Perform Routine Surveillance of Winterized Buildings and Equipment for EV Areas

Tank Farm Plant Operating Procedure

SURVEILLANCE

USQ # TF-16-0700-S, Rev 2

<table>
<thead>
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<th>Release Date</th>
<th>Justification</th>
<th>Summary of Changes</th>
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<td>C-2</td>
<td>03/21/2017</td>
<td>Request by TF-PLN-167 Owner</td>
<td>Deleted reference to White Label program</td>
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<td></td>
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<td>C-1</td>
<td>07/12/2016</td>
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<td>C-0</td>
<td>05/17/2016</td>
<td>Periodic Review</td>
<td>Clarified step 3.1.2, updated Radcon Statement, reworded steps 5.1.4 &amp; 5.1.8, made</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Datasheet 1 consistent with other procedures and in column where is states check with</td>
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<td></td>
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<td>a checkmark, it now just has the checkmark and not the &quot;word check&quot;.</td>
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<tr>
<td>B-4</td>
<td>05/02/2016</td>
<td>To correct a deficiency in</td>
<td>Added New Step 3.1.2 to address White Label program requirements.</td>
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<td>B-3</td>
<td>10/22/2015</td>
<td>Request by Electrical group</td>
<td>Datasheet 1: Added Special Instruction to ensure temps are taken</td>
</tr>
<tr>
<td></td>
<td></td>
<td>to ensure personnel are not</td>
<td>from HMI, external temperature device or on the exterior with an infrared</td>
</tr>
<tr>
<td></td>
<td></td>
<td>opening cabinets to get</td>
<td>temperature gun.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>temperatures.</td>
<td></td>
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Perform Routine Surveillance of Winterized Buildings and Equipment for EV Areas
1.0 PURPOSE AND SCOPE

1.1 Purpose

This procedure provides instructions for performing the winterization surveillance of buildings and equipment assigned to EV Team areas.

1.2 Scope

This procedure involves the surveillance of winterized equipment and buildings during cold weather conditions and cold weather temperature excursions assigned to EV Team areas.

This procedure is not intended to protect safety-significant waste transfer structures, systems and components (SSCs). TO-040-790 and TO-040-791 implement safety-significant SSC TSR/DID freeze protection requirements.

2.0 INFORMATION

2.1 Terms and Definitions

- CWP - Cold Weather Protection. Cold Weather Protection surveillance is performed WEEKLY.
- CWTE - Cold Weather Temperature Excursions. Cold Weather Temperature Excursion Surveillance is performed DAILY when the temperature, as reported by the Hanford Weather Net, decreases below +10°F (-12.2°C). The Cold Weather Temperature Excursion remains in effect until the daily low temperature has remained above +10°F (-12.2°C) for 72 hours.
2.2 General Information

2.2.1 This procedure will be performed starting October 1, or after initial winterization is performed, and will end March 31 of the following year unless continued surveillances are warranted by cold weather conditions.

2.2.2 If required by Tank Farms Engineering or Tank Farm Management this procedure may be performed after March 31 due to extended periods of cold weather.

2.2.3 Cold Weather Protection surveillance is performed once each week, unless waived by the Central Shift Office for the week due to favorable (e.g., above freezing average daily temperatures) weather conditions as reported by the Hanford Weather Net.

2.2.4 Daily Cold Weather Protection Surveillance is performed during Cold Weather Temperature Excursions.

2.2.5 The Central Shift Office will initiate Cold Weather Temperature Excursion and Cold Weather Protection Surveillance for Production Operation organizations.

2.2.6 Fire Protection Systems will receive the highest priority for cold weather protection.

2.2.7 The major use of this procedure is for system-based items (e.g., compressor cabinets, WFIE cabinets, etc.). A unique identifier is not required for their identification. The labels do not have to match verbatim, but do have to be characterized with a method of identification. Unique identifiers will be utilized for identification of electrical distribution components that are required to be checked. Supervision will address any question with equipment identification.
3.0 PRECAUTIONS AND LIMITATIONS

3.1 Personnel Safety

3.1.1 All identified hazards are addressed in the General Hazard Analysis (GHA).

3.2 Equipment Safety

CAUTION - Failure to perform Cold Weather Protection Surveillance on Fire Protection Systems could lead to equipment damage or failure.

CAUTION - Adjusting thermostats could result in equipment damage.

CAUTION - Failing to ensure ventilation system inlet stations are free of blockage due to ice buildup may cause equipment damage due to tank high-vacuum conditions.

3.3 Radiation and Contamination Control

3.3.1 When this procedure is worked in radiological areas, an approved radiological work permit (RWP) is required. If radiological conditions or work performed falls outside the scope of the RWP, all work activities must be discontinued until a new or revised RWP has been issued in accordance with TFC-ESHQ-RP_RWP-C-03.

4.0 PREREQUISITES

4.1 Special Tools, Equipment, and Supplies

The following supplies may be needed to perform this procedure:

- Keys for building entry
- Infrared temperature gun.

4.2 Performance Documents

The following documents may be needed to perform this procedure:

- 3-MISC-363, Winterization/DE-Winterization Tank Farms.

4.3 Field Preparation

4.3.1 ENSURE initial winterization procedure 3-MISC-363 and associated work activities has been performed prior to starting this procedure,
5.0 PROCEDURE

5.1 Perform Routine Surveillance of Buildings and Equipment

CAUTION
Failure to perform Cold Weather Protection Surveillance on Fire Protection Systems could lead to equipment damage or failure.

5.1.1 AS DIRECTED by Central Shift Manager, INITIATE Cold Weather Protection surveillance.

CAUTION
Failing to ensure ventilation system inlet stations are free of blockage due to ice buildup may cause equipment damage due to tank high-vacuum conditions.

5.1.2 IF local temperatures are below 32°F and fog is within DST Primary or Annulus Inlet Air Station areas (if installed), MONITOR DST and Annulus Inlet Screens to ensure they remain free of ice blockage.

5.1.3 CHECK heating systems are OPERABLE by inspecting accessible rooms and areas AND ENSURE rooms and areas are warm.

5.1.4 IF DIRECTED by Central Shift Manager, PERFORM Data Sheet 1.

5.1.5 IF surveillance activities indicate abnormal conditions, PERFORM the following:

5.1.5.1 NOTIFY the Area Shift Manager.

CAUTION
Adjusting thermostats could result in equipment damage.

5.1.5.2 DO NOT adjust thermostats.
5.1 Perform Routine Surveillance of Buildings and Equipment (Cont.)

NOTE - Area Shift Manager will evaluate the need for heating in buildings with failed heating systems and provide notification to Hanford Fire Department and Building Managers of failed building heating systems. If required, the Area Shift Manager will initiate a work request to repair failed heating units.

5.1.6 IF a heating system has apparently failed or a room/area is inaccessible, NOTIFY Area Shift Manager AND RECORD condition on appropriate Data Sheet 1.

5.1.7 IF containers containing suspect freezable liquids are encountered, NOTIFY Area Shift Manager.

5.1.8 CONFIRM the following:
- ALL exterior instrument/equipment cabinets and building doors are CLOSED
- ALL louvers on Cabinets are in the CLOSED position
- ALL water service pits have COVERS CLOSED, valve handles are installed, or valve handle holes are taped CLOSED.

5.1.9 WHEN items (fire protection or otherwise) not listed are found, and may be vulnerable to freezing, NOTIFY Area Shift Manager AND RECORD findings on Data Sheet 1.

5.1.10 SUBMIT completed Data Sheet 1 to Area Shift Manager for review and distribution.

Area Shift Manager Review Data Sheets From Operators

5.1.11 AFTER Data Sheet 1 has been completed, REVIEW Cold Weather Protection Surveillance Data Sheet 1.

5.1.11.1 IF equipment needing immediate cold weather protection is identified, MITIGATE the situation as soon as possible.

5.1.11.2 INITIATE repairs to cold weather protection equipment as noted on Data Sheet 1.
5.2 Records

5.2.1 PERFORM the following for records identified within this procedure.

5.2.1.1 RECORD the number of times the record was generated in applicable column

OR

PLACE a check mark (✓) in the N/A column.

5.2.1.2 SUBMIT the package to FWS/OE/Shift Manager.

<table>
<thead>
<tr>
<th>Records Submittal Checklist</th>
<th>Number of times completed</th>
<th>N/A (✓)</th>
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<td>5.2 Records</td>
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<tr>
<td>Step 5.2.2</td>
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<td>Data Sheets</td>
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<td></td>
</tr>
<tr>
<td>Data Sheet 1 - EV Team Area Cold Weather Protection Surveillance</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5.2.2 FWS/OE/Shift Manager SEND the completed records to the Central Shift Office for records retention.

________________________ / ______________________ / ________________
Signature                  Print (First and Last) Date
FWS/OE/Shift Manager

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.
Data Sheet 1 - EV Team Area Cold Weather Protection Surveillance

<table>
<thead>
<tr>
<th>Location</th>
<th>System</th>
<th>Condition</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>AW02C-WSTA-ENCL-002</td>
<td>Heater</td>
<td>Cabinet Interior Temperature *)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt;32 °F</td>
<td></td>
</tr>
<tr>
<td>AW102-IA-ENCL-101</td>
<td>AW TANK 102 SPEC GRAV INSTRUMENT ENCLOSURE</td>
<td>Cabinet Exterior Temperature *)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt;32 °F</td>
<td></td>
</tr>
<tr>
<td>AWVP8-WT-LDSTA-208</td>
<td>Heater</td>
<td>Cabinet Exterior Temperature *)</td>
<td></td>
</tr>
<tr>
<td>10 ft east of AWB Pit</td>
<td></td>
<td>&gt;32 °F</td>
<td></td>
</tr>
<tr>
<td>AWVPA-WT-LDSTA-207</td>
<td>Heater</td>
<td>Cabinet Exterior Temperature *)</td>
<td></td>
</tr>
<tr>
<td>5 ft west of AWA Pit</td>
<td></td>
<td>&gt;32 °F</td>
<td></td>
</tr>
<tr>
<td>Flush Pit Heater Control</td>
<td>Power Light Green</td>
<td>ON</td>
<td></td>
</tr>
<tr>
<td>AW01C-WSTA-ENCL-001</td>
<td>Heater</td>
<td>Cabinet Interior Temperature *)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt;32 °F</td>
<td></td>
</tr>
<tr>
<td>AW03C-WSTA-ENCL-003</td>
<td>Heater</td>
<td>Cabinet Interior Temperature *)</td>
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<tr>
<td></td>
<td></td>
<td>&gt;32 °F</td>
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<tr>
<td>AW05C-WSTA-ENCL-005</td>
<td>Heater</td>
<td>Cabinet Interior Temperature *)</td>
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<td>&gt;32 °F</td>
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<td>AW06C-WSTA-ENCL-006</td>
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<td>Cabinet Interior Temperature *)</td>
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<td>&gt;32 °F</td>
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<tr>
<td></td>
<td>AW241-VTP-ENCL-118 (A-Train) HMI Indication</td>
<td>Heat</td>
<td>TI-118 &gt;34 °F (*)</td>
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<td></td>
<td>AW241-VTP-HTR-390</td>
<td>&gt;32 °F</td>
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<td>AW241-VTP-HTR-550A, B</td>
<td>Cabinet Vent (Top Left Side) Temperature *)</td>
<td>&gt;32 °F</td>
</tr>
<tr>
<td>AW241-VTP-V-381 (A-Train) Seal Pot</td>
<td>Cond. Valve Insulation</td>
<td>SECURED</td>
<td></td>
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<tr>
<td>AW241-VTP-V-382 (A-Train) Seal Pot</td>
<td>Cond. Valve Insulation</td>
<td>SECURED</td>
<td></td>
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<tr>
<td>AW241-VTP-ENCL-111 (B-Train) HMI Indication</td>
<td>Heater</td>
<td>AW241-VTP-HTR-111A, B, C</td>
<td>TI-111 &gt;43 °F (*)</td>
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<tr>
<td></td>
<td>AW241-VTP-ENCL-119 (B-Train) HMI Indication</td>
<td>Heat</td>
<td>TI-119 &gt;34 °F (*)</td>
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<td></td>
<td>AW241-VTP-ENCL-010 (B-Train) On skid, Local Indication</td>
<td>Heater</td>
<td>AW241-VTP-TI-010 (*)</td>
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<tr>
<td></td>
<td>AW241-VTP-HTR-490</td>
<td>&gt;32 °F</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AW241-VTP-ENCL-650 (B-Train) On skid</td>
<td>Heater</td>
<td>AW241-VTP-HTR-650A, B</td>
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<td></td>
<td>AW241-VTP-HTR-650A, B</td>
<td>Cabinet Vent (Top Left Side) Temperature *)</td>
<td>&gt;32 °F</td>
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</tbody>
</table>

**Special Instructions**

(*) IF taking temperatures of electrical cabinets and/or enclosures, **ENSURE** temperatures are taken from HMI, external temperature device or on the exterior with an infrared temperature gun.

(Continued on Next Sheet)
### Data Sheet 1 - EV Team Area Cold Weather Protection Surveillance

<table>
<thead>
<tr>
<th>Location</th>
<th>System</th>
<th>Condition</th>
<th>Status (✓)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AW241-VTP-V-481 (B-Train) Seal Pot</td>
<td>Cond. Valve Insulation</td>
<td>SECURED</td>
<td></td>
</tr>
<tr>
<td>AW241-VTP-V-482 (B-Train) Seal Pot</td>
<td>Cond. Valve Insulation</td>
<td>SECURED</td>
<td></td>
</tr>
<tr>
<td>AW296-VTA-ENCL-900 (K-2 Stack Monitor Cabinet)</td>
<td>Heater</td>
<td>Cabinet Interior Temperature (*) &gt;32 °F</td>
<td></td>
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<tr>
<td>AW04C-WSTA-ENCL-004</td>
<td>Heater</td>
<td>Cabinet Interior Temperature (*) &gt;32 °F</td>
<td></td>
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</table>

### Outside of Farm

<table>
<thead>
<tr>
<th>Location</th>
<th>System</th>
<th>Condition</th>
<th>Status (✓)</th>
</tr>
</thead>
<tbody>
<tr>
<td>241-AW-271 Bldg (Instrument Building)</td>
<td>Heat Pump</td>
<td>WARM</td>
<td></td>
</tr>
<tr>
<td>241-AW-801 (Water Service)</td>
<td>Heater</td>
<td>WARM</td>
<td></td>
</tr>
<tr>
<td>AW241-WT-ENCL-111 15 ft south of change trailer</td>
<td>Heater</td>
<td>Cabinet Exterior Temperature (*) &gt;32 °F</td>
<td></td>
</tr>
<tr>
<td>AW241-WT-ENCL-112 15 ft south of change trailer</td>
<td>Heater</td>
<td>Cabinet Exterior Temperature (*) &gt;32 °F</td>
<td></td>
</tr>
<tr>
<td>AW Change Trailer MO-818</td>
<td>Heater</td>
<td>WARM</td>
<td></td>
</tr>
<tr>
<td>272-AW Garage</td>
<td>Heater</td>
<td>WARM</td>
<td></td>
</tr>
</tbody>
</table>

### Special Instructions

(*) IF taking temperatures of electrical cabinets and/or enclosures, ENSURE temperatures are taken from HMI, external temperature device or on the exterior with an infrared temperature gun.

(*** If ambient temperature is below 36 °F, one of the two heat trace circuit switches should be ON and lamp lit for that circuit only. If ambient temperature is above 35 °F and expected to remain above 35 °F, both heat trace circuits should be OFF.

### 272AW Room 3 Decon Seal Pot

<table>
<thead>
<tr>
<th>Location</th>
<th>System</th>
<th>Status (ON / OFF) (***</th>
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</thead>
<tbody>
<tr>
<td>AW272-WT-CP-210 Seal Pot Indicating Panel CKT #1</td>
<td>Decon Shower Drain Line Heat Trace</td>
<td>ON / OFF (***</td>
</tr>
<tr>
<td>AW272-WT-CP-210 Seal Pot Indicating Panel CKT #2</td>
<td>Decon Shower Drain Line Heat Trace</td>
<td>ON / OFF (***</td>
</tr>
</tbody>
</table>

### Comments

Performed By: ______________________ / ______________________ / ______________
Signature Print (First and Last) Date

SM or Alternate Review: ______________________ / ______________________ / ______________
Signature Print (First and Last) Date

NOTE - When local temperatures are below 36 °F and the dew point is within 3 °F of the temperature, a temporary round sheet must be initiated to ensure DST and Annulus Inlet Screens are free of ice blockage once per twelve (12) hour shift or as requested by Shift Manager while dew point/temperature conditions exist.