Sample Transfer Truck Operation

Tank Farm Plant Operating Procedure

SAMPLING

USQ #TF-17-0854-D, Rev 0

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1.0 PURPOSE AND SCOPE

1.1 Purpose

This procedure provides instructions necessary for onsite transportation of samples in PIG Transport System. This procedure implements Defense in Depth controls as described in RPP-13303, *Tank Farms Documented Safety Analysis*, 3.3.2.3.2-2, *Other Defense-in Depth Features*.

1.2 Scope

1.2.1 This procedure applies to the following:
- Loading and transporting samples using PIG Shipping Container System
- Responding to a road accident during transport.

1.2.2 This procedure can be performed in multiple locations. A work area and/or location specific hazard analysis must be performed prior to starting the activity per TFC-ESHQ-S_SAF-C-02.
2.0 INFORMATION

2.1 Terms and Definitions

- ORRSR - Onsite Routine Radioactive Shipment Record
- RSR - Radioactive Shipment Record

2.2 General Information

2.2.1 The PIG Shipping Container provides the containment boundary for PIG shipments. Each system containment includes the container lid, container body and associated O-ring(s).

2.2.2 The 208-L (55-gal) drum provides a secondary containment boundary, for the PIG, with its gasket and secured lid.

2.2.3 The configuration for the bottom section of inner spacer inside the 55-gallon drum is one cavity sized to fit the PIG Shipping Container.

2.2.4 Some activities or components in this procedure have been identified by HNF-SD-TP-SARP-001 as "important to safety" with a Quality Level (QL) A-3 or QL B-3. Steps or checklist items containing these activities or components are identified with (HNF-SD-TP-SARP-001).
3.0 PRECAUTIONS AND LIMITATIONS

3.1 Personnel Safety

3.1.1 Use of overhead hoist or two people is required to remove/insert 208-L (55 gal) drum spacer.

3.1.2 Protective footwear, safety glasses, hard hats, and leather gloves are required during performance of this procedure.

3.1.3 The Sample Truck shall be positioned on level terrain and personnel shall be aware of pinch points.

3.2 Radiation and Contamination Control

3.2.1 This procedure requires the presence of a Health Physics Technician (HPT) to verify contamination and dose rate levels.

3.2.2 Personnel handling radioactive material are required to be signed in on an appropriate RWP.

3.2.3 When this procedure is worked in radiological areas, an approved radiological work permit (RWP) is required. If radiological conditions or work performed falls outside the scope of the RWP, all work activities must be discontinued until a new or revised RWP has been issued in accordance with TFC-ESHQ-RP_RWP-C-03.
3.3 Limits

HNF-SD-TP-SARP-001, Safety Analysis Report for Packaging (Onsite) Sample PIG Transport System

Section 4.0 Transport System

Transport shall not take place under icy conditions unless roads have been plowed and sanded, or when visibility is seriously impaired by fog, rain, snow or dust (less than one mile visibility).

Seal times for the PIG Shipping Container are as follows:
- 485 h for the 0.125 L (Sample PIG) payload
- 89 h for the 0.5 L (Steel PIG) payload.

For inter-area transport (between 200 area and 300 area) the transfer route shall be controlled to preclude public access during the transfer.

Section 5.2 Packaging for Reuse

   Table A5-4 Quality Level A-3 Component Inspections
   Table A5-5 Quality Level B-3 Component Inspections
4.0 PREREQUISITES

4.1 Special Tools, Equipment, and Supplies

The following supplies may be needed to perform this procedure:

- Two-way radio or cellular phone
- Torque wrench, calibrated
- Socket, $\frac{1}{8}$ in., $\frac{1}{2}$ in. sq. drive
- Socket, 1 ¼ in.
- Open end wrench, $\frac{1}{8}$ in.
- Triangular reflectors
- Lint-free cloths
- TERI Reinforced Towels (Engineer should be contacted for equivalent material if TERI reinforced towels are not available.)
- First Aid kit
- RSR or ORRSR, as applicable
- Chain of custody, as required.

4.2 Field Preparation

4.2.1 ENSURE a work area and/or a location specific hazards analysis has been performed per TFC-ESHQ-S-SAF-C-02.
5.0 PROCEDURE

5.1 Inspect Sample Transfer Truck

NOTE - An inspection is required at the beginning of each shift when used or whenever the truck is turned over to a new driver.

5.1.1 INSPECT Sample Transfer Truck AND DOCUMENT results on Checklist 1.

5.1.2 IF any deficiencies are noted, CONTACT FWS.

5.1.3 IF sample truck requires refueling, ENSURE that there are no samples in N-55 Overpacks before refueling.

5.1.4 FORWARD completed Checklist 1 to Waste Tank Sampling for record retention.
5.2 Inspect and Transport Empty Containers

5.2.1 OBTAIN RSR or ORRSR from Authorized Shipper or FWS.

5.2.2 WHEN transporting a PIG shipping container, ENSURE packaging is free of obvious defects.

NOTE - A survey report may be used to confirm empty status.

5.2.3 VERIFY packaging is empty.

5.2.4 COMPLETE radiological survey of package as follows:

5.2.4.1 ENSURE Radioactive Material Tag is complete and attached.

5.2.4.2 ENSURE Radiological Levels are within limits stated on RSR or ORRSR.

5.2.4.3 IF Radiological Levels are not within limits stated on RSR or ORRSR, NOTIFY Dispatcher or FWS. (HNF-SD-TP-SARP-001)

5.2.4.4 INITIAL OR SIGN RSR or ORRSR.

5.2.5 USE overhead hoist to load empty packaging.

5.2.6 STAGE PIG truck at Tank Farm gate.

NOTE - Driver may sign as receiver for WTS only.

5.2.7 REQUEST receiver to sign RSR or ORRSR.
5.3 **Inspect N-55 Overpack and 208 L (55 gal) Drum**

5.3.1 **ENSURE** the 208-L (55-gal) drum has no broken welds or dents that would prevent proper lid closure.

5.3.2 **ENSURE** N-55 Overpack has no missing rivets, broken welds or dents that would prevent proper lid closure.

5.3.3 **ENSURE** N-55 Overpack toggle clamps move freely, tiedowns show no signs of wear and lifting fixture has no broken welds.

5.3.4 **ENSURE** N-55 Overpack gasket is free of defects.

5.3.5 **ENSURE** 208-L (55-gal) drum is in N-55 Overpack and drum inner spacer is intact.

5.3.6 **ENSURE** 208-L (55-gal) drum lid, lock-ring/bolt, bolt threads and drum gasket are free of defects.

5.3.7 **ENSURE** correct inner spacer(s) (PIG) is used.
5.4 Load and Transport Samples

5.4.1 COMPLETE radiological survey of package AND ENSURE Radioactive Material Tag is complete and attached to shipping container.

5.4.2 USE overhead hoist or other means AND LOAD shipping container into N-55 Overpack and 208-L (55-gal).

5.4.3 POSITION top of inner spacer over shipping container.

5.4.4 POSITION drum lid, including NEOZAN gasket, lock-ring and bolt on 208-L (55-gal) drum. (HNF-SD-TP-SARP-001)

5.4.5 TORQUE lock-ring and bolt to 40 (35-45) ft-lbs while hammer tapping lock-ring with rubber mallet. (HNF-SD-TP-SARP-001)

5.4.6 POSITION top of N-55 Overpack on bottom half. (HNF-SD-TP-SARP-001)

5.4.7 ALIGN four toggle clamps AND ADJUST T-bar on clamps such that clamps may be closed with minimum force. (HNF-SD-TP-SARP-001)

5.4.8 CLOSE clamps.

5.4.9 IF not previously installed on shipping container, INSTALL a tamper indicating Tape/Seal on N-55 Overpack. (HNF-SD-TP-SARP-001)

5.4.10 SECURE N-55 Overpack to Sample Truck using tiedown straps. (HNF-SD-TP-SARP-001)

5.4.11 OBTAIN RSR or ORRSR from Authorized shipper.

5.4.12 ENSURE removable contamination on external surfaces of N-55 Overpack does not exceed limits identified on RSR or ORRSR.

5.4.13 IF dose rate on any point of N-55 Overpack surface exceeds limits identified on RSR or ORRSR, CONTACT authorized shipper. (HNF-SD-TP-SARP-001)
5.4 Load and Transport Samples (Cont.)

5.4.14 COMPLETE radiological survey of package AND ENSURE Radioactive Material Tag is complete and attached.

5.4.15 ENSURE labels and markings on N-55 Overpack and placards are as specified by the certified shipper AND INITIAL OR SIGN RSR or ORRSR. (HNF-SD-TP-SARP-001)

NOTE - Refer to TO-080-800, Data Sheet 2 for initial seal time of Pig Shipping Container when shipping tank samples.

5.4.16 TRANSPORT samples to door of receiving facility within 24 hours of receipt or as determined by venting requirements. (See Section 3.2.3 for limits) (HNF-SD-TP-SARP-001)

5.4.17 IF sample cannot be delivered within time specified, OR

IF the container has not been vented within the previous 99 hours, CONTACT Dispatcher/FWS for instruction on where to place the truck or to initiate a work package or procedure to vent container.
5.5 Deliver Samples to Receiving Facility

5.5.1 NOTIFY Receiving Facility and Dispatcher or FWS upon arrival.

5.5.2 ENSURE integrity of tamper indicating Tape or Seal on N-55 Overpack. (HNF-SD-TP-SARP-001)

5.5.3 SURVEY exterior of N-55 Overpack.

5.5.4 IF external contamination limits are exceeded, NOTIFY Dispatcher or FWS. (HNF-SD-TP-SARP-001)

5.5.5 REMOVE tamper indicating Tape/Seal from N-55 Overpack.

5.5.6 SURVEY interior of N-55 Overpack, 208-L (55-gal) drum lid, top inner spacer prior to removing PIG Shipping Container as each area is exposed. (HNF-SD-TP-SARP-001)

5.5.7 REMOVE tie downs AND UNLOCK toggle pins.

5.5.8 OPEN top half of N-55 Overpack to expose inner packaging.

5.5.9 REMOVE 208-L (55-gal) drum lid and top inner spacer.

5.5.10 SURVEY Shipping containers during their removal AND ENSURE levels are within limits identified on RSR or ORRSR. (HNF-SD-TP-SARP-001)

5.5.11 USE overhead hoist or other means AND REMOVE Sample PIG Shipping Container from 208-L (55-gal) drum. (HNF-SD-TP-SARP-001)

5.5.12 IF Radiological Levels are not within limits, NOTIFY Dispatcher or FWS.

5.5.13 IF container has leaked, NOTIFY Dispatcher or FWS and Central Shift Manager.

5.5.14 USE overhead hoist or other means AND MOVE PIG Shipping Containers into facility.

5.5.15 IF customer has empty containers to return, PERFORM Steps 5.2.1 through 5.2.5.
5.6 Emergency Response

5.6.1 SECURE area AND PLACE reflectors to warn other drivers.

5.6.2 NOTIFY WTS dispatcher or FWS by radio or phone of any situation.

5.6.3 MAINTAIN visual contact with truck until relieved by Authorized Shipper or FWS.

5.6.4 PROVIDE assistance.
5.7 Records

5.7.1 **PERFORM** the following for records identified within this procedure.

5.7.1.1 **RECORD** the number of times the record was generated in applicable column

**OR**

**PLACE** a check mark (✓) in the N/A column.

5.7.1.2 **SUBMIT** the package to the FWS/OE/Shift Manager.

<table>
<thead>
<tr>
<th>Records Submittal Checklist</th>
<th>Number of times completed</th>
<th>N/A (✓)</th>
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<tbody>
<tr>
<td>Checklists</td>
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<tr>
<td>Checklist 1 - Sample Transfer Truck Inspection Checklist</td>
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</tr>
<tr>
<td>FWS/OE/Shift Manager <strong>SEND</strong> the completed records to the Central Shift Office for records retention.</td>
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<tr>
<td>___________________________ / ___________________________ / ___________________________</td>
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<tr>
<td>Signature</td>
<td>Print (First and Last)</td>
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<tr>
<td>FWS/OE/Shift Manager</td>
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The record custodian identified in the Company Level Records Inventory and Disposition Schedule (RIDS) is responsible for record retention in accordance with TFC-BSM-IRM_DC-C-02.
<table>
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<th>Component</th>
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<th>Unsat</th>
<th>Comments</th>
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<td>Tires and Rims</td>
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<tr>
<td>Oil</td>
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<tr>
<td>Coolant</td>
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<td>Running Lights/Flashing Amber Lights Light(s)</td>
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<td>Steering Mechanism</td>
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<tr>
<td>Horn</td>
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<tr>
<td>Hoist load chains</td>
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<tr>
<td>Hoist</td>
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<tr>
<td>Hoist/chain motion (i.e. no binding) vibration, etc.</td>
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<tr>
<td>Reflector Triangle</td>
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<tr>
<td>Emergency Flashing Lights</td>
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</tbody>
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Signature                                                                 Print (First and Last) Date