Accept Waste Containers from Other Facilities

Tank Farm Plant Operating Procedure

Effluent Treatment Facility

USQ Not Required – ETF is a < Hazard Category 3 Radiological Facility

<table>
<thead>
<tr>
<th>Rev/Mod</th>
<th>Release Date</th>
<th>Justification</th>
<th>Summary of Changes</th>
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<tr>
<td>A-3</td>
<td>11/01/2018</td>
<td>Changes identified from Periodic Review</td>
<td>Added flexibility statement. Added step to empty waste from catch container into Sump 1 or Sump 2. Clarified information in purpose and scope section.</td>
</tr>
<tr>
<td>A-2</td>
<td>07/17/2018</td>
<td>ETF Procedure Formatting</td>
<td>Updated the location of reference to log book, included waste site form, and modified the records section to comply with the Procedures standard.</td>
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<tr>
<td>A-1</td>
<td>12/12/2016</td>
<td>Inconsequential change</td>
<td>Update records section.</td>
</tr>
</tbody>
</table>

Table of Contents

1.0 PURPOSE AND SCOPE ......................................................................................................................... 2
   1.1 Purpose .................................................................................................................................................. 2
   1.2 Scope .................................................................................................................................................... 2

2.0 INFORMATION ........................................................................................................................................... 2
   2.1 Terms and Definitions ............................................................................................................................ 2

3.0 PRECAUTIONS AND LIMITATIONS ...................................................................................................... 3
   3.1 Personnel Safety ..................................................................................................................................... 3
   3.2 Radiation and Contamination Control .................................................................................................... 3
   3.3 Environmental Compliance ..................................................................................................................... 3
   3.4 Limits ..................................................................................................................................................... 3

4.0 PREREQUISITES ......................................................................................................................................... 4
   4.1 Special Tools, Equipment, and Supplies ................................................................................................. 4
   4.2 Performance Documents .......................................................................................................................... 4
   4.3 Field Preparations ................................................................................................................................... 5

5.0 PROCEDURE .............................................................................................................................................. 6
   5.1 Unload Containers and Transfer into 2025E Building ............................................................................. 6
   5.2 Transfer Container Contents to Sump 1 .................................................................................................. 9
   5.3 Add Rad Waste to Sump Tanks Using Pogo Pump ................................................................................. 12
   5.4 Add Rad Waste to Sump Tanks Using Flexible Impeller Pump ................................................................. 15
   5.5 Records .................................................................................................................................................. 20
Accept Waste Containers from Other Facilities

1.0 PURPOSE AND SCOPE

1.1 Purpose

This procedure provides instructions for the receipt and storage of low-level radioactive, hazardous/dangerous, or mixed waste solutions in containers from other facilities for processing at ETF.

1.2 Scope

This procedure involves the four classifications of waste at ETF:

- LLMW
- Hazardous/Dangerous waste
- Non-regulated waste (not radioactive)
- LLW.

This procedure does not provide instructions for operation of waste container storage/accumulation areas at ETF and LERF. Refer to ETF-60K-001, Operate Waste Storage Areas, for management of these wastes.

The procedure does not provide instructions for accepting tanker trucks. Refer to ETF-59A-001, Load in West Bay Operation, or ETF-59A-003, Load-In East Bay Operation.

This procedure also does not apply to the acceptance or storage of powder waste drums from Thin Film Dryer Operations. Refer to ETF-80C-001, Drum Handling System Operation, for management of these wastes.

2.0 INFORMATION

2.1 Terms and Definitions

- LLMW – Low-Level Mixed Waste
- LLW – Low-Level Waste
- SWITS – Solid Waste Information and Tracking System.
3.0 PRECAUTIONS AND LIMITATIONS

3.1 Personnel Safety

3.1.1 Heavier containers/drums are to be moved using a forklift or other approved lifting device.

3.1.2 Personnel handling waste containers shall use caution to avoid injury from excessive weight.

3.2 Radiation and Contamination Control

3.2.1 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 Environmental Compliance

3.3.1 In the event of a spill/leak/release, notify the SOM/FWS and respond per ETF-ERP-85B-003, Emergency Spill or Release at ETF.

3.4 Limits

3.4.1 A 36-inch separation is required between aisles of containers holding dangerous waste. Drum rows may be a maximum of two drums wide.
4.0 PREREQUISITES

4.1 Special Tools, Equipment, and Supplies

The following supplies may be needed to perform this procedure:

- Portable, two-way radio
- Permanent, black, ink markers (e.g., Sharpie©)
- Approved drum cart or fork-lift truck
- Leather gloves
- Steel-toed shoes, or equivalent
- Personal protective equipment (as specified by process memo)
- Waste containers to be emptied (as specified by process memo)
- Spill containment materials and absorbent rags
- Peristaltic sampling pump (LERF sample pump)
- Silicone peristaltic pump tube (process memo may specify alternative material for tubing)
- Stainless-steel tubing to connect to pump suction hose, if desired
- Plastic bags and bucket with flush water.

4.2 Performance Documents

The following documents may be needed to perform this procedure:

- HNF-5183, Tank Farm Radiological Control Manual
- ETF-20B-001, Sump Tank/Pump System Operation
- ETF-65D-003, Package Waste
- TFC-OPS-OPER-C-17, Operating Logbooks
- Process memo.
4.3 Field Preparations

4.3.1 CHECK process memo specifies the following information at a minimum:
- Job Hazards Analysis has been performed on process memo
- Identified containers to be emptied into the sump
- Information regarding container contents and associated hazards
- Special personal protective equipment or handling requirements
- When to perform transfer of container(s) to sump
- Sump rinse and pump-down requirements
- Disposition of material waste generated during activity.

4.3.2 ENSURE the following resources are available:
- Operable, portable eyewash units
- Power for sampling pump
- HPT assistance.
5.0 PROCEDURE

NOTE - Sections 5.1 through 5.4 may be worked concurrently, independently, in parallel, or in any logical order.

5.1 Unload Containers and Transfer into 2025E Building

5.1.1 INSPECT shipping documents to verify appropriate papers are present.

5.1.2 IF shipping documents are missing or incomplete, NOTIFY SOM to determine whether to proceed.

5.1.3 REQUEST HPT perform dose and contamination survey of vehicle and containers.

5.1.4 ENSURE container lids are secured for unloading.

5.1.5 INSPECT containers for:
- Leaks or punctures
- Excessive corrosion
- Pressurization (bulging containers or drum lids, sounds of gas release, etc.)
- Loose debris
- Chemicals or residue on outside of containers
- Other indications of loss of containment or equipment failure.

5.1.6 BEFORE use, INSPECT filled drum storage pallet for the following:
- Cracks
- Tears
- Breaks
- Gouges
- Deformities.

5.1.7 IF pallet is damaged, REMOVE pallet from service AND DISPOSE of appropriately.
5.1 Unload Containers and Transfer into 2025E Building (Cont.)

5.1.8 **INSPECT** waste containers to verify the container has container IDs that match shipping papers AND

**FOR** the following appropriate markings:
- If container is for hazardous waste or LLMW, the container must have an EPA hazardous waste sticker
- If container is for hazardous waste or LLMW, the container must have a major risks marking (e.g., flammable, corrosive, F-listed, toxic, persistent, etc.)
- If container is for LLW or LLMW, the container must have a “Radioactive Material” sticker
- If container is for waste that is not hazardous and not radioactive, the container must have a non-regulated waste sticker
- If the container is for liquids, the container may require orientation arrows or “This End Up” markings.

5.1.9 **IF** the appropriate markings are missing or incomplete, **NOTIFY** SOM to determine whether to proceed.

5.1.10 **NOTIFY** Control Room AND

**OPEN** access door to Process Area.

5.1.11 **TRANSFER** containers to staging area for receipt and HPT survey as instructed by SOM.

5.1.12 **POST** area per HPT instructions.

5.1.13 **IF** specified by SOM, **PLACE** container in overpack (secondary containment).

5.1.14 **RECEIVE** shipment by signing as receiver on one or more of the following shipping documents:
- Onsite Routine Radioactive Shipment Record (Blue Card) (A-6000-528)
- Radioactive Shipment Record form (A-6003-214.1)
- Uniform Hazardous Waste Manifest
- Other approved shipping documents.
5.1 Unload Containers and Transfer into 2025E Building (Cont.)

5.1.15 REQUEST HPT perform contamination survey of empty truck or truck trailer.

5.1.16 IF contamination is detected, NOTIFY SOM and RadCon management to determine actions required.

5.1.17 REQUEST HPT perform contamination and dose rate surveys of individual containers, per one of the following:
- Applicable survey plan
- Process memo
- Procedure.

5.1.18 IF removable contamination exceeds levels in HNF-5183,

   OR

   IF container dose rate exceeds value given on the container's label, NOTIFY SOM and RadCon management to determine actions required.

5.1.19 MOVE drums from staging area to container storage room or process floor after surveys are complete.

5.1.20 RETURN shipping documentation to SOM.
5.2 Transfer Container Contents to Sump 1

5.2.1 ENSURE VOG system is in OPERATION.

5.2.2 STAGE materials near Sump 1.

5.2.3 MONITOR Sump 1 liquid level during filling to prevent overflow.

5.2.4 ENSURE Sump 1 level is greater than 50% or level specified by process memo.

5.2.5 ADD water via Sump 1 sprays if necessary per ETF-20B-001.

5.2.6 IF container is small or contains small amount of waste, GO TO step 5.2.19 at direction of SOM.

5.2.7 INSTALL pump tubing per pump manufacturer’s instructions.

5.2.8 DON PPE as specified by process memo/RWP.

NOTE - HPT surveys will be performed in accordance with applicable RWP.

5.2.9 REQUEST HPT survey.

5.2.10 PLACE absorbent material on floor next to Sump 1 and around Sump 1 view port.

5.2.11 PLACE container to be emptied onto absorbent material to catch drips.

5.2.12 PLACE pump discharge tubing end into Sump 1 view port hatch.

5.2.13 REMOVE cap on container AND

INSERT suction end of pump tubing (with/without stainless-tubing attachment, as deemed necessary) into container.

5.2.14 FULLY TURN pump flow-rate knob counter-clockwise.

5.2.15 POSITION pump switch to forward.

5.2.16 ADJUST pump flow rate, as required.
5.2 Transfer Container Contents to Sump 1 (Cont.)

**Special Instructions**

A container or inner liner is empty when all wastes that can be removed using common practices (e.g., pouring, pumping, aspirating, etc.) have been taken out, and no more than one inch remains at the bottom; or, the volume of remaining waste is $\leq 3\%$ of the container’s total capacity; or if the container’s total capacity is $> 100$ gallons, the volume of remaining waste is no more than $0.3\%$ of total capacity (WAC-173-303-160).

5.2.17 WHEN container is empty, POSITION pump switch to OFF.

5.2.18 REMOVE tubing from container.

5.2.19 IF container still has a small heel of liquid in it, POUR heel down Sump 1 hatch or drain funnel, as instructed by SOM/process memo with assistance from HPT.

5.2.20 IF container has greater than one inch of material remaining after the emptying process (i.e., the container is not considered empty), PERFORM the following:

5.2.20.1 NOTIFY SOM.

5.2.20.2 LEAVE labels intact.

5.2.20.3 REINSTALL lid.

5.2.20.4 SET container aside.

5.2.21 REPLACE lid on container.

5.2.22 MARK/LABEL empty drums as follows:

5.2.22.1 REMOVE hazardous waste (yellow sticker) label from wastewater drum.

5.2.22.2 REMOVE Class 9 label, “Non-DOT Radioactive” and any existing weight stickers.

5.2.22.3 MARK drum(s) “EMPTY.”

5.2.22.4 PLACE a “Radioactive Material” sticker on the drum if one is not present.
Accept Waste Containers from Other Facilities

5.2 Transfer Container Contents to Sump 1 (Cont.)

5.2.23 **REPEAT** steps 5.2.11 through 5.2.22 as necessary for additional containers.

5.2.24 **FLUSH** pump tubing by pumping (one- to two-gallon) bucket with flush water into Sump 1.

5.2.25 **DISCONNECT** pump power.

5.2.26 **REMOVE** tubing from pump.

5.2.27 **DISCARD** pump tubing, absorbent material, and other waste as instructed by SOM as follows:

5.2.27.1 **PLACE** water works into a plastic bag.

5.2.27.2 **ADD** pump tubing, absorbent material, and any other secondary waste generated from transfer to the bag.

5.2.27.3 **TAPE** bag closed and add to waste container.

5.2.27.4 **DOCUMENT** items added to waste container on the Inventory Sheet in accordance with ETF-65D-003 (Site Form A-6007-332, ETF Waste Container Inventory Sheet).

5.2.27.5 **WHEN** container is 90% full, **NOTIFY** Waste Technical Services.

5.2.28 **RINSE AND PUMP DOWN** Sump 1 contents in compliance with process memo and ETF-20B-001.
5.3 Add Rad Waste to Sump Tanks Using Pogo Pump

5.3.1 SELECT receiving sump.

5.3.2 ENSURE VOG System is in OPERATION.

5.3.3 PUMP the sump down to a minimum level.

5.3.4 PERFORM sump tank washdown per ETF-20B-001.

5.3.5 PUMP the sump down to a minimum level per SOM direction.

Special Instructions

Minimum PPE required by IH for the transfer of customer waste drums to the sump is as follows:

- Laboratory coat
- Safety glasses with side shields
- 3-mil nitrile gloves.

5.3.6 DON PPE as instructed in appropriate RWP and as required by IH.

NOTE - HPT surveys will be performed in accordance with applicable RWP.

5.3.7 REQUEST HPT survey.

5.3.8 CHECK that there is enough room in the SWRT or surge tanks to hold volume of waste drums to be transferred to sump.

5.3.9 CLOSE the following valves:

- 80E-020
- 80E-021
- 80E-022.

5.3.10 ENSURE drum pump toggle switch OFF.

5.3.11 CONNECT hose between pogo pump AND

ATTACH other end to sump line behind Polisher C at either hose connection point available.

5.3.12 OPEN valve 80E-019.

5.3.13 OPEN (80E-020) [80E-021] based on hose connection point chosen.
5.3  **Add Rad Waste to Sump Tanks Using Pogo Pump (Cont.)**

5.3.14  **CONNECT** power line of drum pump to electrical outlet.

5.3.15  **ENSURE** drum vent is OPEN.

5.3.16  **INSERT** drum pump suction pipe in drum pumpout hole of waste drum.

5.3.17  **MONITOR** sump liquid level during filling to prevent overflow.

5.3.18  **PLACE** drum pump toggle switch ON.

5.3.19  **AFTER** liquid level in drum drops below pump suction, **TILT** drum to allow for as much liquid as possible to be pumped.

5.3.20  **PLACE** drum toggle switch to OFF.

5.3.21  **REPLACE** emptied customer waste drum with new one.

5.3.22  **REPEAT** steps 5.3.1 through 5.3.21 for remainder of customer waste drums.

5.3.23  **FLUSH** pump/transfer hose with about \( \frac{1}{3} \) of a 55-gallon drum of water.

5.3.24  **PUMP** sump down to a minimum level.

5.3.25  **PERFORM** sump tank washdown per ETF-20B-001.

5.3.26  **CLOSE** the following valves:

- 80E-019
- 80E-020
- 80E-021.

5.3.27  **UNPLUG** drum pump from electrical outlet.

5.3.28  **DISCONNECT** hose between pogo pump and sump addition line.

5.3.29  **PLACE** camlock plugs/caps on all camlock fittings on the following:

- Pump
- Transfer hoses
- Sump addition line.
Accept Waste Containers from Other Facilities

5.3 Add Rad Waste to Sump Tanks Using Pogo Pump (Cont.)

Special Instructions

A container or inner liner is considered empty when all wastes that can be removed using common practices (e.g., pouring, pumping, aspirating, etc.) have been taken out, and no more than one inch remains at the bottom; or, the volume of remaining waste is ≤ 3% of the container’s total capacity; or if the container’s total capacity is > 100 gallons, the volume of remaining waste is no more than 0.3% of total capacity (WAC-173-303-160).

An “EMPTY” sticker may be used for the required marking, but a DOT “Empty” label shall not be used.

5.3.30 MARK/LABEL empty drums as follows:

5.3.30.1 REMOVE hazardous waste (yellow sticker) label from wastewater drum.

5.3.30.2 REMOVE Class 9 label, “Non-DOT Radioactive” and any existing weight stickers.

5.3.30.3 MARK drum(s) “EMPTY.”

5.3.30.4 PLACE a “Radioactive Material” sticker on the drum if one is not present.

5.3.31 IF container has greater than one inch of material remaining after the emptying process (i.e., the container is not considered empty), PERFORM the following:

5.3.31.1 NOTIFY SOM.

5.3.31.2 LEAVE labels intact.

5.3.31.3 REINSTALL lid.

5.3.31.4 SET container aside.

5.3.32 NOTIFY CRO the package identification number(s) for the emptied drum(s) for recording on process memo.

5.3.33 NOTIFY Waste Technical Services with specific drum numbers that were emptied for their status update in SWITS.
5.4 Add Rad Waste to Sump Tanks Using Flexible Impeller Pump

5.4.1 SELECT receiving sump.
5.4.2 ENSURE VOG System is in OPERATION.
5.4.3 PUMP sump down to minimum level.
5.4.4 PERFORM sump tank washdown per ETF-20B-001.
5.4.5 PUMP sump down to a minimum level per SOM direction.

**Special Instructions**

Minimum PPE required by IH for the transfer of customer waste drums to the sump is as follows:
- Laboratory coat
- Safety glasses with side shields
- 3-mil nitrile gloves.

5.4.6 DON PPE as instructed in appropriate RWP and as required by IH.

**NOTE** - HPT surveys will be performed in accordance with applicable RWP.

5.4.7 REQUEST HPT survey.
5.4.8 CHECK there is enough room in the SWRT or surge tanks to hold volume of waste drums to be transferred to sump.

5.4.9 CLOSE the following valves:
- 80E-020
- 80E-021
- 80E-022.

5.4.10 ATTACH transfer hose to one side of waste transfer pump AND PLACE other to sump line behind Polisher C at either hose connection point available.

5.4.11 ATTACH other transfer hose to other side of waste transfer pump and to drum pumping tool.

5.4.12 OPEN valve 80E-019.

5.4.13 OPEN (80E-020) [80E-021] based on hose connection point chosen.
5.4 Add Rad Waste to Sump Tanks Using Flexible Impeller Pump (Cont.)

5.4.14 ENSURE drum pump switch is in the 0 position.

5.4.15 ENSURE switch on outlet is OFF.

NOTE - Power plug is a twist-lock plug.

5.4.16 CONNECT power cord of waste transfer pump to electrical outlet.

5.4.17 ENSURE drum pumping tool valve DR-1 is OPEN.

**Special Instructions**

The waste transfer pump is capable of pumping in either direction depending on the switch direction. There are arrows above the 1 and 2 on the waste transfer pump switch showing which way the pump will pump when the switch is in that position.

On the pump head of the waste transfer pump is a valve that will bypass the pump itself. The valve is OPEN (i.e., pump bypassed) when the handle is parallel to the pump head. The valve is CLOSED (i.e., pump not bypassed) when the handle is perpendicular to the pump head.

5.4.18 ENSURE bypass valve on waste transfer pump head is CLOSED (not bypassed).

5.4.19 ENSURE drum vent is OPEN.

5.4.20 INSERT drum pumping tool into drum pumpout hole of waste drum.

5.4.21 MONITOR sump liquid level during filling to prevent overflow.

5.4.22 TURN switch on outlet to ON.
5.4 Add Rad Waste to Sump Tanks Using Flexible Impeller Pump (Cont.)

NOTE - Occasionally the pump will not start when the switch on the outlet is turned ON. This will occur when the flexible impeller becomes bound up in the pump head. Usually the flexible impeller can be freed by reversing the flow direction and bumping (quickly turning ON then OFF) the pump.

5.4.23 IF pump does not start, TURN switch on outlet to OFF AND

PERFORM the following:

5.4.23.1 PLACE waste transfer pump to opposite direction setting to reverse flow.

5.4.23.2 QUICKLY TURN pump ON and OFF.

5.4.23.3 IF pump starts, GO TO step 5.4.24.

5.4.23.4 IF pump does not start, CONTACT SOM.

5.4.24 PLACE waste transfer pump to either 1 or 2 depending on which direction the pump is to pump.

5.4.25 AFTER liquid level in drum drops below pump suction, TILT drum to allow for as much liquid as possible to be pumped AND

PLACE the waste transfer switch to 0.

5.4.26 REPLACE emptied customer waste drum with new one.

5.4.27 REPEAT steps 5.4.19 through 5.4.26 for remainder of waste drums.

5.4.28 FLUSH transfer line and pump with approximately ⅙ of a 55-gallon drum of water while rotating pump bypass valve several times from OPEN to CLOSE to flush bypass line.

5.4.29 LEAVE bypass valve CLOSED.

5.4.30 CLOSE the following valves:
- 80E-019
- 80E-020
- 80E-021.

5.4.31 ENSURE outlet switch is OFF AND

UNPLUG drum waste pump from electrical outlet.
5.4 Add Rad Waste to Sump Tanks Using Flexible Impeller Pump (Cont.)

5.4.32 DRAIN hoses into a catch container.

5.4.33 PLACE camlock caps/plugs on all camlock fittings on the following:
   • Inlet and outlet of waste drum pump
   • Transfer hoses
   • Outlet of drum pumping tool
   • Sump addition line.

5.4.34 BAG drum pumping tool end AND STORE both in an RMA.

5.4.35 EMPTY waste from catch container into Sump Tank 1 or Sump Tank 2.

Special Instructions

An “EMPTY” sticker may be used for the required marking, but a DOT “Empty” label shall not be used.

5.4.36 MARK/LABEL empty drums as follows or according to process memo:

5.4.36.1 REMOVE hazardous waste (yellow sticker) label from wastewater drum.

5.4.36.2 REMOVE Class 9 label, “Non-DOT Radioactive” and any existing weight stickers.

5.4.36.3 MARK drum(s) “EMPTY.”

5.4.36.4 PLACE a “Radioactive Material” sticker on the drum if one is not present.

5.4.37 IF container has greater than one inch of material remaining after the emptying process (i.e., the container is not considered empty), PERFORM the following:

5.4.37.1 NOTIFY SOM.

5.4.37.2 LEAVE labels intact.

5.4.37.3 REINSTALL lid.

5.4.37.4 SET container aside.
5.4 Add Rad Waste to Sump Tanks Using Flexible Impeller Pump (Cont.)

5.4.38 PROVIDE CRO the package identification number(s) for the emptied drum(s) for recording on process memo and/or in the ETF Control Room Logbook.

5.4.39 PROVIDE Waste Technical Services the specific drum number(s) that were emptied for their status update in SWITS.
### 5.5 Records

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

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

OR

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

5.5.1.2 **SUBMIT** the package for verification of completed records.

<table>
<thead>
<tr>
<th>Records Submittal Checklist</th>
<th>Number of times completed</th>
<th>N/A (✓)</th>
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</thead>
<tbody>
<tr>
<td><strong>SHIPPING DOCUMENTS</strong> <em>(Received shipping documents may include one or more of the following :)</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A-6000-528, Onsite Routine Radioactive Shipment Record (Blue Card)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A-6003-214.1, Radioactive Shipment Record form</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uniform Hazardous Waste Manifest</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other approved shipping documents</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DATA SHEETS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contents Inventory Sheet (in accordance with ETF-65D-003)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**FWS/OE/Shift Manager** **SEND** the completed records to the Central Shift Office for records retention.

____________________________________ / __________________________________ / _____________

Signature                          Print (First & Last)       Date

FWS/OE/Shift Manager

The record custodian identified in the Company Level Record Inventory and Disposition Schedule (RIDS) is responsible for record retention in accordance with TFC-BSM-IRM_DC-C-02.