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CCP/LBNL Roles and Responsibilities

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1.0 PURPOSE

This document establishes the roles and responsibilities between the Central Characterization Project (CCP) and Lawrence Berkeley National Laboratory (LBNL) for implementing the services for Certification for Transportation, and Transportation of contact-handled (CH) transuranic (TRU) waste to the Advanced Mixed Waste Treatment Project (AMWTP) in Idaho.

1.1 Scope

CH TRU waste currently located at LBNL that is determined acceptable for transport will be shipped to the AMWTP, where it will be further processed, characterized, and certified for permanent disposal at the Waste Isolation Pilot Plant (WIPP).

In general, LBNL will provide information for the development of the process knowledge (PK) documentation of the generation, processing, characterization and packaging activities needed to transport the waste in the Nuclear Regulatory Commission (NRC) approved CH Packaging shipping containers. This documentation will include Container Packaging Forms and video recordings of the examination of all waste items, and nondestructive assay (NDA) data.

CCP will conduct certification and subsequent transport activities as needed to deliver the waste to the AMWTP. These activities will include sampling/analysis of container headspace for flammable gases, compilation and reporting of process knowledge, review of characterization data, and submittal of waste acceptance documentation to the AMWTP, transportation evaluations, payload selections, and shipping container loading and leak testing. These activities will be conducted in accordance with U.S. Department of Energy (DOE); Carlsbad Field Office (CBFO) approved procedures, in a manner acceptable to LBNL to ensure safe and compliant operations on the LBNL.

LBNL will retain all landlord duties for the loading facility and retains the right to ensure that all workers comply with the facility's documented safety analysis (DSA) and obey all safety rules and instructions.

LBNL will maintain authority to proceed with work at the loading facility. This includes requirements that all CCP procedures or changes to procedures satisfy DSA requirements.

LBNL will provide required medical resources in case of injury or illness to any CCP personnel while at the LBNL.

The remainder of this document provides detailed delineation of the roles and responsibilities in each of the subject areas required to execute this work scope.

2.0 REQUIREMENTS

This document implements the applicable requirements of:

- DOE/WIPP 02-3183, *CH Packaging Program Guidance*
- DOE/WIPP-02-3184, *CH Packaging Operations Manual*
- DOE/WIPP 02-3185, *CH Packaging Maintenance Manual*
- DOE/WIPP 06-3345, *Waste Isolation Pilot Plant Flammable Gas Analysis*
- CCP-PO-401, *CCP Contact-Handled Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC) for Intersite Shipments*
- CCP-QP-002, *CCP Training and Qualification Plan*
- CCP-QP-008, *CCP Records Management*
- CCP-TP-054, *CCP Adjustable Center of Gravity Lift Fixture Preoperational Checks and Shutdown*
- CCP-TP-055, *CCP Varian Porta-Test Leak Detector Operations*
- CCP-TP-401, *CCP Process Knowledge Compilation for Preliminary Characterization*
- CCP-TP-404, *CCP Contact-Handled Transuranic Waste Certification and Data Entry for Intersite Shipments*
- CCP-TP-405, *CCP Intersite Shipments of Contact-Handled Transuranic Waste*

3.0 RESPONSIBILITIES

3.1 CCP Manager

- 3.1.1 Functions as primary point of contact between CCP and LBNL.
- 3.1.2 Ensures adequate CCP staffing for CH packaging loading.
- 3.1.3 Oversees certification of containers for shipment to AMWTP.
- 3.1.4 Coordinates with LBNL for resolutions to deficiencies.

3.2 LBNL Project Manager

- 3.2.1 Functions as primary point of contact between LBNL and CCP.
- 3.2.2 Reviews procedures listed in Section 4.6.2 for the purpose of ensuring facility safety requirements are met.
- 3.2.3 Provides appropriate waste designation for all waste.
- 3.2.4 Coordinates crane, hoisting, and rigging support.
- 3.2.5 Coordinates with CCP Manager for resolution of deficiencies.

3.3 Process Knowledge (PK)

- 3.3.1 LBNL will provide access and assistance to CCP in gathering information and documentation as needed to support PK compilation and reporting.
- 3.3.2 CCP will compile and report the PK in a format that will document the acceptability of the waste for shipment. CCP will then use this information to generate and submit the appropriate documentation to the AMWTP, such that AMWTP can evaluate the waste in accordance with its acceptance criteria. CCP will be responsible for obtaining AMWTP concurrence for each waste shipment prior to departure from the LBNL.

3.4 Nondestructive Examination (NDE)

- 3.4.1 LBNL will perform waste examination/packaging for each waste container as needed to document the absence of prohibited items, confirm the waste form, confirm the container identification, confirm venting and packaging configuration, and identify contents. Video and audio recordings shall be provided for each waste container. The recordings shall clearly show all of the attributes noted above,

such that no other documentation will be needed to support NDE characterization.

3.4.2 CCP will review each recording and certify as appropriate for transport.

3.5 Nondestructive Assay (NDA)

3.5.1 CCP will provide support to LBNL in the performance of NDA for each waste container as needed to quantify fissile material content, plutonium-equivalent curie (PE-Ci) content, TRU-alpha activity, TRU-alpha activity concentration, decay heat and isotopic content as needed to address 95 percent of the radiological hazard. The fissile content, TRU alpha activity, TRU-alpha activity concentration, decay heat, and isotopic content will be reported as the nominal measured value, plus an uncertainty value, in terms of the standard deviation. PE-Ci content will be reported as the nominal measured value.

3.5.2 The values will be reported to CCP in a format acceptable to both parties, both in electronic and paper formats. CCP will also provide assay equipment calibration and operational data as necessary to support certification of the waste for transport.

3.5.3 CCP will review each assay and certify as appropriate for transport.

3.6 Container Headspace Sampling, Gas Generation Testing (GGT) and Analysis for Transportation

3.6.1 CCP will conduct sampling and analysis of the headspace of each container to document the absence of flammable conditions.

3.6.2 CCP will conduct GGT as applicable to document that the transportation of CH TRU waste in the Transuranic Package Transporter Model II (TRUPACT-II) meets the applicable requirements set forth in the TRUPACT-II Safety Analysis Report.

3.6.3 CCP will review the data for each container, and certify as appropriate for transport.

3.7 Data Evaluation

3.7.1 Following collection of the characterization data, CCP will review the data and confirm it is in accordance with the PK, the waste acceptance criteria for the AMWTP, and the transportation requirements of CCP-PO-401, *CCP Contact-Handled Transuranic Authorized Methods for Payload Control (CCP CH-TRAMPAC)* for

Intersite Shipments. CCP will select the waste containers for each payload assembly, and ensure the assembly is compliant with transport requirements.

- 3.8 Payload Assembly
 - 3.8.1 CCP will provide the payload assembly configurations to LBNL. LBNL will perform radiological surveys of the payloads, in accordance with site procedures.
 - 3.8.2 A CCP representative will be present during payload assembly operations, and the CCP representative is responsible for performing container inspections and verifying the identification of each individual container.
- 3.9 CCP Waste Certification Official (WCO)
 - 3.9.1 Responsible for certifying containers for shipment, data entry into the WIPP Waste Information System/Waste Data System (WWIS/WDS), interface with CCP Transportation Certification Official (TCO) and LBNL personnel.
- 3.10 CCP CH Packaging Loading Personnel
 - 3.10.1 CH Packaging operations, maintenance, and leak testing, as defined in the responsibility matrix (See Appendix A, Responsibilities Matrix).
- 3.11 CCP Transportation Certification Official (TCO)
 - 3.11.1 Interfaces with LBNL Waste Certification Official to provide documentation for manifesting, assigns payloads for shipment, and certifies shipment for Transportation. Transportation Tracking and Communications System (TRANSCOM) can be entered by CCP.
- 3.12 CCP Quality Assurance (QA)
 - 3.12.1 Functions as CCP's primary interface and point-of-contact for Quality Assurance (QA) matters between CCP, host facility and DOE/CBFO.
 - 3.12.2 Ensures receipt inspection per CCP-QP-026, *CCP Inspection Control* of certified gas is performed.
 - 3.12.3 Provide oversight support as determined by the CCP Program Manager.

4.0 INTERFACE

4.1 Training

4.1.1 CCP personnel will be trained and qualified to WIPP requirements as directed by CCP-QP-002, *CCP Training and Qualification Plan*. Additionally, CCP personnel assigned to LBNL must complete required site-specific LBNL training. LBNL site-specific training must be completed prior to the individual being assigned to perform work on the LBNL work site within the designated facility.

[A] List of Qualified Individuals (LOQIs) for CCP personnel will be posted and monitored by the CCP TCO to confirm CCP personnel are not assigned to perform work until in compliance with the training and qualification requirements.

4.1.2 LBNL will provide site-specific training to CCP personnel.

4.2 Deficiencies

4.2.1 CCP Identified Deficiencies

[A] If CCP personnel identify any unacceptable condition associated with a waste container during the CCP data review or loading process, (e.g. prohibited item, or container integrity issue), LBNL will be notified of the unacceptable condition and drum will be handled in accordance with LBNL procedures.

[B] LBNL will provide CCP Certification Manager with appropriate closure documentation of the deficiencies before drums can be shipped.

4.2.2 LBNL Identified Deficiencies

[A] All LBNL identified deficiencies will be addressed using site procedures, as appropriate, to resolve deficiencies before impacted operations continue.

4.3 Process Knowledge (PK)

4.3.1 CCP PK personnel will perform and document the PK collection, and reporting, per CCP-TP-401, *CCP Process Knowledge Compilation for Preliminary Characterization*.

- 4.3.2 Site PK personnel and CCP personnel will work in conjunction with one another in the PK compilation, discrepancy resolution, or PK reassessment of source documents.
- 4.3.3 CCP personnel will be responsible for obtaining AMWTP concurrence for each waste stream.
- 4.4 Waste Certification and WIPP Waste Information System/Waste Data System (WWIS/WDS) Data Entry
- 4.4.1 CCP will perform data review for each container to be shipped.
- 4.4.2 CCP will transmit certification data using the WWIS/WDS.
- 4.4.3 CCP will document and certify that all CH TRU waste payload containers meet CCP CH-TRAMPAC requirements.
- 4.5 Transportation
- 4.5.1 Transportation of CH TRU waste to AMWTP will be performed by the CCP.
- 4.5.2 CCP will be responsible for loading of CH Packaging, performing transportation certification, and preparation of the shipment.
- 4.5.3 CCP will provide LBNL Shippers with appropriate documentation for manifesting of shipments as defined in the responsibilities matrix (See Appendix A).
- 4.5.4 LBNL will be responsible for signing the manifest documentation.
- 4.6 Procedures
- 4.6.1 The following procedures will be provided to the LBNL for the purpose of USQ screening, ensuring facility safety requirements are met:
- CCP-TP-054, *CCP Adjustable Center of Gravity Lift Fixture Preoperational Checks and Shutdown*
 - CCP-TP-055, *CCP Varian Porta-Test Leak Detector Operations*

4.6.2 The following documents are controlled by DOE/CBFO and upon CCP receiving notification of issuance/revision, CCP shall notify the Host site for purpose of USQ screening:

- DOE/WIPP 02-3183, *CH Packaging Program Guidance*
- DOE/WIPP 02-3184, *CH Packaging Operations Manual*
- DOE/WIPP 02-3185, *CH Packaging Maintenance Manual*
- DOE/WIPP 06/3345, *Waste Isolation Pilot Plant Flammable Gas Analysis*

4.7 Documents

4.7.1 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 quality records will be transmitted by CCP personnel via CCP-QP-008, *CCP Records Management*.

4.7.2 Documents provided to LBNL by CCP include:

[A] Shipment information for shipment manifesting

4.7.3 Documents provided to CCP by LBNL include:

[A] Initial waste packaging data including video/audio recordings

[B] NDA data

[C] Radiological surveys

[D] Container Weights

[E] Scale Calibration

5.0 RECORDS

- 5.1 Records are generated during the implementation of procedures referenced in this Roles and Responsibilities Document. These records are maintained as QA records in accordance with CCP-QP-008. No additional records are generated as a result of this document.

Appendix A – Responsibilities Matrix

Major Task	Sub-Task	Performing Group
Payload Building		LBNL /CCP
	Drum moves to and from building station	LBNL
	Labeling	LBNL
	Payload survey	LBNL
CH Packaging Loading	Perform release surveys of dunnage drums per LBNL procedures.	LBNL
	Direct the TRUPACT, Mobile Loading Unit and ancillary equipment in and out of the loading facility	LBNL
	Receipt/shipment survey of CH Packaging	LBNL
	Pre-use inspect hoisting and rigging equipment	LBNL /CCP
	Pre-use inspect Adjustable Center-of-Gravity Lift fixture (ACGLF) and Ten-Drum Overpack (TDOP) Adaptor	CCP
	Conduct radiation surveys of all transportation and loading equipment as required by LBNL procedures.	LBNL
	Remove/inspect/clean/install Outer Containment Vessel (OCV)/Inner Containment Vessel (ICV) lock ring bolts	CCP
	Place ACGLF on OCV/ICV lids, remove lids and place on storage stands (under CCP guidance)	LBNL/CCP
	Rotate locking rings to release OCV/ICV lids from the bodies (Vacuum System)	CCP
	Operate ACGLF control console	CCP
	Remove/inspect/clean/repair vent & test port plugs, confinement O-rings, etc.	CCP
	Lubricates & reinstalls CH Packaging parts	CCP
	Complete Maintenance Records (Document Measuring and Test Equipment [M&TE])	CCP
	Provide all spare parts for CH Packaging	CCP

Appendix A – Responsibilities Matrix (Continued)

Major Task	Sub-Task	Performing Group
	Stages drums for building payloads arrays.	LBNL
	Verifies payloads for loading	CCP
	Loads payloads in CH Packaging (under CCP guidance)	LBNL/CCP
	Rotate locking rings to secure OCV/ICV lids to bodies (Vacuum System)	CCP
	Verify Helium cylinder for leak test	CCP
	Perform Helium leak test, perform associated calculations	CCP
	Install/remove leak test equipment	CCP
	Document CH Packaging components installed & torque during leak testing (Document M&TE)	CCP
	Fax/mail maintenance records to WIPP & place copies in field file	CCP
	Review/submit completed documents to WIPP or records	CCP
	TRANSCOM Entries	CCP
	Ship CH Packaging shipments from LBNL to AMWTP	CCP
Nondestructive Assay	Provide equipment and conduct assay	CCP
Flammable Gas Analysis	Provide equipment and conduct analysis	CCP
Radiological Control Technician (RCT) Support	All RCT Support (not already included above) as necessary	LBNL
Shipping	Provide trailer, CH Packaging, Tractors	CCP
	Schedule shipments	CCP