# Monorail, Jib, A-Frame, Tripod, and Hydraulic Hoist Mechanical Inspection

Tank Farm Maintenance Procedure  
Effluent Treatment Facility

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

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1.0 PURPOSE AND SCOPE

1.1 Purpose

This procedure provides a safe, uniform method to inspect facility monorails, jib booms, A-frames, and hydraulic hoists.

1.2 Scope

Procedure instructions include steps for inspecting facility monorails, jib booms, A-frames, and hydraulic hoists.

2.0 INFORMATION

None.

3.0 PRECAUTIONS AND LIMITATIONS

3.1 Personnel Safety

3.1.1 Falls from elevation may cause serious bodily injury up to and including death. For heights above four feet follow DOE-0346, Hanford Site Fall Protection Program (HSFPP).

3.1.2 Lock and tag protects against temperature, pressure, or hazardous chemicals before breaching the system. Under these circumstances, lock and tag is required in accordance with procedure DOE-0336, Hanford Site Lockout/Tagout Procedure.

3.2 Radiation and Contamination Control

3.2.1 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.

3.3 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.
4.0 PREREQUISITES

4.1 Special Tools, Equipment, and Supplies

The following supplies may be needed to perform this procedure:
- Chevron SRI NLGI2 general purpose grease
- Man lift
- Hydraulic oil.

4.2 Performance Documents

The following documents may be needed to perform this procedure:
- DOE-0336, Hanford Site Lockout/Tagout Procedure
- ANSI Standard B30.11, Monorails and Underhung Cranes.

4.3 Field Preparations

4.3.1 REQUEST Operations lock and tag has been applied as necessary per DOE-0336.

4.3.2 REQUEST HPT perform appropriate surveys when required by rad screening.
5.0 PROCEDURE

Special Instructions

Sections of this procedure may be performed in any logical order, out of sequence, or in parallel.

5.1 Monorails

5.1.1 **INSPECT** each monorail system for:
- Deformed members
- Cracked members
- Corroded members
- Loose fastener bolts
- Damaged fastener bolts
- Missing fastener bolts
- Loose concrete anchor bolts
- Damaged concrete anchor bolts
- Loose, damaged, or missing rivets, nuts, pins, etc.

5.1.2 **INSPECT** concrete around anchors and supporting members for:
- Cracking
- Spalling
- Crumbing
- Other signs of deterioration.

5.1.3 **INSPECT** monorail for:
- Excessive wear
- Alignment
- Proper lubrication
- Load rating
- Cleanliness.
5.1 Monorails (Cont.)

5.1.4 **INSPECT** trolley and trolley wheels for:
- Lubrication
- Wear beyond use
- Alignment
- Rail fit
- Load rating
- Wheels roll smoothly
- Bolts (wrench tight).

5.1.5 **ENSURE** monorail end stops are:
- In place
- Secure
- In good condition.

5.1.6 **INSPECT** for labels.
5.2 Jib Booms

5.2.1 **INSPECT** jib boom for:
- Proper lubrication
- Load rating
- Wheels roll smoothly
- Cracks in weldments
- Structural steel deficiencies (i.e., missing components, corrosion, dents).

5.2.2 **INSPECT** trolley and trolley wheels for:
- Lubrication
- Wear beyond use
- Alignment
- Rail fit
- Load rating
- Wheels roll smoothly
- Bolts (wrench tight).

5.2.3 **INSPECT** for labels.
5.3 A-Frames and Tri-Pods

5.3.1 INSPECT A-Frames and Tri-pods for:
- Proper lubrication
- Cracks in weldments
- Load rating
- Structural steel deficiencies (i.e., missing components, corrosion, dents).

5.3.2 INSPECT trolley and trolley wheels for (A-frames only):
- Lubrication
- Wear beyond use
- Alignment
- Rail fit
- Load rating
- Wheels roll smoothly
- Bolts (wrench tight).

5.3.3 INSPECT for labels.

5.4 Hydraulic Hoists

5.4.1 INSPECT for:
- Hydraulic leaks
- Load rating
- Wheels roll smoothly
- Structural steel deficiencies (i.e., missing components, corrosion, dents).

5.4.2 IF hydraulic fluid is low, ADD hydraulic oil.

5.4.3 INSPECT for labels.
5.5 Restoration

5.5.1 **RESTORE** to as-found conditions.

5.5.2 **INFORM** SOM test is complete and instrument/equipment/system may be returned to service.

5.5.3 **IF** any major or structural repairs are required, **LOAD TEST** equipment in accordance with the following:
- DOE-RL-92-36
- ANSI Standard B30.11.

5.5.4 **IF** any conditions are found that may impact safe operation of equipment, **IMMEDIATELY ATTACH** “DO NOT OPERATE” tag to equipment **AND** **NOTIFY** SOM and DA.

5.5.5 **REPORT** any deficiencies and/or probable cause of early failure to FWS or and DA.

5.6 Review

5.6.1 **INFORM** FWS test is complete.

5.6.2 *(FWS) **REVIEW AND ENSURE** the following*
- Completed data sheets meet the acceptance criteria
- Comments sections are filled out appropriately
- 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 comments/remarks section of the data sheet.

5.7 Records

The performance of this procedure generates no records. However PM/S data sheets associated with the procedure are records and are maintained in the work package as record material.

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