Tank Farm Plant Operating Procedure  Effluent Treatment Facility

Operate Waste Storage/Accumulation Areas

All Changes Require Review by the following Organizations:

Waste Management

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

CHANGE HISTORY (≤ LAST 5 REV-MODS)

<table>
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<tr>
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<tr>
<td>B-2</td>
<td>03/29/2018</td>
<td>Update references</td>
<td>Update references for RCRA surveillances.</td>
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<tr>
<td>B-1</td>
<td>11/30/2017</td>
<td>Process Clarification</td>
<td>Update to section 1.1. Added red stamp for Waste Management review.</td>
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<tr>
<td>B-0</td>
<td>11/14/2017</td>
<td>MOP changes</td>
<td>Major revision to update procedure to current standards and regulations for waste management at ETF.</td>
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<tr>
<td>A-2</td>
<td>07/06/2017</td>
<td>Process Clarification</td>
<td>Removed wordage from Section 1.1, Removed extra step 5.2.7.</td>
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<td>A-1</td>
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1.0 PURPOSE AND SCOPE

1.1 Purpose


This procedure provides instructions and guidance for operating waste container storage areas in treatment, storage, and disposal (TSD) areas, 90 day accumulation areas (AA), satellite accumulation areas (SAA’s), radioactive waste staging/storage areas and universal waste/recycle areas.

The permitted TSD storage/accumulation areas are depicted in Figure 1, which is derived from the RCRA Part B permit for the facility. Figure 2 provides a schematic of the indoor container storage/accumulation areas.

ETF 90-day AAs include the area within the fence around the LERF basins and designated area(s) inside 2025E process area.

Low level radioactive waste staging/storage areas include designated containers/areas in 2025E, and are established as needed, as well as a LLW trailer located outside the LERF basin fence on the North side of the basins.

Universal Waste Battery collection points are established in the 2025EA copy room and 2025E lobby. HS-0011 bay 3 and 219C are established for Universal and Recycle waste storage areas.
1.2 Scope

This procedure applies to four classifications of waste at ETF/LERF:

- Low-level mixed waste (LLMW)
- Hazardous waste (HAZ)
- Low-level radioactive waste (LLW)
- Universal/Recycle waste.

This procedure does not apply to the acceptance of waste containers from other facilities. ETF-60K-006 covers receipt of these containers.

There are no Polychlorinated biphenyl PCB waste storage areas established at ETF. If PCB wastes are generated which are not PCB remediation waste, immediately contact Waste Management Specialist (WMS) and the Environmental Field Representative (EFR). The WTS and EFR will provide direction and revise this procedure to ensure all regulatory requirements related to storage of TSCA PCB waste are met.

ETF TSD waste storage areas are inspected daily and documented per ETF Daily Operator Rounds; ETF-OR-DR-CR, ETF-OR-DR-MTT, ETF-OR-DR-STT, and ETF-OR-DR-OOR. 90-day waste storage area inspections are required weekly per ETF-60K-005. SAA, Universal and Recycle waste areas are inspected monthly per ETF-60K-005.
2.0 INFORMATION

2.1 Terms and Definitions

- AA – Accumulation Area
- EFR – Environmental Field Representative
- HAZ – Hazardous Waste
- LLMW – Low-level Mixed Waste
- LLW – Low-level Radioactive Waste
- NON-REG – Non-regulated Waste
- SAA – Satellite Accumulation Area
- SWITS – Solid Waste Information and Tracking System
- TSD – Treatment, Storage, and Disposal
- WMS – Waste Management Specialist

2.2 General Information

2.2.1 An example for verifying is as follows: if the accumulation date on the soft sided container moved from the 90 day AA is older than the date on the RO/RO, the oldest accumulation date must be marked on the EPA hazardous waste label.
3.0 PRECAUTIONS AND LIMITATIONS

3.1 Personnel Safety

3.1.1 Foot protection and hand protection (gloves) are required.

3.1.2 A portable, two-way radio or other accepted means of summoning emergency assistance is required to be readily accessible at all times while inside the storage/accumulation area.

3.2 Equipment Safety

3.2.1 A minimum 36-inch separation is required between aisles of containers holding dangerous waste. Drum rows may be a MAXIMUM of two drums wide.

3.2.2 Any dangerous waste container containing free liquids must have secondary containment and/or be stored in a designated area inside 2025 E which is considered to be a secondary containment area, or has separate secondary containment berms.

3.3 Radiation and Contamination Control

3.3.1 Work in radiological areas will be performed using a radiological work permit following review by Radiological Control per ALARA Work Planning procedure, TFC-ESHQ-RP_RWP-C-03.

3.4 Environmental Compliance

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

4.1 Special Tools, Equipment, and Supplies

The following supplies may be needed to perform this procedure:

- Portable, two-way radio
- Wrench
- Leather or nitrile gloves
- Safety shoes
- Banding material, clips, pliers
- Absorbent pads.

4.2 Performance Documents

The following documents may be needed to perform this procedure:

- ETF-ERP-85B-003, Spill or Release
- ETF-60K-005, Inspect Waste Management Areas
- ETF-60K-007, Universal and Recycle Waste Management at ETF
- ETF-65D-003, Package Waste
- Site Form (A-6007-331), Container Packaging Checklist
- Site Form (A-6007-332), ETF Waste Container Inventory Sheet
- Site Form (A-6007-335), Monthly SAA and Universal/Recycle Waste Area Inspections.

4.3 Field Preparations

4.3.1 **ENSURE** HPT surveys each container prior to storage/accumulation per HNF-5183, Tank Farm Radiological Control Manual.

4.3.2 **UPON** discovery of unknown waste, **NOTIFY** SOM/BED.

  4.3.2.1 **FOLLOW** instructions provided in ETF-65D-003.

**NOTE** - Figure 1 and Figure 2 provide maps of the permitted storage areas.

4.3.3 **STORE** all dangerous waste in SAA, a 90-day AA, or in a permitted storage area.
5.0 PROCEDURE

NOTE - Sections of this procedure may be performed out of sequence in any logical order.

5.1 Transfer ETF or LERF-Generated Waste Containers to Container Storage/Accumulation Areas

Special Instructions

Waste drums are banded together in groups depending upon shipping destination and hazard classification as drums become available in groups of four per pallet. Stack drums no more than three high.

5.1.1 DETERMINE appropriate waste storage area using Figure 1 and Figure 2.

5.1.2 CHECK waste containers to be transferred to a waste container storage/accumulation area meet the criteria listed in Attachment 1.

5.1.3 IF the appropriate markings are missing or incomplete

OR

IF the dates on the EPA sticker, Site Form (A-6007-332), or packaging checklist conflict, NOTIFY SOM and WMS to reconcile differences before proceeding AND

CORRECT accumulation date based on direction from SOM or WMS.

5.1.4 MOVE waste containers as follows:

5.1.4.1 OBTAIN appropriate waste container handling equipment.

5.1.4.2 IF moving drums onto pallets for storage, INSPECT pallets before use for:
  • Cracks
  • Tears
  • Breaks
  • Deformity.

5.1.4.3 IF pallet is damaged, REMOVE from service AND

DISPOSE of per ETF-65D-003.

5.1.4.4 IF moving soft-sided containers or Roll On/Roll Off (RO/RO) Containers, VERIFY container is closed and secured prior to movement.
5.1 Transfer ETF or LERF-Generated Waste Containers to Container Storage/Accumulation Areas (Cont.)

NOTE - An example of verifying the accumulation date can be found on step 2.2.1

5.1.4.5 IF moving soft-sided containers into a RO/RO container, VERIFY the accumulation date.

5.1.4.6 IF moving ETF generated waste, MOVE ETF generated waste container to a permitted TSD storage area.

5.1.4.7 IF moving LERF generated waste, MOVE LERF generated waste to either an ETF permitted TSD storage area or less than 90 day accumulation area.

5.1.4.8 GROUP waste drum with other drums of same hazard class(es).

5.1.4.9 PLACE waste container in designated permitted TSD storage per hazard class.

5.1.4.10 ENSURE that each row of containers is no more than two containers wide.

5.1.4.11 ENSURE there is a minimum of 36 inches of aisle space between rows of containers measured between two closest points.

NOTE - ETF-65D-003 contains the log book entry requirements.

5.1.4.12 RECORD the waste container information in the Waste Container Tracking Logbook.

5.1.4.13 UPDATE SWITS with accumulation dates, full dates and location changes.

5.1.4.14 TRANSFER waste inventory sheets for full containers to the record PIN file.

5.1.4.15 NOTIFY WMS that container is full and has been transferred to storage area.
5.2 90 Day accumulation Areas

5.2.1 ESTABLISH 90 day accumulation areas as follows:

5.2.1.1 (WTS) APPROVE new 90 day accumulation areas.

5.2.1.2 NOTIFY SOM and WTS of approved 90 day Accumulation Area (AA) set up.

5.2.1.3 POST 90 day accumulation area signs/labels at approved location.

5.2.1.4 GENERATE 90 day AA inventory sheet binder or logbook.

5.2.1.5 ENSURE containers outside/uncovered accumulation areas are elevated or are otherwise protected from contact with accumulated liquids.

5.2.2 OPERATE 90 day AA as follows:

5.2.2.1 ENSURE 90 day AA’s are clearly posted with the following:

- Signs identifying the area as 90 day accumulation area.
- “No Smoking” signs if ignitable or reactive waste is accumulated (2025E no smoking sign is on the exterior of the building).

5.2.2.2 ENSURE waste accepted and managed in 90-day AA meets the criteria listed in Attachment 2.

5.2.2.3 PLACE containers in appropriate location(s) or into appropriate container(s) via dolly, hand truck, cart, or other method that will not result in rupturing the container or causing it to leak.

5.2.2.4 ENSURE marking and labeling on containers is legible, unobscurred, and visible for inspections.

5.2.2.5 ENSURE that each row of containers is no more than two containers wide.
5.2 90 Day accumulation Areas (Cont.)

5.2.2.6 ENSURE there is a minimum of 36 inches of aisle space between rows of shipping containers measured between the two closest points.

5.2.2.7 ENSURE containers are segregated in the 90 day accumulation area according to compatibility.

5.2.2.8 IF container storage time is 70 days or older, NOTIFY WMS.

5.2.2.9 ENSURE the storage time for waste containers stored in a 90-day AA does not exceed 90-days from the accumulation date.

5.2.3 REMOVE 90 day accumulation area as follows:

5.2.3.1 ENSURE all hazardous or mixed waste has been removed from the 90-day AA.

5.2.3.2 OBTAIN approval for removal of 90-day AA location from the WMS and SOM.

5.2.3.3 REMOVE 90-day AA signs/labels.

5.2.3.4 REMOVE completed waste inventory sheet binders AND TRANSFER to record PIN file

OR

PROVIDE to WMS for retention.
5.3 Satellite Accumulation Areas

5.3.1 **ESTABLISH** SAA as follows:

5.3.1.1 *(SOM/WTS) SUBMIT* email to the WTS Manager for approval of the new SAA location.

5.3.1.2 *(WMS) PERFORM* visual inspection of requested SAA to ensure location is appropriate as an SAA.

5.3.1.3 *(WMS) UPDATE* Site Form (A-6007-335) for approved SAA location AND

**NOTIFY** Waste Technical Services manager of new SAA location.

5.3.1.4 **POST** SAA signs/labels at approved location.

5.3.1.5 **NOTIFY** SOM/WTS that approved SAA has been established.

5.3.2 **OPERATE** SAA as follows:

5.3.2.1 **ENSURE** area is clearly identified as SAA.

5.3.2.2 **ENSURE** that a “No Smoking” and “Authorized Personnel Only” sign are present on the outer doors of the SAA area.

5.3.2.3 **IF** generated during routine operations, **ENSURE** hazardous waste is accumulated in an SAA.

5.3.2.4 **ENSURE** only compatible wastes are accumulated in the same container.

5.3.2.5 **ENSURE** containers are closed and secured when waste is not being added, unless precluded by safety concerns.

5.3.2.6 **ENSURE** primary containers and secondary containment are in good condition and have no apparent structural defects (e.g., not leaking, crushed, cracked, corroded).
5.3 Satellite Accumulation Areas (Cont.)

5.3.2.7 IF a container begins to leak, is leaking, or shows signs of structural defect (e.g., corrosion), IMMEDIATELY CONTACT SOM/BED to initiate appropriate actions.

5.3.2.8 ENSURE containers are physically separated according to compatibility.

5.3.2.9 ENSURE containers holding liquid wastes are located within secondary containment that is compatible with the waste being accumulated.

5.3.2.10 ENSURE a Waste Container Inventory Sheet is present for each waste container in the SAA.

5.3.2.11 ENSURE the words “Hazardous Waste” are clearly visible on the primary container.

5.3.2.12 ENSURE the major risk (e.g., toxic, flammable, corrosive) is labeled on the waste container.

5.3.2.13 MARK corrosive waste containers with “Acidic” for pH <2 or “Basic” for pH greater than 12.5.

5.3.2.14 ENSURE that the volume of hazardous waste is less than 55 gallons or 1 quart of acutely hazardous waste (WMS will provide identification of acute wastes prior to disposal) per SAA.

5.3.2.15 IF the volume limits have been met, IMMEDIATELY MARK the accumulation start date, AND

MOVE container within 72 hours to a 90 day accumulation area or permitted TSD area.

5.3.2.16 REMOVE completed waste inventory sheet binders AND

TRANSFER to record PIN file

OR

PROVIDE to WMS for retention.
5.3 Satellite Accumulation Areas (Cont.)

5.3.3 **REMOVE** satellite accumulation area as follows:

5.3.3.1 **ENSURE** all hazardous or mixed waste has been removed from SAA.

5.3.3.2 **SUBMIT** an email for approval for the removal of an SAA location from the WMS.

5.3.3.3 **NOTIFY** WMS by email that the requested SAA has been removed.

5.3.3.4 (WMS) **UPDATE** Site Form (A-6007-335).
5.4 **Treatment Storage Disposal Area**

NOTE - TSD areas are established through the facility RCRA Permit. Figure 1 and Figure 2 show the permitted TSD areas.

5.4.1 **ENSURE** containers meet the requirements listed in Attachment 1.

5.4.2 **PLACE** containers into TSD unit via dolly, hand truck, fork lift, or other method that will not result in rupturing the container or causing a leak.

5.4.3 **ENSURE** that each row of containers is no more than two containers wide.

5.4.4 **ENSURE** containers are stored so there is a minimum of 36 inches of aisle space between shipping containers measured at the closest point.

5.4.5 **ENSURE** drums are stacked no more than three high.

5.4.6 **ENSURE** that incompatible wastes are segregated from other waste types within the TSD waste storage area.

NOTE - ETF-60K-005, Table 2 can provide additional instructions regarding incompatible waste segregation.

5.4.6.1 **CONTACT** WTS for specific instructions to ensure containers are segregated by waste type and compatibility.

5.4.7 **ENSURE** adequate space between structures and containers allowing access for inspection and emergency actions.

5.4.8 **ENSURE** marking and labeling on containers are visible and unobscured.

5.4.9 **ENSURE** there is no liquid present in the secondary containment areas or near any of the waste containers.

5.4.9.1 **IF** liquid is present, **RECORD** the location where liquid was found, container number and contents **AND**

**IMMEDIATELY NOTIFY** SOM.

5.4.10 **ENSURE** that container location changes are updated in SWITS and WMS are notified.

5.4.10.1 **REMOVE** completed waste inventory sheet binders **AND**

**TRANSFER** to record PIN file **OR**

**PROVIDE** to WMS for retention.
5.5 Low Level Radioactive Waste Staging/Storage Area

5.5.1 ESTABLISH Low Level Waste (LLW) staging area as follows:

5.5.1.1 OBTAIN approval for a low level radioactive waste staging/storage area location from WTS and Radcon management/designee.

5.5.1.2 (SOM/WMS) UPDATE weekly waste inspection procedure and checklist with approved LLW staging/storage area location.

5.5.1.3 POST applicable LLW signs at approved location.

5.5.1.4 PLACE Site Form (A-6007-332) in a binder or protective sleeve on the LLW container.

5.5.2 OPERATE LLW Staging/Storage Area as follows:

5.5.2.1 ENSURE the LLW staging/storage area is clearly identified as a radiological area.

5.5.2.2 ENSURE container meets the requirements listed in Attachment 1.

5.5.2.3 ENSURE LLW containers are marked with the date of commencement of storage (date the container is FULL).

5.5.2.4 ENSURE the storage time for LLW does not exceed one year from the FULL date.

5.5.2.5 REMOVE completed waste inventory sheet binders AND TRANSFER to record PIN file

OR

PROVIDE to WMS for retention.

5.5.3 REMOVE LLW Staging/Storage Areas as follows:

5.5.3.1 ENSURE all radioactive waste has been removed from the radioactive waste staging/storage area.

5.5.3.2 REMOVE radiological area signs and/or LLW signs.
5.6 Universal/Recyclable Waste Staging/Storage Area

5.6.1 **ESTABLISH** Universal Waste/Recyclable Waste (UW/RW) staging/storage area as follows:

5.6.1.1 **OBTAIN** approval from WTS for a new UW/RW location.

5.6.1.2 (SOM/WMS) **UPDATE** the waste inspection procedure and site form monthly waste inspection checklist with approved UW/RW staging area location.

5.6.1.3 **POST** applicable Universal or Recycle Waste labels at approved location.

5.6.1.4 **NOTIFY** WMS when UW or RW area has been established.

5.6.2 **OPERATE** UW/RW staging/storage area as follows:

5.6.2.1 **ENSURE** area is clearly identified as a UW or RW area.

5.6.2.2 **ENSURE** UW and RW are only accumulated in approved areas.

5.6.2.3 **ENSURE** only compatible UW and RW materials are accumulated in the same container.

5.6.2.4 **ENSURE** UW and RW containers meet the requirements of ETF-60K-007 for marking, labeling, and closure.

5.6.2.5 **ENSURE** that the accumulation time frame for UW waste does not exceed nine months.

5.6.2.6 **GO TO** ETF-60K-007 for shipping UW/RW.

5.6.3 **REMOVE** UW/RW staging/storage area as follows:

5.6.3.1 **ENSURE** all waste is removed from the staging/storage area.

5.6.3.2 **REMOVE** signs and or labels from the staging/storage area.

5.6.3.3 **NOTIFY** WMS that UW/RW staging/storage area has been removed.
5.7 Records

The performance of this procedure generates no records.

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.
Attachment 1 – Waste Container Criteria

The following criteria must be met before a waste container is transferred to a waste container storage/accumulation area. Refer to ETF-65D-003

- Container has a bar code number or PIN
- Container has appropriate labels
  - If container is for hazardous waste or low-level mixed waste, an EPA hazardous waste sticker and major risk label has been applied
  - If container is for hazardous waste or LLMW to be stored in a 90 day AA or the TSD permitted storage areas the accumulation date must be marked on the EPA Hazardous waste label on the container
  - If the container is for LLW or LLMW, the container must have a “Radioactive Material” sticker and be marked with dose rate
  - If the container is for liquids, the container would require orientation arrows or “This End Up” markings
  - If the container is for UW, the container must have a Universal Waste Label and be marked with the waste type.
  - If the container is for Recyclable, the container must have a Recycle label and be marked with the type of waste.
  - For non-hazardous waste, a non-regulated waste sticker has been applied
  - For empty containers, an EMPTY label has been applied.
- Packaging checklist including inspection has been completed for each container (e.g., liner used, accumulation start date, initials, dates, bar code number).
- Drum lid locking rings and bungs are in place, properly tightened and lock nuts are tight.
- Maverick’s are closed with bungees holding the top cover in place, or the container closed per manufacturer instructions when full.
- Container in good condition as follows:
  - Free of bulges, dents, and corrosion that may reduce container integrity
  - Free of loose debris, chemicals, or residue on top of container.
- Waste Inventory sheet is attached, legible, and complete (containers that are active)
- Dangerous waste accumulation date on the inventory sheet and the container match
- HPT survey is complete and marked on radioactive sticker
- Gross weight on top and front of drum if full.
- Containers are closed and secured when waste is not being added
Attachment 2 – 90 Day Accumulation Area Criteria

The following criteria must be met for waste to be managed and accepted in a 90 day accumulation area:

- Container meets Attachment 1 criteria.
- Only compatible wastes are stored in the same container/containment.
- Containers/containments are compatible with the waste being stored.
- Wastes are not to be placed into a used container that previously held an incompatible waste.
- A completed Waste Inventory Sheet or actual contents of the container are available.
- Containers/containments are undamaged with no signs of leaking.
- Containers are closed when waste is not being added.
- Containers are labeled with the words “Hazardous Waste.”
- Containers are labeled with the major risk (e.g., toxic, flammable, oxidizer, corrosive).
  Label corrosive, waste containers with “Acidic” (≤ 2) or “Basic” (≥ 12.5) or pH range.
- Accumulation date label is on the outermost packaging.
- Wastes must be removed from a 90-day accumulation area in 90 days or less from the accumulation date marked on the container and transferred or moved to permitted TSD.
- A bar code or container identification number is on the outermost packaging/shipping container.
- Accumulation date on the waste container matches the 90-day accumulation area inventory workbook/inventory sheet.
Figure 1 – Outdoor Container Storage/Accumulation Areas

- Verification Tank
- Truck Bay
- Pump Room
- HEPA/Carbon Filters
- HVAC System
- Cooling Units
- Transformers
- Primary Access
- Hot Maintenance Shop
- Container Handling Room
- Laboratory Area
- Maintenance Shops
- Offices, Locker Rooms, Shops, etc.

HEPA = High-efficiency particulate air
HVAC = Heating, ventilation, and air conditioning

Additional Container Storage

Hydrogen Peroxide Tank

RCRA Permitted Container Storage Areas

2025ED Load-In Facility
59A-TK-1
59A-TK-109
59A-TK-117

Chemical Feed Tanks
Surge Tank

RCRA Permitted Container Storage Areas