TEDF HVAC Fan/Damper Inspection

Tank Farm Plant Operating Procedure
Effluent Treatment Facility

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

CHANGE HISTORY (≤ LAST 5 REV-MODS)

<table>
<thead>
<tr>
<th>Rev-Mod</th>
<th>Release Date</th>
<th>Justification</th>
<th>Summary of Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-2</td>
<td>11/13/2018</td>
<td>Process Improvement</td>
<td>Adding conditional statements to Section 5.3 to remove work loop.</td>
</tr>
<tr>
<td>A-1</td>
<td>07/28/2016</td>
<td>Correct Use Type</td>
<td>Change from continuous use to reference use per document owner’s direction.</td>
</tr>
<tr>
<td>A-0</td>
<td>10/26/2015</td>
<td>Conversion To WRPS Format</td>
<td>New Procedure; Supersedes ETF-PRO-MN-51473 (EL23012)</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

3.0 PRECAUTIONS AND LIMITATIONS .................................................................................................... 2
  3.1 Personnel Safety .......................................................................................................................... 2
  3.2 Radiation and Contamination Control ......................................................................................... 2
  3.3 Environmental Compliance ......................................................................................................... 2

4.0 PREREQUISITES .............................................................................................................................. 3
  4.1 Performance Documents .............................................................................................................. 3
  4.2 Field Preparations ....................................................................................................................... 3

5.0 PROCEDURE ...................................................................................................................................... 4
  5.1 Fan Inspection ............................................................................................................................ 4
  5.2 Fan Damper Inspections .............................................................................................................. 4
  5.3 Adjustments, Cleaning, and/or Replacements ............................................................................ 5
  5.4 Restoration ................................................................................................................................... 5
  5.5 Acceptance Criteria .................................................................................................................... 5
  5.6 Review ......................................................................................................................................... 6
  5.7 Records ....................................................................................................................................... 6
1.0 PURPOSE AND SCOPE

1.1 Purpose

This procedure provides instructions for a safe, uniform way to maintain Axipal Vaneaxial fans and Pottorff dampers.

1.2 Scope

This procedure applies to preventive maintenance on Axipal Vaneaxial fans and Pottorff dampers at TEDF.

2.0 INFORMATION

None.

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 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 Performance Documents

The following documents may be needed to perform this procedure:
- DOE-0336, Hanford Site Lockout/Tagout Procedure
- Vendor information: Pottorff, Control Dampers Installation and Operating Instructions; Flakt Aerovent Fan Instruction Manual for Axipal Fans.

4.2 Field Preparations

4.2.1 CONFIRM Operations personnel have configured system or equipment as required to allow performance of this procedure.

4.2.2 IF lock and tag is required by the controlling organization, CONFIRM it has been installed.
5.0 PROCEDURE

Special Instructions

Fan and fan damper inspections can be performed in any logical order as long as all fans are complete when maintenance is concluded.

5.1 Fan Inspection

5.1.1 WHILE fan is in operation, OBSERVE fan assembly for excessive vibration or noise.

5.1.2 INSPECT boot for the following:

- Rips
- Tears
- Signs of impending failure.

5.2 Fan Damper Inspections

NOTE - Dampers are used only on 68A-FAN-001 and 68B-FAN-001.

5.2.1 CHECK damper motors and actuators through operating cycle to check for the following:

- Defects or binding
- Damper blade fully open or closed within stroke or travel of actuator arm (observe shaft end for damper blade position)
- Spring installed and in good condition, when present
- Linkage clean, when present.

5.2.2 IF damper assembly requires any of the following, GO TO Section 5.3:

- Adjusting
- Cleaning
- Replacing boot.

OTHERWISE, GO TO Section 5.4:
5.3 Adjustments, Cleaning, and/or Replacements

5.3.1 IF performing one of the following, COMPLETE Section 5.3:
- Boot replacement
- Damper cleaning/adjustment
- Internal Inspections.

5.3.2 REQUEST Operations apply lock and tag per facility requirements in accordance with DOE-0336.

5.3.3 IF boot needs to be replaced, REPLACE boot.

5.3.4 IF damper needs adjustment ADJUST damper linkage to allow blade to fully open and close during actuator arm travel.

5.3.5 IF cleaning is needed, CLEAN blade shaft and linkages.

5.4 Restoration

5.4.1 RESTORE to as-found conditions.

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

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

5.5 Acceptance Criteria

5.5.1 IF adjustments are made to damper linkage in Step 5.3.4, CYCLE fan on and off to observe proper blade travel AND

RESTORE equipment to original configuration.
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

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 Records Inventory and Disposition Schedule (RIDS) is responsible for record retention in accordance with TFC-BSM-IRM_DC-C-02.