Table of Contents

1.0 PURPOSE AND SCOPE ........................................................................................................... 3
  1.1 Purpose ................................................................................................................................. 3
  1.2 Scope ...................................................................................................................................... 3

2.0 INFORMATION .......................................................................................................................... 3
  2.1 General Information ................................................................................................................ 3

3.0 PRECAUTIONS AND LIMITATIONS ...................................................................................... 4
  3.1 Personnel Safety ..................................................................................................................... 4
  3.2 Radiation and Contamination Control .................................................................................... 4
  3.3 Environmental Compliance .................................................................................................... 4

4.0 PREREQUISITES ....................................................................................................................... 4

5.0 PROCEDURE ............................................................................................................................. 5
  5.1 Winterization (September) ..................................................................................................... 5
  5.2 De-Winterization (April) ....................................................................................................... 7
  5.3 Review .................................................................................................................................... 9
5.4 Records
1.0 PURPOSE AND SCOPE

1.1 Purpose

This procedure provides instructions for activation and de-activation of winterization activities on General Purpose Facilities located outside of tank farms, including the structure, mechanical equipment, and heat trace.

1.2 Scope

1.2.1 September: Inspection and mechanical preparations before the onset of winter in facilities and buildings, recording corrective maintenance needs, and documenting results of this performance.

1.2.2 April: De-activate and return equipment to normal configuration.

1.2.3 Minor repairs that are within the scope of approved level 4 activities are authorized.

2.0 INFORMATION

2.1 General Information

Implementation of winterization/freeze protection for General Purpose Facilities. Implementation of winterization/freeze protection provides an additional layer of defense in depth against damage to equipment/structures vulnerable to freezing (e.g. piping systems, structures, isolation valves, and electrical cabinets).
3.0 PRECAUTIONS AND LIMITATIONS

3.1 Personnel Safety

3.1.1 Comply with DOE-0359, Hanford Site Electrical Safety Program.

3.1.2 All known hazards and identified personal protective equipment will be addressed in the pre-job briefings.

3.1.3 If a safety hazard is identified and cannot be corrected during the performance of this procedure, barricade the area and notify Industrial Safety of any condition(s) affecting the safety of personnel.

3.2 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.

3.3 Environmental Compliance

The Central Shift Office must be notified in the event of a leak or a spill in accordance with TFC-ESHQ-ENV_FS-C-01, Environmental Notification.

4.0 PREREQUISITES

None.
5.0  PROCEDURE

Special Instructions

Activation of winterization steps should start no later than September 15 and be completed no later than October 1. De-activation of winterization steps should start no later than April 1 and return equipment to normal configuration by April 30 in accordance with TFC-BSM-FPM-PR-C-13

Sections and steps of this procedure may be performed in any logical order with concurrence of the facility manager/FWS. Record those actions on a Work Order and “N/A” on applicable data sheets.

5.1  Winterization (September)

NOTE - Steps 5.1.1 through 5.1.13 are only performed in the fall to prepare facilities for winter weather conditions.

5.1.1  CHECK areas around buildings for:
- Excavated or uncovered piping that may be exposed and susceptible to freezing.
- Any new equipment/systems installed since last winter that may not be freeze protected.
- Any temporary systems that may require freeze protection.
- Outside storage and unheated storage areas to ensure there are no materials susceptible to freeze damage.
- Pit covers are properly installed and not damaged.

5.1.2  INSPECT the outside of buildings and equipment for:
- Proper siding/skirting configuration
- Degraded, or damaged insulation on pipes, tanks, valves, etc.
- Damaged gutters.
- Holes or gaps in buildings or equipment that may allow excessive heat loss.

5.1.2.1  IF inspecting Cold Test Facility (CTF), ENSURE the following:
- Compressor connex heater is turned ON
- Client protected equipment (i.e. Mobile Retrieval System on 35’ level).
- Test column drain valve (bottom of column) and vent valve (top of column) are OPEN.
GENERAL PURPOSE FACILITIES WINTERIZATION/DE-WINTERIZATION

5.1 Winterization (September) (Cont.)

5.1.3 INSPECT all doors, gaskets, and handles for operability and proper closing.

5.1.4 INSPECT windows for proper sealing.

5.1.5 ENSURE all outer doors and windows are closed securely and door closures are operating properly as directed by the facility owner.

5.1.6 SECURE AND ISOLATE water supply lines at a point not subject to freezing.

5.1.7 CONFIRM operability light is present by checking heat trace “End of Line Detector”.

5.1.8 VISUALLY INSPECT exposed heat trace for weathering/damage.

5.1.9 TEST circuit breaker type Ground Fault Equipment Protector (GFEP) associated with heat trace for deficiencies.

5.1.10 ENSURE non-self-regulating heat trace and heater(s) are energized/operable.

5.1.11 RECORD deficiencies for corrective maintenance on data sheet.

5.1.12 IF any inspected items require winterization, and cannot be repaired utilizing approved Level 4 activity, REQUEST corrective maintenance.

5.1.13 CLOSE/COVER exposed equipment and system components to prevent heat loss.
5.2 De-Winterization (April)

NOTE - Steps 5.2.1 through 5.2.13 are only performed in the spring to prepare facilities for summer weather conditions.

5.2.1 CHECK areas around buildings for:
- Excavated or uncovered piping that may be damaged from freezing.
- Any new equipment/systems installed since last winter that may not be freeze protected.
- Any temporary systems that may have damage due to freezing.
- Outside storage and unheated storage areas to ensure there are no materials damaged from freezing.

5.2.2 INSPECT the outside of buildings and equipment for:
- Proper siding/skirting configuration
- Degraded, or damaged insulation on pipes, tanks, valves, etc.
- Damaged gutters.
- Holes or gaps in buildings or equipment that may allow excessive heat loss.

5.2.2.1 IF inspecting Cold Test Facility (CTF), ENSURE the following:
- Compressor connex heater is turned ON
- Client protected equipment (i.e. Mobile Retrieval System on 35' level).
- Test column drain valve (bottom of column) and vent valve (top of column) are OPEN.
5.2 De-Winterization (April) (Cont.)

5.2.3 **INSPECT** all doors, gaskets, and handles for operability and proper closing.

5.2.4 **INSPECT** windows for proper sealing.

5.2.5 **ENSURE** all outer doors and windows are closed securely and door closures are operating properly as directed by the facility owner.

5.2.6 **ENSURE** water can flow from water supply lines.

5.2.7 **CONFIRM** operability light is present by checking heat trace “End of Line Detector”.

5.2.8 **VISUALLY INSPECT** exposed heat trace for weathering/damage.

5.2.9 **TEST** circuit breaker type GFEP associated with heat trace for deficiencies.

5.2.10 **ENSURE** non-self-regulating heat trace and heater(s) are de-energized.

5.2.11 **RECORD** deficiencies for corrective maintenance on data sheet.

5.2.12 **IF** any inspected items require de-winterization, and cannot be repaired utilizing approved Level 4 activity, **REQUEST** corrective maintenance.

5.2.13 **CLOSE/COVER** exposed equipment and system components to prevent heat loss.
5.3 Review

5.3.1 FWS REVIEW AND ENSURE the following:

- 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 on the Work Record.

5.3.2 SEND copy of completed work order to operations for OPS Acceptance.

5.4 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.