

WP 05-WH1011

Revision 41

CH Waste Processing

Technical Procedure

EFFECTIVE DATE: 02/28/11

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APPROVED FOR USE

CONTINUOUS USE PROCEDURE

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CHANGE HISTORY SUMMARY

REVISION NUMBER	DATE ISSUED	DESCRIPTION OF CHANGES
38	07/08/10	<p>Clarifies in the Precautions and Limitations that the Radiological Assessment Filter can be placed in the housing at any time prior to placing on TRUPACT</p> <p>Dose rates obtained during the performance of procedure at 30 centimeters are to determine radiological posting requirements</p> <p>Steps 2.3.15, 2.4.26, 2.5.1, 2.5.6, 2.5.8, 2.5.29 have been clarified in order to provide direction to the Radiological Control Technician</p> <p>Step 2.5.11 has been changed to clarify that entry into the abnormal operations procedure for the purpose of completing actions related to potentially noncompliant container is required for a damaged payload assembly</p> <p>Words related to survey results above 200mrem/hour have been deleted</p>
39	08/31/10	<p>Added bullet to Precautions and Limitations about cycling of the vacuum valve</p> <p>Added a note above Step 2.5.8</p> <p>Delete note from above Step 2.5.12</p> <p>Added dose rate measurements to Step 2.5.25 and to Attachment 1 under Performance, Step 2.5.25</p>
40	02/08/11	<p>Updated document References section.</p> <p>Revised the Precautions and Limitations Section, removing the following bullets:</p> <ul style="list-style-type: none"> Additional firefighting on the back shift. The use of jack stands on freestanding trailers. Barricades in the WHB and TMF. <p>Revised steps the document to allow better user performance of the procedure.</p>
41	02/28/11	Editorial change to correct step numbering.

INTRODUCTION ^{1, 2, 3, 4, 5}

This procedure provides instructions for unloading contact-handled (CH) packages which consist of the transuranic (TRU) package transporter (TRUPACT-II or HalfPACT) shipping container.

Performance of this procedure generates the following record(s), as applicable. Any records generated are handled in accordance with departmental Records Inventory and Disposition Schedules.

- Attachment 1 - CH Waste Processing Data Sheet
- Attachment 2 - Stacking of Multiple Payloads
- Narrative Log

REFERENCES

BASELINE DOCUMENTS

- Title 30 *Code of Federal Regulations* (CFR) §57.5015, "Oxygen Deficiency"
- 40 CFR Part 761, "Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions"
- NRC-Docket-71-9218, *Certificate of Compliance for the TRUPACT-II Package*
- NRC-Docket-71-9218, *TRUPACT-II Safety Analysis Report for the TRUPACT-II Shipping Package*
- NRC-Docket 71-9279, *Certificate of Compliance for the HalfPACT*
- NRC-Docket 71-9279, *Safety Analysis Report for the HalfPACT Shipping Package*
- Contact Handled Transuranic Waste Authorized Methods for Payload Control (CH TRAMPAC)
- Hazardous Waste Facility Permit (HWFP), Waste Isolation Pilot Plant, Permit No. NM4890139088-TSDF, issued by the New Mexico Environment Department
- DOE/WIPP-02-3183, *CH Packaging Program Guidance*
- DOE/WIPP-02-3184, *CH Packaging Operations Manual*

- DOE/WIPP-07-3372, *Waste Isolation Pilot Plant Documented Safety Analysis*
- DOE/WIPP-07-3373, *Waste Isolation Pilot Plant Technical Safety Requirements*
- *Multi-Gas Monitor Instruction Manual*
- *Sampling Pump Instruction Manual*
- WP 12-HP2001, Abnormal Radiological Conditions

REFERENCED DOCUMENTS

- WP 04-AD3001, Facility Mode Compliance
- WP 05-WH.02, WIPP Waste Handling Operations WDS User's Manual
- WP 05-WH1025, CH Waste Downloading and Emplacement
- WP 05-WH1101, Surface Transuranic Mixed Waste Handling Area Inspections
- WP 05-WH4401, Waste Handling Operator Event Response
- WP 08-NT3020, TRU Waste Receipt
- WP 12-HP1100, Radiological Surveys
- WP 12-HP1500, Radiological Posting and Access Control
- WP 12-HP4000, Emergency Radiological Control Responses
- MWI00073, Transport, Storage and Use of Compressed Gas Cylinders

PRECAUTIONS AND LIMITATIONS

NOTE

Unless otherwise noted, steps are performed by waste handling (WH).

The Technical Safety Requirements (TSRs) contain Limiting Conditions for Operation (LCOs) and Specific Administrative Controls (SACs) which provide specific preventative or mitigative limits and required actions for identified accident scenarios. Failure to comply with LCOs or SACs may constitute a violation and must be immediately reported to the Facility Shift Manager (FSM). The step affected by the LCO/SAC is followed by the LCO/SAC number in bold brackets (e.g., **[LCO 3.X.X]**). Applicable LCO/SAC Surveillance Data Sheets SHALL be completed as required by WP 04-AD3001.

- **The following LCOs apply AT ALL TIMES:**
 - Propane-powered vehicles/equipment are prohibited in the CH BAY, RH BAY, SHAFT ACCESS AREA, UNDERGROUND at all times. **[LCO 3.3.4]**

- **The following LCOs apply during WASTE HANDLING and WASTE STORAGE MODE:**
 - The confinement ventilation system for the CH BAY SHALL be OPERABLE. **[LCO 3.2.1]**
 - Liquid-fueled vehicles/equipment are prohibited in the CH BAY and in the SHAFT ACCESS AREA. **[LCO 3.3.2] [LCO 3.3.3]**
 - CH WASTE SHALL be secured to the facility pallet prior to movement. **[LCO 3.5.1]**

- If a noncompliant or potentially noncompliant payload/container is identified during the performance of this procedure, the payload/container must be properly identified and posted so that it is not downloaded to the underground until the required actions of LCO 3.7.1, Noncompliant Container Response have been addressed.

- Only personnel qualified as Waste Handling Technician/Engineer (WHT/WHE), or trainees operating under direct supervision of qualified WHT/WHE, are authorized to perform waste handling activities specified in this procedure.

- Step 2.4.6 may be performed at any time prior to Step 2.4.7.

- Events that require cessation of this procedure, such as an emergency radiological event, must be performed in accordance with WP 05-WH4401 and WP 12-HP4000.

- If procedure cannot be performed as written, WHE shall be contacted.
- Step 2.5.36 may be performed at any time during the performance of this procedure.
- Moving/stacking of the payloads in the CH Bay may be performed at any time, while in waste handling mode, and at the direction of the WHE/Crew Manager.
- Failure to rotate the counterweights on the Adjustable Center of Gravity Lift Fixture (ACGLF) to the balanced position may cause ACGLF to swing uncontrollably, resulting in equipment damage or personnel injury.
- Outer containment assembly (OCA) lid, Lift Pocket Covers may be removed at any time.
- ACGLF may be placed on lids at any time during the process.
- Inner Containment Vessel (ICV) or Outer Containment Vessel (OCV) lock rings shall not be rotated with mechanical force.
- Cycling of the vacuum valve is permitted to ensure vacuum pressure is obtained.
- Attachment 3 can be used as a reference for projected volumes in the CH Waste Storage Area.
- **The following restrictions must be observed in the CH Bay:**

NOTE

All pallets of waste must be stored in an approved storage area prior to exiting waste handling mode. Under normal Waste Handling Operations (WHO) each pallet (including half pallets) containing CH waste are counted toward the maximum of 13 pallets in the CH bay.

- No more than seven facility pallets loaded with CH waste stored in the northeast corner.
- No more than seven facility pallets loaded with CH waste stored in the southwest corner.
- Only one facility pallet loaded with CH waste may be in the shielded storage room.
- Total projected volume in the CH Bay Storage Area is not to exceed 135.9 m³; the equivalent of thirteen (13) fully loaded pallets (including half pallets) and four (4) CH Packages at the

TRUDOCKs, with or without lids removed and payloads remaining in the TRUPACT or HalfPACT.

- TRUPACT-IIs or HalfPACTs loaded with CH waste may be stored at each TRUDOCK location.
- Waste is not to be placed in the CH Bay Surge storage area of the Waste Handling Building (WHB) without authorization of the Waste Operations Manager. If a condition exists that will cause an overflow of waste in the CH Bay storage area, waste handling shall be stopped and WHE, Central Monitoring Room Operator (CMRO), and Waste Handling Manager (WHM) contacted.
- No more than five facility pallets loaded with CH waste (stored near Airlock 107), when surge storage is in use, per Attachment 3.
- TRUPACT-II must be ventilated to >20 percent oxygen level before entry into ICV body if backfilled with inert gas.
- The ICV vent time for Controlled Waste Shipments is based upon the waste stream, the departure time, and date from the generator site. The vent deadline is determined by the Transportation Engineer (TE), in accordance with WP 08-NT3020. Upon receipt of a controlled shipment, the TE will notify the WHE of the date and time the package must be vented.
- TE may be notified at any time that container identification (ID) numbers match WIPP Waste Information System (WWIS)/Waste Data System (WDS) Shipment Summary Report.
- When placing or removing a TRUPACT-II/HalfPACT at the TRUDOCK with Forklift 41-H-012C, two spotters must be used.
- At any point during waste processing, the TRUPACT-II lids can be positioned back onto the TRUPACT body to maintain appropriate equipment configuration, as determined by the WHE.
- If discrepancies with CH Packaging are found while processing, the WHE shall be notified. If a condition exists that cannot be resolved, the WHE shall then notify the Packaging Maintenance Engineer (PME) of the discrepancy.
- If a shipment is to be returned to generator site, DOE/WIPP-02-3184, Subsection 2.16, Loading Payload Assembly, must be performed.
- Waste containers shall not be stored in the WHB for longer than 60 days.
- OCV-ICV lids shall be removed using a straight (vertical) pull; side pulls are not permitted.

- If shipment **DOES NOT** contain Controlled Waste, use the WWIS/WDS Shipment Summary Report and schedule CH package unloading based on the ICV closure date to ensure that the 60-day U.S. Nuclear Regulatory Commission venting requirement and/or 59-day New Mexico Environment Department inspection requirement are not exceeded.
- In the event CH waste handling activities will be performed on the back-shift (or off-shift), WHE must ensure that applicable equipment preoperational inspections and area inspections have been completed and CH TSR staffing met in order to continue CH waste handling operations.
- **A spotter and a Radiological Control Technician (RCT) are required when moving WASTE that is not in a shipping package.**
- Dose rates obtained during the performance of this procedure are at 30 centimeters from each payload assembly and are for the determination of posting requirements of WP 12-HP1500. They are not intended to ensure or demonstrate compliance with the WIPP Waste Acceptance Criteria.

PREREQUISITE ACTIONS

NOTE

The package unloading operation must only be performed in a dry environment. In the event of precipitation during outdoor unloading or loading operations, OCV and ICV cavities must be covered to prevent precipitation from entering the interior cavities. If precipitation does enter interior cavities, all freestanding water must be removed before shipment, and liquid handled according to the site's waste management procedures.

NOTE

Transport trailer operations, package loading and unloading from transport trailers, hoisting and rigging activities such as ACGLF operations, equipment checkout and shutdown, and component inspection activities must be performed, but may be performed in any order and in parallel with other activities as long as radiological control steps are not bypassed. Steps involving OCA/ICV lid removal/installation and payload removal/loading may be performed in parallel if there are multiple operators working on the same packaging.

NOTE

All sign-offs are on Attachment 1 of this procedure, unless otherwise noted.

- 1.0 WHE, record shipment number and OCA body serial number on Attachment 1.

SIGN-OFF

- 2.0 WHE, ensure TE has validated shipping documents, inspected CH packages for damage, and released CH packages for unloading.

SIGN-OFF

- 3.0 WHE, ensure on Attachment 1, that the shipment has been received in the WWIS/WDS.

SIGN-OFF

- 4.0 WHE, obtain WWIS/WDS Shipment Summary Report.

- 5.0 If shipment contains Controlled Waste, obtain Attachment 4 (WIPP Control Checklist for Controlled CH Shipments) of WP 08-NT3020, from the TE.

- 6.0 Ensure applicable section of WP 05-WH1101, has been completed.

- 7.0 Ensure applicable equipment preoperational inspections have been completed.

8.0 If the ICV body was backfilled with inert gas for the current shipment, perform the following:

[A] WHE, record oxygen monitor serial number and verify calibration due date has not expired.

SIGN-OFF or N/A

[B] WHE, ensure oxygen monitor daily calibration and sample pump operational check is complete.

SIGN-OFF or N/A

9.0 Configure TRUDOCK position to facilitate operations for specific type of CH package, if required.

PERFORMANCE

1.0 TRAILER HANDLING AND UNLOADING

<p style="text-align: center;">CAUTION</p> <p>A physical check shall be made to ensure air bags on the trailer have fully inflated before trailer is moved. Failure to do so may cause tires to rub on the bottom of the rear CH package. The trailer must be kept as level as possible during movement.</p>

NOTE

If a trailer is posted as a Radiological Area, the RCT must be notified before moving TRUPACT and/or trailer.

- 1.1 Position transport trailer in a designated area.
- 1.2 Lower trailer jacks (landing gear), ensuring trailer is level.
- 1.3 Install wheel chocks.
- 1.4 Install trailer stands on freestanding trailers, prior to removing package.
- 1.5 Prepare CH package for removal as follows:
 - Release tie-downs from packaging.
 - Rotate four forklift pocket covers to UP position.

NOTE

Only dry CH packages are allowed in the CH Bay.

1.6 If required, dry CH package before transferring into WHB, using the following methods:

- Brush or scrape
- Wipe with cloths

CAUTION

Forklift tip-back beyond level may damage CH package exterior surface.

1.7 Transfer CH package to TRUDOCK.

WARNING

Operator shall remain on station until TRUDOCK Bay doors are fully closed.

CAUTION

TRUDOCK Bay doors must not contact CH package when lowering TRUDOCK Bay doors.

1.8 Ensure TRUDOCK Bay Doors will clear CH package.

1.9 Lower TRUDOCK Bay doors and close/latch TRUDOCK gates.

2.0 CH PACKAGE UNLOADING

2.1 WH, ensure adequate WHO staff is available to support CH waste processing.

SIGN-OFF

2.2 WH, ensure WHB is configured for waste handling mode.

SIGN-OFF

2.3 OCA Lid Removal

2.3.1 Remove and dispose of the security seals.

2.3.2 If seal is broken or missing, contact WHE.

2.3.3 Remove the following components to prepare OCA lid for removal:

- OCA lift pocket covers, if not previously removed
- OCV test-port access plug and thermal plug
- OCV vent port access plug and thermal plug
- OCA lock bolts (6)

NOTE

If OCA lid is turned so that the OCV seal test port plug is not accessible, Step 2.3.4 cannot be performed, and Operator must proceed to Step 2.3.5.

2.3.4 Ensure OCV seal test-port plug is fully seated.

2.3.5 Remove OCV vent port cover.

NOTE

Torque on OCV vent port plug may be relieved prior to installation of OCV vent port tool.

2.3.6 Install OCV vent port tool.

2.3.7 Retrieve OCV vent port plug into vent port tool.

2.3.8 Connect vacuum line to vent port tool.

2.3.9 Start vacuum pump and evacuate 3-in to 15-in Hg (mercury) vacuum gauge.

2.3.10 Rotate OCV lock ring to UNLOCKED position.

2.3.11 Stop vacuum pump.

2.3.12 Disconnect vacuum line to vent port tool.

2.3.13 Remove vent port tool and OCV vent port plug.

- 2.3.14 Ensure ACGLF counterweights are at 180 degrees and 000 degrees (± 2 degrees).
- 2.3.15 If not previously completed, attach ACGLF to OCA lid.

CAUTION

To avoid shearing of lid lift pins, load cell reading **MUST NOT** exceed 7,500 lb when weight of ACGLF is zeroed out, or 10,000 lb when weight of ACGLF is included.

NOTE

Radiological Surveys are performed in accordance with WP 12-HP1100.

- 2.3.16 Perform the following:
- **SLOWLY** raise OCA lid above the top of the ICV lid, as directed by RCT.
 - RCT, perform general area gamma dose rate survey around perimeter of TRUPACT as OCA lid is being raised.
- 2.3.17 **IF** the OCA lid does not lift off, **THEN** perform the following:
- [A] Contact WHE.
 - [B] **GO TO** Section 3.0, attempt to remove the lid, **AND** return to Step 2.3.18.

NOTE

At the discretion of the RCT, Step 2.3.18 may be performed after Step 2.3.19. In addition, ICV lid exterior swipes may be performed after Step 2.3.19.

- 2.3.18 RCT, perform contamination swipes of OCA lid interior surface and ICV lid exterior surface.
- 2.3.19 Place OCA lid on storage stand.
- 2.3.20 RCT, monitor swipes for gross levels of activity.

2.4 ICV Lid Removal

- 2.4.1 Ensure ACGLF counterweights are at 180 degrees and 000 degrees (± 2 degrees).
- 2.4.2 If not previously completed, attach ACGLF to ICV lid.
- 2.4.3 Remove ICV vent port cover.
- 2.4.4 Remove the following:
 - ICV outer vent port plug
 - ICV lock bolts (3)
 - ICV seal test-port plug
 - OCV seal test-port plug

WARNING

ICV inner vent port plug **MUST NOT** be removed if torque is relieved prior to installing ICV vent port tool. Plug removal may result in contamination of personnel and area.

NOTE

Torque on ICV inner vent port plug may be relieved prior to installation of ICV vent port tool.

- 2.4.5 Install ICV vent port tool.
- 2.4.6 RCT, install Radiological Assessment Filter (RAF) with TRUPACT number and date into the RAF assembly.
- 2.4.7 Install the RAF assembly onto ICV vent port tool.
- 2.4.8 Connect vacuum hose to RAF assembly.
- 2.4.9 Retrieve ICV inner vent port plug into ICV vent port tool.

CAUTION

Vacuum should not exceed 15-in Hg when attempting to open ICV lid.

- 2.4.10 Start vacuum pump and evacuate 3-in to 15-in Hg vacuum gauge.

- 2.4.11 Rotate ICV lock ring to UNLOCKED position.
- 2.4.12 Stop vacuum pump.
- 2.4.13 Disconnect vacuum line from RAF assembly.
- 2.4.14 Remove RAF assembly from ICV vent port tool.

NOTE

At the discretion of the RCT, Step 2.4.25 may be performed immediately after Step 2.4.15.

- 2.4.15 RCT, perform contamination swipe of RAF assembly quick connect.
- 2.4.16 RCT, monitor swipe and RAF for gross levels of activity.
- 2.4.17 RCT, place filter in a Multi Channel Analyzer (MCA) with no flow, or into an equivalent instrument.
- 2.4.18 RCT, let filter count for at least five minutes.
- 2.4.19 RCT, examine spectrum for any TRU activity.
- 2.4.20 RCT, if there is observable TRU activity, notify WHE/WHM, Radiological Control Engineer/Radiological Control Manager (RCE/RCM), CMRO, and **STOP** waste processing on affected TRUDOCK position(s).

NOTE

Additional RAF samples may be taken as directed by WHM, with RCT and RCE support to determine TRU activity.

- 2.4.21 RCT, record the following on Attachment 2, Radiological Survey Report, Section B, of WP 12-HP1100:
 - Time
 - Pu²³⁹ cpm (counts per minute)
 - Peak channel or peak energy, as applicable

NOTE

In Step 2.4.22 below, the swipes were taken at Step 2.3.18 on OCA lid interior surface and ICV lid exterior surface, and at Step 2.4.15 on RAF quick connect.

2.4.22 RCT, verify activity on swipes and RAF is below acceptable limits.

SIGN-OFF

2.4.23 RCT, ensure continuous air monitor (CAM) is operating.

2.4.24 Remove ICV vent port tool and ICV inner vent port plug.

2.4.25 If not previously completed, install CAM head and vent hood system.

2.4.26 Ensure air flows into vent hood.

CAUTION

To avoid shearing of lid lift pins, load cell reading **MUST NOT** exceed 5,000 lb when weight of ACGLF is zeroed out, or 7,500 lb when weight of ACGLF is included.

NOTE

Gamma dose rate survey performed at Step 2.4.27 will be signed off at Step 2.4.31.

2.4.27 Perform the following:

- **SLOWLY** raise ICV lid to clear ICV body, and hold it above the top of ICV body flange, as directed by RCT.
- RCT, perform general area gamma dose rate survey around perimeter of venthood as ICV lid is being raised.

2.4.28 **IF** ICV lid does not lift off,
THEN perform the following:

[A] Contact WHE.

[B] **GO TO** Section 3.0, attempt to remove the lid, and return to Step 2.4.29.

2.4.29 RCT, perform contamination swipes of ICV lid interior and top of payload assembly.

2.4.30 RCT, monitor swipes for gross levels of activity.

2.4.31 RCT, verify activity on swipes is below acceptable limits.

SIGN-OFF

NOTE

Step 2.4.32 may be performed concurrently with Steps 2.4.33 and 2.4.34.

2.4.32 Remove vent hood system and CAM head.

2.4.33 WHE, **IF** ICV body was backfilled with inert gas for the current shipment,
THEN perform a TRUPACT-II walk-around measurement verifying that the oxygen concentration is >20 percent in the worker breathing zone.

SIGN-OFF or N/A

2.4.34 Place ICV lid on storage stand.

2.4.35 If shipment contains Controlled Waste, record ICV vented date and time on Attachment 4, of WP 08-NT3020.

2.4.36 WHE, for Controlled Waste shipments, ensure the venting time was met **AND** sign and date on Attachment 4, of WP 08-NT3020.

2.5 Unloading Payload Assembly

2.5.1 RCT, perform as applicable, swipes of the guide tubes, connecting devices ratchet straps and accessible areas of payload and ICV.

2.5.2 RCT, monitor swipes for gross levels of activity.

CAUTION

To prevent weight from shifting, Operator must ensure that the two ACGLF counterweights are located at 180 degrees and 000 degrees (± 2 degrees) **BEFORE** lifting the ACGLF or payload, when the payload does not have predetermined counterweight settings.

NOTE

If no predetermined settings are on payload, settings default to 180 degrees/000 degrees (± 2 degrees).

2.5.3 **IF** the payload does not have predetermined counterweight settings,
THEN ensure that the two ACGLF counterweights are at 180 degrees and 000 degrees (± 2 degrees) **BEFORE** lifting ACGLF or payload.

2.5.4 WH, record predetermined settings listed on top of payload, if available.

SIGN-OFF

2.5.5 Attach ACGLF with appropriate legs/adaptor to payload.

2.5.6 Position ACGLF counterweights to predetermined positions as marked on top of payload.

2.5.7 RCT, verify activity on swipes of guide tubes, connecting devices, ratchet straps, and any accessible areas of the payload and ICV, is below acceptable limits.

SIGN-OFF

CAUTION

A facility pallet with an open position, must be staged within crane envelope prior to unloading payload.

NOTE

Steps 2.5.9 through 2.5.14 are performed concurrently while removing the payload assembly.

NOTE

ACGLF tilt sensor indicators should be monitored and the counterweights adjusted to ± 0.5 degrees, as needed.

- 2.5.8 Crane Operator, ensure facility pallet is staged prior to unloading payload.
- 2.5.9 Raise payload assembly slowly.

NOTE

Gamma dose rate survey performed at Step 2.5.10 will be signed off at Step 2.5.27.

- 2.5.10 RCT, perform gamma dose rate survey at 30 centimeters from the waste payload surface.
- 2.5.11 WH, visually inspect payload assembly verifying containers are not damaged.

SIGN-OFF

NOTE

At the discretion of the RCT Step 2.5.12, may be performed after Step 2.5.21.

NOTE

WIPP WWIS/WDS and container ID number verification can be performed during contamination surveys.

- 2.5.12 RCT, perform contamination swipes on areas of payload assembly not previously accessible, such as lower SWB seals, and upper and lower layer of 14-pack drums.

2.5.13 WHT/RCT, **IF** payload assembly is damaged, **THEN** perform the following:

- Notify WHE, WHM, and/or RCT Supervisor.
- Ensure information is accurately documented in the Narrative Logbook.
- Isolate the payload and post in accordance WP 12-HP1500, if necessary.
- Ensure payload is clearly marked so that it is not downloaded without the approval from the Operations and Disposal Manager.
- **GO TO** WP 05-WH1058 and ensure all applicable actions are completed for "Noncompliant Container Response".

NOTE

If a payload has a dunnage assembly, containers are only required to have a dunnage or empty label affixed. Specific dunnage container ID numbers found on the WWIS/WDS Shipment Summary Report are not required to be verified. Dunnage assemblies may be confirmed by the absence of radionuclides and hazardous materials information on the Shipment Summary Report.

2.5.14 Using bar code reader, scan a waste container in each of the payload assemblies.

OR

IF WWIS/WDS bar code reader is **NOT** operational, **THEN** visually verify all accessible payload alpha/numeric container ID against WWIS/WDS Shipment Summary Report.

2.5.15 WH, record appropriate result: payload container alpha/numeric ID matches or does not match the WWIS/WDS. Initial Attachment 1 **AND** notify WHE or designee of the results.

SIGN-OFF

2.5.16 WHE, **IF** WWIS/WDS bar code reader is NOT operational, **THEN** manually enter WWIS/WDS concurrence into WWIS/WDS database.

2.5.17 Notify TE that container alpha/numeric ID matches WWIS/WDS Shipment Summary Report.

- 2.5.18 **IF** the container ID alpha/numeric numbers **DO NOT** match WWIS/WDS Shipment Summary Report, **THEN**, WHE, notify the CMRO, TE, WHM, and Site Environmental Compliance Manager of discrepant load.
- 2.5.19 RCT, perform contamination swipes of payload assembly bottom.
- 2.5.20 Move payload assembly to facility pallet.
- 2.5.21 RCT, perform contamination swipes of ICV interior, if not previously performed in Step 2.5.1.
- 2.5.22 RCT, perform Step 2.5.12 if not previously performed.
- 2.5.23 RCT, monitor swipes for gross levels of activity.

NOTE

The maximum CH surface storage capacity for the shielded storage area is one fully loaded facility pallet, or a maximum waste volume of 9 m³.

- 2.5.24 If placing a facility pallet into the Shielded Storage Room, perform the following:
- [A] Conduct a surface area inspection of the shielded storage room.
 - [B] Document inspection on Attachment 1, Surface CH TRU Mixed Waste Handling Area Preoperational Inspection, of WP 05-WH1101.
- 2.5.25 WH, If waste shipment contains Polychlorinated Biphenyls (PCBs), verify waste containers are labeled with a PCB warning label, circle appropriate result, and initial Attachment 1.
- If label is not present, contact WHE.

SIGN-OFF or N/A

- 2.5.26 **IF** handling SWBs and slip sheet installation is required, **THEN** perform the following:
- [A] Remove ratchet straps.
 - [B] Raise upper SWB.
 - [C] RCT, perform contamination swipes on newly exposed areas of SWB (if applicable).

- [D] Install slip sheet.
- [E] Lower SWB.
- [F] RCT, monitor swipes for gross levels of activity.

2.5.27 RCT, verify activity on swipes of bottom of payload assembly and ICV interior, if not previously performed in Step 2.5.19 and Step 2.5.21 are below acceptable limits, and dose rate measurement is below 200 mrem/hr (gamma plus neutron) at 30 centimeters from waste payload.

SIGN-OFF

2.5.28 RCT, verify activity on swipes of upper and lower areas of payload assembly and newly exposed areas of SWB (if applicable) are below acceptable limits as performed in Step 2.5.12 and Step 2.5.26.

SIGN-OFF

- 2.5.29 Remove guide tubes (if applicable).
- 2.5.30 **IF** dunnage is removed,
THEN RCT:
- [A] Perform contamination swipes of newly exposed area of payload assembly.
 - [B] Monitor swipes for gross levels of activity.
 - [C] Verify activity on swipes is below acceptable limits.

SIGN-OFF or N/A

<p>CAUTION</p> <p>Criticality Safety Administrative Control: Waste stored in the WHB must be no greater than two drums high, two boxes high or a single TDOP.</p>

- 2.5.31 WH, **IF** required to move/stack payloads in the CH Bay,
THEN perform the following:
- [A] When stacking payloads, record required information on Attachment 2 and initial Attachment 1.

- [B] Inspect payloads to be moved for damage.
- [C] Remove tiedown assembly (if necessary).
- [D] Stack payloads per Attachment 2; after completed sign-off on Attachment 1.

SIGN-OFF or N/A

- [E] RCT, perform dose rate survey (gamma and neutron) at 30 centimeters from the waste payload.
- 2.5.32 RCT, if newly exposed area of payload pallet/payload exists, perform the following:
- [A] Contamination swipes of newly exposed area of payload pallet/payload.
 - [B] Monitor swipes for gross levels of activity.
 - [C] Verify activity on swipes is below acceptable limits.

SIGN-OFF or N/A

NOTE

Payload assemblies/containers should be identified for mitigation of volatile organic compounds (VOCs) by the generator site in the shipping papers and/or by marking the containers for mitigation. The marking should identify which filter on each container is to be left open.

- 2.5.33 **IF** payload container(s) are identified as needing mitigation for high VOCs, **THEN GO TO** WP 05-WH1058, perform section on Covering Filters on Assemblies Containing High VOCs, **AND RETURN TO** Step 2.5.34.
- 2.5.34 Secure payload assembly to facility pallet with tie-down assembly.
- 2.5.35 Complete the **Surveillance Data Sheet(s)**, EA04AD3001-SR29, for **LCO 3.5.1, Surveillance Requirement (SR) 4.5.1.1**, as found in WP 04-AD3001.
- 2.5.36 Performers of procedure, enter printed name, signature, date, and initials on Attachment 1.
- 2.5.37 Place Attachment 1 of WP 05-WH1025 with payload.

CAUTION

The following controls are related to frequency and severity of fires. Failure to comply with any of the following controls must be IMMEDIATELY reported to the CMRO.

- When waste is stored in the southwest corner of the CH BAY, diesel powered equipment used in the TMF shall maintain a 15 ft standoff distance from the common wall between the CH BAY and the TMF or a fire watch is posted with the diesel equipment being operated.
- When waste is stored in the northeast corner of the CH BAY, diesel powered equipment used in the RH BAY shall maintain a 15 ft standoff distance from the common wall between the CH BAY and RH BAY or a fire watch is posted with the diesel equipment being operated.
- No more than three pallets of fiberboard slip sheets and one pallet of polyethylene slip sheets shall be stored in the CH BAY. Pallets of slip sheets must be stored at least 15 ft away from waste. No more than one gallon of denatured alcohol may be at each TRUDOCK location. Pallets of slip sheets must not be stacked and a 15 ft distance maintained between each slip sheet pallet.

NOTE

During normal operations, the maximum CH Bay surface storage area (including the Shielded Storage Room) capacity is thirteen (13) fully loaded pallets and four (4) CH Packages at the TRUDOCKs with payloads remaining in the TRUPACT or HalfPACT (with or without lids removed), not to exceed a maximum waste volume of 135.9 m³.

Minimum spacing of 44 inches (1.1 m) must be maintained between loaded facility pallets.

- 2.5.38 Transport loaded facility pallet to CH container storage area, Shielded Storage Room.

OR

IF downloading to the underground (U/G) for emplacement, **THEN** download in accordance with WP 05-WH1025.

- 2.5.39 RCT, once waste is placed in CH Bay storage area, post in accordance with WP 12-HP1500 posting criteria.

NOTE

Performance of this section may require the transport and use of compressed gas cylinders and the performance of associated LCO Surveillances per MWI00073. Failure to complete a SR within its specified frequency WILL constitute a violation of the associated LCO and must be immediately reported to the FSM.

3.0 REMOVING STUCK LIDS WITH NITROGEN OR COMPRESSED AIR

- 3.1 If using nitrogen, submit an Action Request (AR) for maintenance support, prior to transporting or using a compressed gas cylinder.
- 3.2 Perform the following for compressed air or nitrogen:
 - 3.2.1 If not already installed, install vent port tool hand-tight.
 - 3.2.2 Connect Pressure Assembly to quick disconnect on vent port tool (Reference Attachment 4).
 - 3.2.3 Close valve V-1.
 - 3.2.4 Close valve V-2.
 - 3.2.5 Ensure that the supply valve is closed.
 - 3.2.6 Ensure that the back pressure relief valve is fully backed off.
 - 3.2.7 Ensure that the pressure regulator is fully backed off.
 - 3.2.8 Connect supply line and regulator to nitrogen-bottle or compressed air source.
 - 3.2.9 Open supply valve and adjust N₂ or air supply regulator to a maximum of 150 psig.
 - 3.2.10 Adjust R1 to about 2.1 psig.
 - 3.2.11 Adjust R2 until it begins to relieve pressure.
 - 3.2.12 Adjust R1 to fully backed off.
 - 3.2.13 Bleed briefly through V-1.
 - 3.2.14 Adjust R1 to about 1 psig.
- 3.3 Ensure that the counterweights are at 180 degrees and 000 degrees (± 2 degrees).

WARNING

The ICV or OCV should not be pressurized above 2 psi to avoid personnel injury. A loaded ICV **MUST NOT** be pressurized unless precautions are taken to prevent possible contamination when lid is raised.

CAUTION

When lifting ICV lid, load cell reading **MUST NOT** exceed 5,000 lb when weight of ACGLF is zeroed out, **OR** 7,500 lb when weight of ACGLF is included.

CAUTION

When lifting OCV lid, load cell reading **MUST NOT** exceed 7,500 lb when weight of ACGLF is zeroed out, **OR** 10,000 lb when weight of ACGLF is included.

- 3.4 Attempt to lift lid using crane at the slowest rate possible while monitoring load cell.
- 3.5 Perform the following while attempting to lift lid with crane:
 - 3.5.1 Throttle valve V-2, keeping pressure \leq 2 psi.
 - 3.5.2 When lid becomes loose, close V-2.
 - 3.5.3 Close supply valve.
 - 3.5.4 Open V-1 to depressurize assembly.
 - 3.5.5 Disconnect supply line from pressure assembly.
 - 3.5.6 Disconnect pressure assembly from vent port tool.
 - 3.5.7 Disconnect vent port tool and survey tool if applicable.
 - 3.5.8 Disconnect supply line and regulator from nitrogen bottle or compressed air source.
 - 3.5.9 Raise lid as directed by RCT and continue with normal operations.

4.0 WHE REVIEW

4.1 WHE, ensure the following:

- Attachment 1 is completed properly.
- Attachment 2 is completed properly, if applicable.
- Attachment 4, of WP 08-NT3020 is complete, if applicable.

4.2 For Controlled Waste shipments, retain a reference only copy of WP 08-NT3020, Attachment 4 and forward the originals to the TE, if applicable.

4.3 Forward Attachment 1 and, if applicable, Attachment 2 to the Records Coordinator.

4.4 Forward all completed Surveillance Data Sheet(s) and associated documentation to the CMR for review and approval, prior to the end of the shift.

Attachment 1 - CH Waste Processing Data Sheet

Step No.	DESCRIPTION	INITIAL
PREREQUISITE ACTIONS		
1.0	Shipment No.: _____ OCA Body Serial No.: _____	WHE
2.0	Shipping documents validated, CH packages inspected and released for unloading.	WHE
3.0	Shipment received in WWIS/WDS.	WHE
8.0[A]	Oxygen monitor serial number and due date verified.	WHE or N/A
8.0[B]	Oxygen monitor daily calibration and sample pump operational check is complete.	WHE or N/A
PERFORMANCE		
2.1	Adequate WHO staff available.	WH
2.2	WHB is configured for waste handling mode.	WH
2.4.22	Activity on swipes of OCA lid interior, ICV lid exterior, RAF assembly quick connect, and RAF is below acceptable limits.	RCT
2.4.31	Gamma dose rate survey performed and activity on swipes of ICV lid interior and top of payload is below acceptable limits.	RCT
2.4.33	Oxygen concentration is >20 percent in the worker breathing zone.	WHE or N/A
2.5.4	Record predetermined settings: Counterweight #1: _____ Counterweight #2: _____	WH
2.5.7	Activity on swipes of guide tubes, connecting devices, ratchet straps and any accessible areas of the payload and ICV is below acceptable limits.	RCT
2.5.11	Payload inspected for damage.	WH
2.5.15	Payload container alpha/numeric ID MATCHES <input type="checkbox"/> or DOES NOT MATCH <input type="checkbox"/> the WWIS/WDS.	WH
2.5.25	Verified waste shipment container <u>does</u> contain PCBs (warning label applied), or container <u>does not</u> contain PCBs (NA).	WH or N/A
2.5.27	Dose rate measurement is below 200 mrem/hr (gamma plus neutron) at 30 centimeters from waste payload, and activity on swipes of bottom of payload and ICV interior, performed in Steps 2.5.19 and 2.5.21, are below acceptable limits.	RCT
2.5.28	Activity on swipes of upper and lower areas of payload assembly and newly exposed areas of the SWB (if applicable), performed in Steps 2.5.12 and 2.5.28, are below acceptable limits as applicable.	RCT
2.5.30[C]	Activity on swipes is below acceptable limits.	RCT or N/A
2.5.31[D]	Completed Attachment 2. Waste stacked no more than two drums or boxes high on facility pallets.	WH or N/A
2.5.32[C]	Activity on swipes of newly exposed area of payload pallet/payload is below acceptable limits.	RCT or N/A

Attachment 1 - CH Waste Processing Data Sheet

Performers, enter printed name, signature, date, and initials:

/	/	/
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/	/	/
/	/	/

Printed Name	Signature	Date	Initials
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REMARKS: _____

REVIEW/VALIDATION: _____	/	/
WHE (Print Name)	Signature	Date

Attachment 3 - CH Waste Storage Area Capacity

SECTION 1: Projected Volume in CH Bay Storage Area

Total projected volume in CH Bay storage area
Not to exceed 135.9 m³; the equivalent of thirteen (13) fully loaded pallets (including half pallets) and four (4) CH Packages at the TRUDOCKs, with or with out lids removed and payloads remaining in the TRUPACT or HalfPACT.

SECTION 2: Projected Volume in Shielded Storage Area

NOTE

This does **NOT** increase the CH Bay Storage Area by one pallet.

Total projected volume in shielded storage area
(Not to exceed 9.0 m³; the equivalent of one fully loaded pallet.)

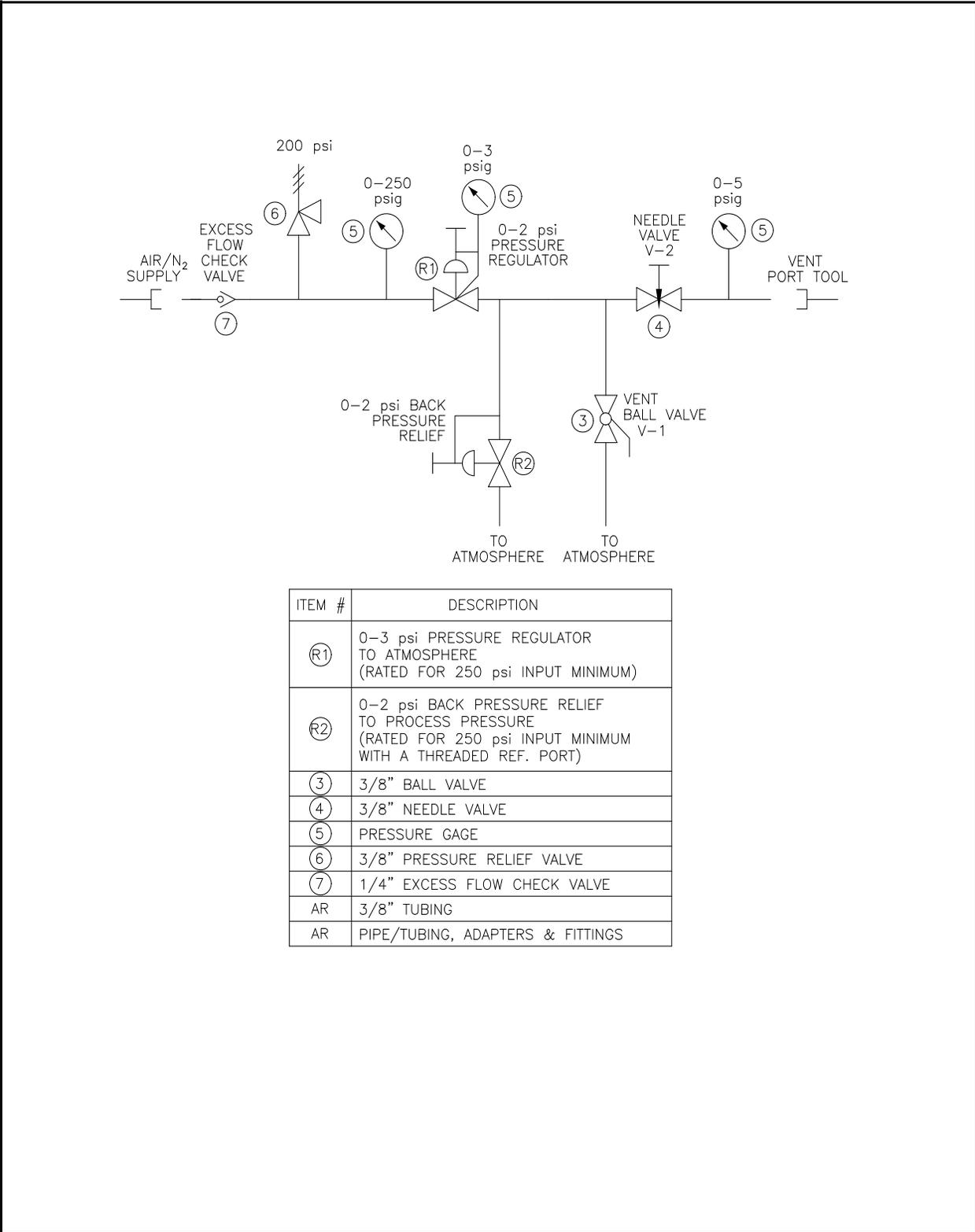
SECTION 3: Projected Volume in Surge Storage Area

NOTE

Waste Operations Manager approval required prior to Surge Storage Area use. Volume is based on Attachment M-1 of the HWFP.

Total projected volume in Surge Storage Area not to exceed 45.3 m³
(The equivalent of five fully loaded pallets.)

Attachment 4 - Flow Diagram for ICV/OCA Lid Pressurization Assembly



ITEM #	DESCRIPTION
(R1)	0-3 psi PRESSURE REGULATOR TO ATMOSPHERE (RATED FOR 250 psi INPUT MINIMUM)
(R2)	0-2 psi BACK PRESSURE RELIEF TO PROCESS PRESSURE (RATED FOR 250 psi INPUT MINIMUM WITH A THREADED REF. PORT)
(3)	3/8" BALL VALVE
(4)	3/8" NEEDLE VALVE
(5)	PRESSURE GAGE
(6)	3/8" PRESSURE RELIEF VALVE
(7)	1/4" EXCESS FLOW CHECK VALVE
AR	3/8" TUBING
AR	PIPE/TUBING, ADAPTERS & FITTINGS