ETF Forklift Battery Inspection

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

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This is a new revision. The First Time Use process as defined in TFC-OPS-OPER-C-13 can be used during the initial performance of this revision.

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1.0 PURPOSE AND SCOPE

1.1 Purpose

This procedure provides instructions for monthly and annual inspections of ETF Forklift Batteries.

1.2 Scope

This procedure applies to monthly and annual inspections of ETF Forklift Batteries.

2.0 INFORMATION

None.
3.0 PRECAUTIONS AND LIMITATIONS

3.1 Personnel Safety

**WARNING** - Sulfuric acid can cause severe chemical burns to eyes, skin and throat.

3.2 Equipment Safety

3.2.1 AVOID overfilling battery, as expansion during charging could cause overflow.

3.3 Radiation and Contamination Control

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

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.
4.0 PREREQUISITES

4.1 Special Tools, Equipment and Supplies

The following supplies may be needed to perform this procedure:

- Sodium bicarbonate
- Distilled or demineralized water
- PPE requirements
  - 11-mil nitrile OR butyl gloves (Gauntlet style)
  - Splash proof, chemical resistant safety goggles and face shield
  - Chemical resistant apron
- Portable eyewash with drench hose OR Safety eyewash location identified
- Other tools, equipment and supplies are identified by Shift Manager/OE/FWS/User.

4.2 Performance Documents

The following documents may be needed to perform this procedure:

- DOE-0336, Hanford Site Lockout/Tagout Program
- DOE-0359, Hanford Site Electrical Safety Program.
5.0  PROCEDURE

5.1  Monthly Inspections

5.1.1  TURN OFF/UNPLUG battery charger.

5.1.2  VISUALLY INSPECT battery for evidence of the following detrimental conditions:
   - Cracks in case
   - Excessive distortion of case
   - Evidence of fluid leakage
   - Damage to terminals
   - Damaged cables.

5.1.3  IF detrimental conditions are found, RECORD on PM Data Sheet.

5.1.4  MEASURE the battery voltages AND RECORD on PM Data Sheet.

5.1.4.1  IF the voltage does not meet the requirements specified on the data sheet, red circle the voltage reading.

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**WARNING**

Sulfuric acid can cause severe chemical burns to eyes, skin and throat.

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5.1.5  PERFORM the following:

5.1.5.1  DON chemical resistant gloves.
   a.  IF adding water, DON apron, face shield, goggles, etc.

5.1.5.2  CLEAN battery and battery terminals with a solution of sodium bicarbonate and water.

5.1.5.3  CONTINUE to clean with solution until battery acid/corrosion products are neutralized (no signs of reaction/fizzing).

5.1.5.4  ENSURE adequate levels of distilled or demineralized water are added to battery.

5.1.5.5  ENSURE battery connection and mounting equipment are tightened.
5.2 **Annual Inspection**

NOTE - Annual inspections are performed in April.

5.2.1 CLEAN battery charger.

5.3 **Restoration**

5.3.1 RETURN equipment to normal operations.

5.3.2 IF any problems were encountered with the inspection process INFORM FWS.

5.4 **Acceptance Criteria**

Acceptance Criteria has been met when Steps in this procedure have been satisfactorily completed.

5.5 **Review**

5.5.1 INFORM FWS the inspection process is complete.

5.5.2 FWS REVIEW AND CONFIRM the following:

- Work requests needed as a result of this procedure are identified and generated
- Work request number(s) of any work documents generated as a result of this procedure are recorded in the Work Record/Remarks section of Work Package.

5.6 **Records**

This procedure is performed within a work package, as such, the procedure in its entirety will be maintained as a record per the Work Control process.

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.

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Figure 1 – Stand-Up Forklift Battery Cell Diagram

Front of Vehicle
Figure 2 – Skyjack Battery Cell Diagram

Front of Vehicle

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