Thin Film Dryer System 60J (Outside Drum Room)

Tank Farm Maintenance Procedure

Effluent Treatment Facility

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

CHANGE HISTORY (≤ LAST 5 REV-MODS)

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<td>A-3</td>
<td>08/13/2018</td>
<td>Field Change for Clarification</td>
<td>Clarified Section 5.0 steps for CRO to operate equipment.</td>
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<td>A-2</td>
<td>03/22/2018</td>
<td>Maintenance Request</td>
<td>Clarification and addition of steps in section 5.1.</td>
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<td>A-1</td>
<td>07/28/2016</td>
<td>Correct Use Type</td>
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<td>A-0</td>
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1.0 PURPOSE AND SCOPE

1.1 Purpose

This procedure provides a safe, uniform method for performing maintenance on Thin Film Dryer System 60J equipment outside the drum handling room.

1.2 Scope

This procedure provides instructions for performing preventive maintenance on Thin Film Dryer System 60J equipment outside the drum handling room.

2.0 INFORMATION

2.1 Terms and Definitions

- SWITS - Solid Waste Information and Tracking System.

3.0 PRECAUTIONS AND LIMITATIONS

3.1 Personnel Safety

3.1.1 Some locations require LOTO for protection against temperature, pressure or hazardous chemicals before breaching the system. Under these circumstances, lock and tag is required in accordance with 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:

- Randolph tube lubricant (SDS/MSDS #022017) for concentrate feed pump tube 60J-P-2
- Chevron Delo 80w-90 gear lube (SDS/MSDS #051149A) for concentrate feed pump gear reducer; approximately 200 mL
- Hose for dryer feed pump, approximately 36 inches; hose specifications will be identified on data sheet.

4.2 Performance Documents

The following documents may be needed to perform this procedure:

- DOE-0336, Hanford Site Lockout/Tagout Procedure
- H-2-88989 with ECNs, Piping and Instrumentation Diagram - Thin Film Dryer
- Vendor information: LCI Plant Manual, LCI # 02-16741, Adtechs #V-135A-005, Books 1 and 2.
5.0 PROCEDURE

Special Instructions

Sections of this procedure may be performed in any logical order, out of sequence, or in parallel. Periodic maintenance does not require performance of all sections. Recall data sheets will list sections to be performed.

5.1 Concentrate Feed Pump 60J-P-2 Lubrication

Initial Set Up

NOTE - Local pressure indicator may read pressure due to line plugging.

5.1.1 REQUEST Operations depressurize 60J-P-2 tubing as follows:

5.1.1.1 ENSURE valves 60J-123 and 60J-155 are OPEN.

5.1.1.2 (CRO) ENSURE 60J-P-2 in MANUAL mode

5.1.1.3 (CRO) ENSURE AOV-60J-154 is CLOSED

5.1.1.4 (CRO) START 60J-P-2 for approximately ten seconds THEN STOP 60J-P-2.

5.1.1.5 CLOSE valve 60J-123.

5.1.2 INSTALL lock and tag per DOE-0336 requirements.

5.1.3 REMOVE access plate.

Special Instructions

Tubing is replaced monthly when Thin Film Dryer has been in operation.

5.1.4 REPLACE tubing as follows:

5.1.4.1 REMOVE old tubing from pump.

5.1.4.2 INSPECT tubing and roller assembly for defects or wear.

5.1.4.3 WRAP tube with absorbent pad.

5.1.4.4 PLACE tube in bag or catch container.

5.1.4.5 CUT tube while in bag/container to prevent contamination release.

5.1.4.6 DISCONNECT AND REMOVE old tubing from piping.
5.1 Concentrate Feed Pump 60J-P-2 Lubrication (Cont.)

5.1.4.7 INSTALL new tubing in pump/piping.

5.1.5 ADD small amount of tube lubricant to tubing section within pump.

5.1.6 RE-INSTALL access plate.

5.1.7 ENSURE access plate nuts are tight.

5.1.8 OPEN 60J-123.

5.1.9 IF inspecting concentrate feed pump oil, GO TO Section 5.2,

OTHERWISE

GO TO Section 5.5, Restoration.

5.2 Concentrate Feed Pump Oil Inspection

5.2.1 IF lock is not already installed, INSTALL lock and tag per DOE-0336 requirements.

5.2.2 INSPECT concentrate feed pump gear reducer for proper oil level.

5.2.3 IF oil is low, ADD Chevron Delo 80W-90 gear lube.

5.2.4 IF inspecting and cleaning blower 60J-F-1, GO TO Section 5.3,

OTHERWISE

GO TO Section 5.5, Restoration.

5.3 Blower 60J-F-1 Inspection and Cleaning

5.3.1 IF lock is not already installed, INSTALL lock and tag per DOE-0336 requirements.

5.3.2 REMOVE manifold cover.

5.3.3 INSPECT inlet and outlet passageways for blockage and general condition.

5.3.4 CLEAN dirty or blocked inlet and outlet passageways.

5.3.5 RE-INSTALL manifold cover.

5.3.6 IF replacing concentrate feed pump gear reducer oil, GO TO Section 5.4,

OTHERWISE

GO TO Section 5.5, Restoration.
5.4 Concentrate Feed Pump Gear Reducer Oil Replacement

5.4.1 IF lock is not already installed, INSTALL lock and tag per DOE-0336 requirements.

5.4.2 DRAIN concentrate feed pump gear reducer oil.

5.4.3 REFILL reducer oil with Chevron Delo 80W-90 gear lube.

5.4.4 GO TO Section 5.5, Restoration.

5.5 Restoration

5.5.1 RESTORE to as-found conditions.

5.5.2 INFORM CRO work is complete and instrument/equipment/system may be returned to service.

5.5.3 IF lock and tag was installed, REQUEST its removal.

5.6 Acceptance Criteria

Acceptance criteria has been met when steps in this procedure have been satisfactorily performed and results are recorded on the data sheet(s).
5.7 Review

5.7.1 DISPOSE of waste per Waste Planning Checklist (SWITS-generated).

5.7.2 DOCUMENT work performed and problems encountered on work package.

5.7.3 IMMEDIATELY NOTIFY Operations and Maintenance management of any equipment problems.

5.7.4 INFORM FWS work is complete.

5.7.5 (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.

5.8 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.