CCP to perform work are in compliance.
- 4.1.6 Immediate notification, in writing, will be provided by CCP or the Host site if any required qualification is revoked, suspended, or expires.
- 4.1.7 The Host site STR will notify CCP if any significant planned changes in site-specific training occur for CCP positions. The planned changes will be agreed to by the RH Program Manager prior to implementation. The finalized training matrix will then be formally transmitted to the RH Program Manager, CCP SPM and CCP Training Coordinator. It is recognized that additional or incidental non-core training may periodically be required by Host site to address special circumstances, response to events or to communicate other information to affected workers that may not appear on the formal Training Matrix.

- 4.1.8 CCP will notify Host site Training and the Host site STR of any personnel changes in CCP staff at INL, including transportation, and will identify the CCP positions to which the new individual will be trained.
- 4.1.9 The addition of CCP or Host site personnel to the CCP LOQI will follow the following sub-steps:
- [A] Host site Training will schedule site-specific training for identified CCP personnel.
 - [B] CCP Training will verify completion of CCP Qualifications and submit the completed CCP Qualification Card to Host site Training.
 - [C] The Host site Qualified Watch List is provided to CCP Training as verification that applicable site-specific training has been completed for all personnel qualified under the CCP qualification program.
 - [D] Host site Training verifies completion of site-specific training, verifies completion of the CCP Qualification Card, and places the individual on the Host site Qualified Watch List.
 - [E] CCP Training will issue the LOQI which reflects completion of both site-specific and CCP position qualifications.
 - [F] Host site Training will provide an updated site-specific Qualified Watch List to CCP Training, as needed, for use in maintaining the LOQI.
 - [G] CCP Training will provide an updated LOQI as needed to support work activities and personnel qualification needs.

4.2 Container Management

- 4.2.1 The Host site is responsible for drum movement and storage.
- 4.2.2 The Host site will provide the dose rate and surface contamination information necessary to certify the container or canister for disposal.
- 4.2.3 CCP is responsible for container management throughout the CCP characterization process.

- 4.2.4 The Host site is responsible for providing documented information to the CCP SPM on any modification to a drum or canister after closure and/or AK has been approved.
- 4.2.5 The CCP SPM will review the documented information of modified drums and will notify the STR when the drums are approved for entrance into the CCP characterization process.

4.3 Deficiencies and Nonconformances

4.3.1 CCP Identified Deficiencies and Nonconformances

NOTE

CCP QA 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 QA will provide notification (e.g., verbal or e-mail as required by the Host site) to the Host site STR/Designee. The Host site STR/Designee may request any supporting documentation needed by the Host site. CCP will ensure appropriate closure of the deficiency. A copy of any CCP NCR related to DOE TRU waste at the INL will be provided to the Host site STR/Designee upon request.
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NOTE

In some cases, INL may perform the work required to resolve deficiencies identified in CCP NCRs and will initiate internal documentation as required by the INL program. However, the CCP NCRs will remain open, and CCP NCR Hold Tags will remain on the affected containers, until resolution of the NCR condition has been confirmed by CCP under its certified program. At that point, CCP will close the NCRs and remove the NCR tags.

- [C] If the deficiency or nonconformance cannot be resolved by the CCP (e.g., does not meet TRU Waste Acceptance Criteria), then the specific drum will be returned with all required documentation to the Host site for disposition.

- [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 Project Manager and the Nuclear Facility Manager of the abnormal event.
- [E] The CCP QA will notify the STR/Designee of potential CCP ORPS and PAAA reports resulting from the certification of waste by CCP at INL.

4.3.2 Host site Identified Deficiencies and Nonconformances

- [A] Deficiencies or nonconformances identified by the Host site 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 at the time of waste packaging or as required by the governing documents in accordance with CCP-TP-500, *CCP Remote-Handled Waste Visual Examination*, using a facility provided by the Host site.
- 4.4.2 Host site will be responsible for all maintenance and repairs to the facility used for VE and/or repackaging operations.

4.5 Nondestructive Examination (NDE)

- 4.5.1 CCP will perform NDE using a radiography unit supplied by the Host site. Containers rejected by NDE will either be processed by VE and repackaged or will be dispositioned by the Host site consistent with the requirements of Section 4.3.
- 4.5.2 The Host site will ensure that waste containers provided to CCP for the radiography process are staged such that the waste will not be frozen (i.e., no chance of liquids in the waste container being frozen).

4.6 Radiological Characterization

- 4.6.1 The Host site will provide technical support and facilities as needed for radiological characterization efforts based on the use of AK for stored RH TRU waste or for sampling and analysis if AK is insufficient.

- 4.6.2 CCP will provide qualified personnel, including Host site personnel, to perform radiological characterization activities.
 - 4.6.3 The Host site will provide support for the CCP for performing calibration of Radiological Characterization instrumentation. This support includes delivery of surrogate drums and source control as needed.
 - 4.6.4 If the preliminary radiological results indicate an individual drum, or suite of RH TRU drums staged for characterization in the INTEC facility, contain a fissile gram amount greater than 350 grams, the appropriate Host site Shift Supervisor or Facility Manager shall be immediately notified. The Host site Operations will remove the container(s) and provide storage in a safe configuration. The CCP will provide a finalized Radiological Characterization Analysis Report to the Host site STR/Designee within seven days.
- 4.7 Headspace Gas (HSG) Sampling and Analysis
- 4.7.1 CCP will perform HSG Sampling and Analysis via:
 - [A] SUMMA[®] HSG sampling with analysis of the SUMMA[®] samples performed by the INL Environmental Chemistry Laboratory (ECL) or other CBFO-certified laboratory.
 - 4.7.2 The Host site will provide a temperature-controlled environment at 18°C (65°F) or greater to equilibrate waste drums for a minimum of 72 hours prior to sampling. The temperature must be maintained until the drum is sampled.
 - 4.7.3 CCP will be responsible for providing the calibrated instrumentation needed to monitor the temperature requirements with documentation provided.
 - 4.7.4 CCP will be responsible for replacing the filter vent as needed to support HSG sampling or transportation.
- 4.8 Flammable Gas Analysis (FGA)
- 4.8.1 CCP will perform sampling and analysis using a GC/MS with Thermal Conductivity Detector in accordance with DOE/WIPP-06-3345, *Waste Isolation Pilot Plant Flammable Gas Analysis*.
 - 4.8.2 Host site will be responsible for replacing the filter vent, as needed.

4.9 Source Control

- 4.9.1 No Special Nuclear Material (SNM) sources are anticipated to be required to support radiological characterization.
- 4.9.2 The Host site will be responsible for management of all Radiological Characterization Non-SNM reference sources. Responsibilities consist of inventory control, storage, shipment and usage. The Host site will provide CCP the number of sources, location, isotopic distribution with activity levels, and names of the custodian and authorized users, as required.
- 4.9.3 The Host site will be responsible for providing radiological control support associated with the CCP non-SNM reference sources. This support consists of maintaining the radioactive materials area (RMA) postings and periodic surveys and performing a semi-annual leak check on the sources as requested by CCP.
- 4.9.4 The Host site, as custodian of non-SNM sources, will provide to CCP the necessary sources for calibration as requested. Host site 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 site procedures.

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 WIPP RH TRU Waste Acceptance Plan (WAP) and DOE/CBFO-94-1012, *U.S. Department of Energy Carlsbad Field Office Quality Assurance Program Document (DOE/CBFO-QAPD)*.
- 4.10.2 CCP AK personnel will perform and document the AK collection, reporting, and confirmation in accordance with WCPIP and CCP-TP-005, *CCP Acceptable Knowledge Documentation*. CCP shall submit the AK Summary Report for Host site review and concurrence. As warranted, the Host site STR/Designee will provide written comments. Upon satisfactory disposition of comments, the Host site STR/Designee will provide written concurrence of the AK Summary Report.
- 4.10.3 Host site personnel will assist CCP AK personnel in support of AK compilation, confirmation, discrepancy resolution, or AK reassessment of source documents.
- 4.10.4 CCP will provide training and qualification of Host site personnel, as necessary, to support AK efforts.

4.11 Data Validation and Reconciliation

4.11.1 CCP, using CCP-trained Host site personnel where applicable, will provide data generation level validated data packages for all characterization activities. CCP will provide data generation level validated data packages for Radiography, Radiological Characterization, VE, and HSG in accordance with the approved CCP procedures governing these processes.

4.11.2 Wherever CCP has obtained the services of another CBFO-certified TRU Waste Program, that program will provide data generation level BDRs to CCP in accordance with their own programmatic documents.

4.11.3 CCP will provide project level validated data packages for Radiography, Radiological Characterization, VE, and HSG Sampling and Analysis.

4.11.4 The CCP SPM, and AK Expert will perform data reconciliation with applicable data quality objectives (QAOs) in accordance with CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data* and/or the Characterization Reconciliation Report.

4.12 Measuring and Test Equipment (M&TE)

4.12.1 CCP operations personnel will provide a list of equipment that requires calibration to the Host site STR/Designee.

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

4.12.3 The Host site will make available national standard-traceable calibration services for gamma and neutron dose measurement instrumentation. The Host site will maintain records on calibration in accordance with their RIDS. Copies of the Certificates of Calibration will be provided to the CCP VPM and CCP M&TE Custodian.

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

4.13 Work Standards

- 4.13.1 CCP operations personnel will work under the Host site Lockout/Tagout procedure.
- 4.13.2 CCP and Host site-provided personnel will perform quality-affecting work under CCP procedures for TRU waste characterization and certification activities. Host site 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 site procedures as they apply to established characterization areas.
- 4.13.5 CCP personnel will work under the Host site safety basis and work control standards, (i.e., General Employee Radiological Training [GERT]). Maintenance work control activities for CCP supplied equipment will be controlled using CCP-TP-140, *CCP Equipment Maintenance*. Maintenance work control activities on Host site-supplied equipment will be controlled using Host site work authorization procedures.
- 4.13.6 As outlined in CCP-CM-001, *CCP Equipment Change Authorization and Documentation*, and CCP-PO-005, it is the responsibility of the CCP VPM to maintain equipment configuration and authorize equipment changes to ensure characterization systems are operated and maintained in accordance with the Host site safety basis. The CCP VPM will not authorize a change to any characterization system until steps 4.13.6 [A] and [B] have occurred:
- [A] The CCP Cognizant Engineer has reviewed and approved the proposed change in writing to the CCP VPM (this may be accomplished via e-mail). In addition, any proposed change to any vendor-supplied characterization system must be reviewed and approved by an appropriate vendor engineer or representative. The vendor engineer or authorized representative must provide written approval to the CCP VPM (this may be accomplished via e-mail) for the proposed change.
- [B] The Host site STR/Designee must concur with the proposed change in writing (this may be accomplished by e-mail) and provide a copy of the approved USQ, if it is required.

[C] The Host site will manage the configuration of the radiography and assay units in accordance with the appropriate Host site procedures. Once these systems have been turned over to CCP for operation, no change to the configuration will be approved by the Host site without CCP's concurrence in writing (this may be accomplished by e-mail) from the CCP VPM.

- 4.13.7 CCP personnel will participate in the Host site bioassay program. CCP personnel involved in VE of waste will provide routine samples as required by the Host site. All other CCP personnel will provide samples as requested under the routine/random program established by the Host site. All CCP personnel will submit the bioassay samples required to establish a baseline for activities at the Host site.
- 4.13.8 The Host site will analyze bioassay samples provided by CCP personnel within 60 days of their receipt.
- 4.13.9 The CCP Project 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 site radiological controls personnel will perform routine surveys for contamination and radiation as specified in Host site policies or procedures. The CCP Project Manager or CCP VPM and appropriate Host site management personnel will be notified immediately upon the discovery of any loose surface contamination in any CCP-occupied buildings or any of the CCP-operated 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 site will provide immediate notification to the CCP Project Manager or CCP VPM of continuous or fixed air sample filter results that exceed established limits for areas routinely occupied by CCP personnel. Access to and copies of air sample results will be made available to CCP upon request.
- 4.13.12 The Host site will provide the necessary dosimetry for CCP personnel. Dosimetry reports will be provided to the CCP Project Manager or CCP VPM.

- 4.13.13 CCP will provide historical information on the operation of any CCP equipment deployed at Host site for the purpose of lessons learned and the implementation of any mitigating actions from these lessons learned.
- 4.13.14 Work activities will be authorized by the Host site Nuclear Facility Manager/Designee based on the Host site Qualified Watch List (QWL).
- 4.14 Waste Certification and WIPP Waste Information System (WWIS/WDS) Data Entry
 - 4.14.1 CCP will prepare Waste Stream Profile Forms (WSPFs) for the subject Host site waste in accordance with CCP-TP-002.
 - 4.14.2 CCP will transmit characterization and certification data in accordance with WWIS/WDS and CCP-TP-530, *CCP RH TRU Waste Certification and WWIS/WDS Data Entry*.
 - 4.14.3 CCP shall submit copies of WSPFs to the Host site for information before submittal to CBFO. The Host site will provide written concurrence on the basis of continued compliance with procedures and programs and CBFO certification of the CCP characterization 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/WDS for approval.
 - 4.14.5 The CCP WCO will provide listings of drums requiring retrieval from storage for the purposes of loading into RH TRU 72-B Canisters.
 - 4.14.6 CCP will begin their loading and shipping process using payload containers approved in WWIS/WDS.
- 4.15 Transportation
 - 4.15.1 CCP is responsible for meeting all requirements for loading and shipping TRU waste certified by CCP as approved in WWIS/WDS.
 - 4.15.2 The Host site will load drums into canisters according to CCP WCO listings, using approved procedures, and will provide the CCP WCO with the necessary data to complete the process.

- 4.15.3 The CCP WCO will work with the Host site as necessary to complete the appropriate transportation activities.
- 4.15.4 The CCP Transportation Certification Official (TCO) will work with the Host site as necessary to load the canisters into the RH TRU 72-B Casks.
- 4.15.5 The CCP TCO will coordinate the completion of the preparations of the RH TRU 72-B Cask for shipment in accordance with DOE/CBFO 02-3283 and DOE/CBFO 02-3284.
- 4.15.6 CCP Transportation will coordinate with the Host site to complete the following activities:
- [A] The Host site will procure all RH TRU 72-B Waste Containers and System Components from WTS.
 - [B] The Host site will load RH TRU 72-B Waste Containers with drums as delineated by CCP's TCO.
 - [C] The Host site will mechanically latch the RH TRU 72-B Waste Container Lid into the closed and fastened position using tooling and procedures as delineated by CCP.
 - [D] The Host site will position loaded RH TRU 72-B Waste Containers in RH TRU 72-B Casks.
 - [E] The Host site will place the RH TRU 72-B Cask Inner Vessel Container Lid into position and torque lid bolts in accordance with CCP's procedure.
 - [F] The Host site will perform Leak Rate Testing of the torqued Inner Vessel Lid in accordance with CCP's Leak Rate Test procedure. In the event of Leak Rate Test failure, the Host site will change out O-Rings and retest the Inner Vessel Lid for Leak Rate Acceptance.
 - [G] The Host site will place the Cask Lid into position and torque lid bolts in accordance with CCP's procedure.
 - [H] The Host site will perform Leak Rate Testing of the torqued Cask Lid in accordance with CCP's Leak Rate Test procedure. In the event of Leak Rate Test Failure, the Host site will change out O-Rings and retest the Cask Lid for Leak Rate Acceptance.

- [I] The Host site will load the assembled RH TRU 72-B Cask on the RH TRU 72-B Trailer and install the Impact Limiters in accordance with CCP's Cask Loading procedure.

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 site will conduct audits/surveillances to assess compliance with applicable procedures.

4.17 Procurement

4.17.1 All items and services to be purchased under CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*, will be graded by CCP in accordance with CCP-QP-001, *CCP Graded Approach*. The grading will determine whether the items and services are quality-affecting (Quality Level 1 or Quality Level 2) or non quality-affecting (Quality Level 0) for WIPP characterization, certification, and transportation.

[A] CCP will procure all quality-affecting items and services required for characterization in accordance with CCP-QP-015, *CCP Procurement*. These items and services are the sole responsibility of CCP with regard to their quality integrity.

[B] Host site will procure items and services determined by the CCP grading process to be non quality-affecting for WIPP characterization, certification, and transportation. The Host site will be responsible for verification and compliance for these items and services.

[C] Items and services that are related to safe operation of the facility, and which do not affect WIPP characterization, certification, and transportation, are not required to be graded by CCP.

[D] Receipt inspection of quality-affecting items will be performed by personnel trained and qualified to CCP-QP-002.

- [E] CCP will maintain Source/Receipt Inspection Verification Sheets (SRIVS) and associated objective evidence for each shipment in accordance with CCP-QP-026.
- [F] CCP will provide Host site advance notice (two weeks preferred) regarding anticipated receiving inspections that will be performed by Host site personnel trained and qualified by CCP.
- [G] Advance notice (two weeks preferred) will be provided to the Host site for expected delivery dates for WTS supplied equipment. Sufficient data (e.g., vendor data, procurement documents) will be provided to the Host site to allow development of Host site receipt inspection plans.

4.18 Project Control

- 4.18.1 CCP and Host site will provide weekly status for their respective scheduled activities and production matrix/curves.
- 4.18.2 CCP will provide Host site with an up-to-date earned value plan, and estimates of completion at the end of each month, or as requested.
- 4.18.3 CCP will maintain and provide Host site with an up-to-date organization chart listing CCP personnel, along with associated roles and responsibilities.
- 4.18.4 CCP will establish and maintain separation of costs and invoices from other CCP-performed work at the INL.
- 4.18.5 CCP will provide Host site with invoices reflecting labor hours, subcontracted service, and material costs grouped to the specific activity (i.e., AK, Deployment, Startup, and Operations) performed.
- 4.18.6 CCP will provide timely cost estimates to the Host site STR/Designee for any new CCP activities planned.
- 4.18.7 CCP will provide the Host site STR/Designee with schedule and actual cost data for scheduled activity on a monthly basis.

4.19 Procedures

4.19.1 As defined in CCP-QP-010, editorial or minor changes may be made to all CCP documents except CCP-PO-001, CCP-PO-002, *CCP Transuranic Waste Certification Plan*, CCP-PO-505, *CCP Remote Handled Transuranic Authorized Methods for Payload Control (CCP RH-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.

4.19.2 New Technical Operating Procedures (procedures that operate equipment) developed by CCP scheduled to be used at the Host site, shall be evaluated by the Host site STR/Designee to determine if the procedure shall be added to the Host site review lists defined below.

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

- CCP AK Reports
- CCP Waste Stream Profile Forms
- *CCP Radiological Characterization Technical Reports*
- *CCP Compliance and Confirmation Test Plans*
- Sampling and Analysis Plans
- *CCP-HSP-500, CCP Hazard Control Plan for RH TRU Operations at INTEC*
- *CCP-PO-501, CCP/INL RH TRU Waste Interface Document*
- *CCP-TP-093, CCP Sampling of TRU Waste Containers*
- *CCP-TP-140, CCP Equipment Maintenance*
- *CCP-TP-500, CCP Remote-Handled Waste Visual Examination*
- *CCP TP-505, CCP Removable Lid Canister Loading*
- *CCP-TP-504, CCP Dose-to-Curie Survey Procedure for Remote-Handled Transuranic Waste*

- CCP-TP-508, *CCP Standard Real-Time Radiography Inspection Procedure*
- CCP-TP-512, *CCP Remote-Handled Waste Sampling*

4.19.4 The following documents, and all revisions to these documents, will be provided to the Host site STR/Designee as "Notify Only" for review:

- CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*
- CCP-PO-002, *CCP Transuranic Waste Certification Plan*
- CCP-PO-005, *CCP Conduct of Operations*
- CCP-PO-505, *CCP Remote-Handled Transuranic Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC)*
- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*
- CCP-QP-006, *CCP Corrective Action Reporting and Control*
- CCP-QP-008, *CCP Records Management*
- CCP-QP-010, *CCP Document Preparation, Approval and Control*
- CCP-TP-001, *CCP Project Level Data Validation and Verification*
- CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data*
- CCP-TP-043, *CCP Chain of Custody for SUMMA® Canister Sampling Using the INEEL Lab*
- CCP-TP-106, *CCP Headspace Gas Sampling Batch Data Report Preparation*
- CCP-TP-507, *CCP Shipping of Remote-Handled Transuranic Waste*

- CCP-TP-509, *CCP Remote-Handled Transuranic Container Tracking*
- CCP-TP-510, *CCP Remote-Handled Radiography Test and Training Drum Requirements*

4.19.5 CCP will maintain control of procedures in accordance with CCP-QP-010.

4.19.6 The Host site STR/Designee will review or designate the appropriate reviews of the CCP procedures listed in step 4.19.3, and forward written comments to CCP Document Control in accordance with CCP-QP-010 for resolution.

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

4.20 Document Transmittals

4.20.1 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.

4.21 Documents to be provided to the Host site by CCP include:

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

- [I] Copies of SRIVS and associated objective evidence for each shipment
- [J] Information on chemical usage and copies of applicable MSDSs as requested for inventory or reporting reasons
- [K] Copies of training requirements and associated training records for Host site personnel supporting CCP
- [L] Results of all DOE/CBFO/NMED/DEQ/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/WDS, as requested
- [N] New Mexico Environment Department (NMED) and United States Environmental Protection Agency (EPA) approval of the CBFO Certification Audit Report
- [O] Documents called out in Section 4.18

4.21.2 Documents to be provided to CCP by Host site include:

- [A] Documentation of required training
- [B] Documentation of training completion for CCP and Host site personnel for training received from the Host site
- [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/WDS data entry
- [E] Radiological information as described per step 3.2.2[A] of this document
- [F] Copies of NCRs, deficiency reports, or other nonconformance documentation per Section 4.3
- [G] Copies of the results of Host site assessments pertaining to CCP
- [H] Copies of calibration certifications
- [I] Copies of QA surveillance reports

4.22 Authorization Safety Basis and Configuration Management

4.22.1 The Host site has primary responsibility to ensure that CCP equipment and processes have been appropriately considered within the DOE-approved Host-site documented safety analysis.

4.22.2 CCP has responsibility to ensure compliance with procedures that protect the personnel, public, and environment.

4.22.3 Accordingly, for CCP provided equipment, CCP will provide the documentation necessary for Host site to perform the evaluation against the safety analysis. This documentation may include health and safety plans, hazard assessments, system descriptions, equipment drawings, or other information deemed necessary by Host site.

4.22.4 For Host-site-provided equipment, CCP will review operational and authorization basis documentation including USQs to ensure the safety of CCP personnel while operating the equipment.

4.22.5 All changes to equipment operated by CCP will be controlled by the Host-site work control program to ensure appropriate authorization-basis evaluations are conducted, and associated controls are established.

4.22.6 The Host site will inform CCP of changes to authorization basis documentation that affect CCP operations prior to implementation.

4.22.7 CCP will provide to the Host site new AK information acquired that affects the material-at-risk inventory.

4.23 Radiochemistry and Resource Conservation and Recovery Act (RCRA) Sampling and Analysis

4.23.1 Host site will provide technical support and facilities as needed to support sample collection, transfer, and analysis for radiochemistry or Resource Conservation and Recovery Act (RCRA) constituents if AK is insufficient or direction is received to sample.

4.23.2 CCP will provide qualified personnel, including Host site personnel, to perform sample collection activities.

4.23.3 The Host site will use a WIPP-approved laboratory to perform analysis of radiochemistry and homogenous solid samples.

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 plan are maintained in accordance with CCP-QP-008.
- 5.3 All QA records generated by CCP documents referenced in this plan shall be maintained by CCP.
- 5.4 All QA records generated by CCP will be maintained and dispositioned in accordance with CCP-QP-028.
- 5.5 Host site will maintain the following records in accordance with Host site requirements. The list includes, but is not limited to, the following:
 - 5.5.1 MSDS
 - 5.5.2 Calibration Certifications
 - 5.5.3 Project Control schedules and cost data reports

6.0 OVERSIGHT

NOTE

Through the Affiliate Agreement between the Host site and WTS, and the associated SOW, the Host site has delegated the authority to characterize, certify, and ship TRU waste to the WIPP. Nonetheless, the Host site retains the responsibility for proper disposal as the waste generator. Accordingly, the following actions will define the level of oversight of the CCP by Host site personnel.

- 6.1 The Host site will accept successful completion of the CBFO certification audit as adequate evidence that the CCP implementation at the Host site is fully compliant with waste disposal requirements as set forth in the WCPIP, WAC, and WAP. However, the Host site may conduct, at their discretion, periodic surveillances of CCP operations.
- 6.2 Following successful completion of the certification audit, the Host site QA will conduct periodic surveillances to ensure CCP work is conducted in accordance with CCP procedures. These surveillances will be conducted in accordance with the Host site QA procedures.
- 6.3 The Host site QA will provide copies of its surveillance reports to the CCP SPM. CCP QA and the SPM will take the following actions:
 - 6.3.1 Review the Host site surveillance reports for any finding or other deficiencies against the CCP SOW.
 - 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 site QA with CCP actions to correct the identified deficiencies, as documented in the CCP CAR.
 - 6.3.4 CCP QA will maintain an information file of the Host site surveillance reports conducted on the CCP SOW.

Figure 1. CCP Organization

