

# CCP-PO-406

Revision 0

## CCP/LLNL 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 Livermore National Laboratory (LLNL) 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 LLNL 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).

LLNL will provide process knowledge (PK) documentation of characterization activities needed to transport the waste in the Nuclear Regulatory Commission (NRC)-approved CH Packaging shipping containers. This documentation will include data sheets for nondestructive examination (NDE), and nondestructive assay (NDA). LLNL will also supply PK documentation of venting and packaging activities for individual containers as appropriate.

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 PK, 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 LLNL to ensure safe and compliant operations on the LLNL.

LLNL will retain all landlord duties for the loading facility and retains the rights to ensure that all workers comply with the facility's Documented Safety Analysis (DSA) and obey all safety rules and instructions.

LLNL will maintain work release authority for all work performed at the loading facility which includes requirements that all CCP procedures or changes to procedures, satisfy LLNL Documented Safety Analysis (DSA) requirements.

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

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*
- 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 Intersite Shipping Module Data Entry for Intersite Shipments*
- CCP-TP-405, *CCP Intersite Shipping of Contact-Handled Transuranic Waste*

### 3.0 RESPONSIBILITIES

#### 3.1 CCP Manager

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

#### 3.2 LLNL Project Manager

- 3.2.1 Functions as primary point of contact between LLNL and CCP.
- 3.2.2 Provides radiological support in accordance with the LLNL Radiation Protection program and provides necessary LLNL site training to CCP personnel.
- 3.2.3 Reviews procedures listed in Section 4.6 for the purpose of Unreviewed Safety Question (USQ) screening, ensuring facility safety requirements are met.
- 3.2.4 Provides appropriate waste designation for all waste.
- 3.2.5 Coordinates crane, hoisting and rigging support.
- 3.2.6 Coordinates with CCP Manager for resolution to deficiencies.
- 3.2.7 Coordinates the release of work and conducts daily pre-job briefings.

#### 3.3 Process Knowledge (PK)

- 3.3.1 LLNL 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 LLNL.

3.4 Nondestructive Examination (NDE)

3.4.1 LLNL will perform radiography or video/audio of initial waste 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/audio of the radiography or video/audio recordings of initial waste packaging 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 LLNL will perform 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, PE-Ci 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 one standard deviation. PE-Ci quantities DO **NOT** require uncertainty determinations.

3.5.2 LLNL will provide any additional information needed for NDA review such as: copies of operational procedures, calibration documents, measurement control information for each day of operation, training, and quality assurance documentation.

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

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

3.6 Container Headspace Sampling and Analysis for Transportation

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

3.6.2 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 LLNL. LLNL 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 Intersite Shipping Module (ISM), or CBFO approved shipping module, interface with CCP Transportation Certification Official (TCO), and LLNL 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 LLNL Shippers to provide documentation for manifesting, assigns payloads for shipment, and certifies shipment for Transportation. Transportation Tracking and Communications System (TRANSCOM) can be entered by LLNL Shipping or CCP.

## 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*. Sub-contract personnel will be trained and qualified to Sub-contractor's procedures and requirements. Additionally, CCP personnel and sub-contract personnel assigned to LLNL must complete required site-specific LLNL training. LLNL site-specific training must be completed prior to the individual being assigned to perform work on the LLNL work site within the designated facility.

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

[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.

### 4.2 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) LLNL will be notified of the unacceptable condition and drum will be handled in accordance with LLNL procedures.

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

#### 4.2.2 LLNL Identified Deficiencies

[A] All LLNL 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 Intersite Shipping Module 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 Intersite Shipping Module (ISM) or CBFO approved shipping module.
- 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 LLNL Shippers with appropriate documentation for bill of lading or manifesting of shipments as defined in the responsibilities matrix (See Appendix A).
- 4.5.4 LLNL will be responsible for signature approval of the bill of lading or manifest documentation.
- 4.6 Procedures
- 4.6.1 The following procedures will be provided to the LLNL 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 purposes 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*

#### 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 LLNL by CCP include:

[A] Shipment information for shipment bill of lading or manifesting

4.7.3 Documents provided to CCP by LLNL include:

[A] NDE or 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		LLNL /CCP
	Drum moves to and from building station	LLNL
	Labeling	LLNL
	Payload survey	LLNL
CH Packaging Loading	Survey of empties/shipments	LLNL
	Move CH Packaging trailers in and out of TRU-Pad loading facility	LLNL
	Receipt/shipment survey of CH Packaging	LLNL
	Pre-use inspect hoisting and rigging equipment	LLNL /CCP
	Pre-use inspect Adjustable Center-of-Gravity lift fixture (ACGLF) and Ten-Drum Overpack (TDOP) Adaptor	CCP
	Receipt/disassembly survey CH Packaging	LLNL
	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)	LLNL
	Rotate locking rings to release OCV/ICV lids from the bodies (Vacuum system)	CCP
	Operate ACGLF control console	CCP
	Rad surveys during disassembly	LLNL
	Remove/inspect/clean/repair vent & test port plugs, confinement O-rings, etc.	CCP
	Lubricates & reinstall CH Packaging parts	CCP
	Complete Maintenance Records (Document Measuring and Test Equipment [M&TE])	CCP
	Provide all spare parts for CH Packaging	CCP
	Stages built payloads for loading	LLNL
	Verifies payloads for loading	CCP

Appendix A – Responsibilities Matrix (Continued)

Major Task	Sub-Task	Performing Group
	Loads payloads in CH Packaging (under CCP guidance)	LLNL
	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 (NTS can enter TRANSCOM if qualified)	LLNL/CCP
	Ship CH Packaging shipments from NTS to AMWTP	CCP
Radiological Control Technician (RCT) Support	All RCT Support (not already included above) as necessary	LLNL
Shipping	Provide trailer, CH Packaging, Tractors	CCP
	Schedule shipments	CCP