Changes “Other Than Inconsequential” Require These Additional Reviews:

Radiological Controls:
Lee Livesey’s Organization

USQ # GCX-2

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1.0 AFFECTED PERSONNEL, FACILITIES, EQUIPMENT, OR AREAS

This procedure applies to WRPS personnel and subcontractors doing work in the 242-A Evaporator controlled by WRPS and the equipment in these areas.

2.0 ENTRY CONDITIONS

NOTE - This procedure provides guidance to 242-A Evaporator Operations personnel and the Shift Operations Manager for responding to pressure hazards, which include steam, raw water, sanitary water, compressed air, and pressurized cylinders.

- This is a guide to assist the operator and Shift Manager in placing the facility in a safe configuration.
- Steps may be skipped, performed simultaneously, or out of order, depending on situational needs.

A failure or leak has occurred in one of the following systems:

- Steam (Condition 1)
- Sanitary water (Condition 2)
- Raw water (Condition 3)
- Compressed air (Condition 4)
- Pressurized gas cylinder (Condition 5).
3.0 ACTIONS

3.1 Initial Actions

NOTE - Steps in this procedure may be performed simultaneously or in any logical order, depending on situational needs.

Condition 1 - Steam Line Release

Condition 1 - Steam Line Release Automatic Actions

- Low steam flow/pressure alarm to specific components (e.g., Reboiler, Steam Ejectors, etc.)
- Low steam flow/pressure alarm may be followed by shutdown interlock(s) being activated, placing the evaporator process operation in recirculation depending upon supply system being affected.

Condition 1 - Steam Line Release Initial Actions

NOTE - A steam line/valve rupture produces the following indications:

- Visual cloud of steam
- Audible pressure noise (hiss or roar)
- Low steam flow/pressure alarm to specific components (e.g., reboiler, steam ejectors, etc.)
- Low steam flow/pressure alarms may be followed by shutdown interlock being activated; placing the Evaporator process operations on recirculation (depends on supply system being affected).

3.1.1 UPON discovery of a steam release (Building Operator), PERFORM the following actions:

3.1.1.1 IMMEDIATELY MOVE AWAY from release point.

3.1.1.2 NOTIFY personnel to stay away from affected area of steam system rupture.

3.1.1.3 NOTIFY Control Room Operator of rupture and, if known, what components the line supplies.

3.1.1.4 SHUT DOWN steam system in accordance with TF-AOP-EVAP-001.

3.1.2 Control Room operator PERFORM the following:

3.1.2.1 UPON notification of a steam release, IF 242-A Evaporator is in operation mode, GO TO procedure TF-AOP-EVAP-005.
3.1 Initial Actions (Cont.)

Condition 1 - Steam Line Release Initial Actions (Cont.)

3.1.2.2 NOTIFY personnel in the facility of steam rupture and to stay away from affected area.

3.1.2.3 REQUEST assistance as needed.

3.1.2.4 GO TO Section 3.2 for follow-up actions.
3.1 Initial Actions (Cont.)

Condition 2 - Raw Water Line Release

Condition 2 - Raw Water Line Release Automatic Actions

- Low raw water flow/pressure alarm to specific components (e.g., Raw Water Strainers, Condensers, etc.)
- Low raw water flow/pressure alarms will be followed by shutdown interlock(s) being activated, initiating an evaporator shutdown.

Condition 2 - Raw Water Line Release Initial Actions

NOTE - A water line/valve rupture produces the following indications:
- Water pouring from line or valve
- Area flooding
- High sump level alarms
- Low raw water flow/pressure alarm to specific components (e.g., raw water strainers, condensers, etc.)
- Low raw water flow/pressure alarms will be followed by shutdown interlock being activated, initiating an evaporator process shutdown.

3.1.3 PERFORM the following actions upon discovery of a raw water line release:

3.1.3.1 IMMEDIATELY MOVE away from release point.

3.1.3.2 NOTIFY personnel to stay away from affected area of raw water system rupture.

3.1.3.3 NOTIFY Control Room operator of rupture and, if known, what components the line supplies.

3.1.3.4 SHUT DOWN raw water system in accordance with TF-AOP-EVAP-001.

3.1.4 CRO PERFORM the following:

3.1.4.1 UPON notification or indication of a raw water line release, IF 242-A Evaporator is in operation mode, GO TO procedure TF-AOP-EVAP-003, Loss of Raw Water.

3.1.4.2 NOTIFY personnel in the facility of raw water system rupture and to stay away from affected area.

3.1.4.3 REQUEST assistance as needed.

3.1.4.4 GO TO Section 3.2 for follow-up actions.
242-A Evaporator Pressure Hazards

3.1 Initial Actions (Cont.)

Condition 3 - Sanitary Water Line Rupture

Condition 3 - Sanitary Water Line Rupture Automatic Actions

None

Condition 3 - Sanitary Water Line Rupture Initial Actions

NOTE - A water line/valve rupture produces the following indications:
- Water pouring from line or valve
- Area flooding
- High sump level alarms.

3.1.5 UPON discovery of a sanitary water line release, PERFORM the following:

3.1.5.1 IMMEDIATELY MOVE AWAY from release point.

3.1.5.2 NOTIFY personnel to stay away from affected area of sanitary water system rupture.

3.1.5.3 NOTIFY Control Room operator of rupture and, if known, what components the line supplies.

3.1.5.4 SHUT DOWN sanitary water system in accordance with TF-AOP-EVAP-001.

3.1.5.5 NOTIFY Control Room operator of water line release and actions taken.

3.1.6 Control Room operator PERFORM the following:

3.1.6.1 UPON notification of a sanitary water line rupture, NOTIFY personnel in the facility of sanitary water system rupture and to stay away from affected area.

3.1.6.2 NOTIFY Shift Manager of water line release and actions taken.

3.1.6.3 GO TO Section 3.2 for follow-up actions.
3.1 Initial Actions (Cont.)

Condition 4 - Compressed Air Release

Condition 4 - Compressed Air Release Automatic Actions
- Low compressed air flow/pressure alarm (e.g., Process Air and Instrument Air header pressures)
- Low compressed air flow/pressure alarm may be followed by shutdown interlock(s) being activated, initiating an evaporator process shutdown (depending upon the affected air supply line).

Condition 4 - Compressed Air Release Initial Actions

NOTE - A compressed air line/valve rupture produces the following indications:
- Audible pressure noise (hiss or roar)
- Low compressed air flow/pressure alarm (e.g., process air and instrument air header pressures)
- Low compressed air flow/pressure alarms may be followed by shutdown interlock(s) being activated, initiating a evaporator process shutdown (depending on the affected air supply line).

3.1.7 UPON discovery of a compressed air system release, PERFORM the following actions:

3.1.7.1 IMMEDIATELY MOVE AWAY from release point.

3.1.7.2 NOTIFY personnel to stay away from affected area of compressed air system rupture.

3.1.7.3 NOTIFY Control Room operator of air release and, if known, what components the line supplies.

3.1.7.4 SHUT DOWN compressed air system in accordance with TF-AOP-EVAP-001.

3.1.8 Control Room operator PERFORM the following:

3.1.8.1 UPON notification of an air release, IF 242-A Evaporator is in operation mode, GO TO procedure TF-AOP-EVAP-006, Loss of Compressed Air System.

3.1.8.2 REQUEST assistance as needed.

3.1.8.3 GO TO Section 3.2 for follow-up actions.
3.1 Initial Actions (Cont.)

Condition 5 - Pressurized Cylinder Release

Condition 5 - Pressurized Cylinder Release Automatic Actions

None

Condition 5 - Pressurized Cylinder Release Initial Actions

NOTE - The possible type of pressurized cylinders in the Evaporator or support buildings are:

- Argon
- Air
- Nitrogen
- Ammonia (span gas bottle)
- Halon.

- A pressurized cylinder leak or rupture disc failure produces the following indications:
  - Audible pressure noise (hiss or high pitched whistle)
  - If the argon cylinder is connected to a whole body counter, a local trouble alarm will activate
  - Odor (if ammonia).

3.1.9 UPON discovery of a pressurized cylinder release, PERFORM the following:

3.1.9.1 EVACUATE the area immediately.

3.1.9.2 WARN personnel of hazard.

3.1.9.3 NOTIFY Shift Manager immediately of hazard AND PROCEED as directed.

3.1.9.4 GO TO Section 3.2 for follow-up actions.
3.2 Follow-on Actions

3.2.1 CONFIRM plant and/or equipment is in a safe configuration.

3.3 Administrative Actions

NOTE - Actual steps taken for restoration are dependent on specific situation and facility configuration at the time of event. The following steps are general guidance and may be performed concurrently, in any order or omitted at discretion of Shift Manager to fit situation.

3.3.1 ENSURE that the CSM is notified of AOP entry AND REQUEST CSM to make notifications per TFC-OPS-OPER-C-57.

3.3.2 EVALUATE conditions per TFC-OPS-OPER-C-24, Occurrence Reporting.

3.3.3 REQUEST Shift Manager to evaluate the need to notify Environmental per TF-REC-001 and TFC-ESHQ-ENV_FS-C-01.

3.3.4 INITIATE repairs or work requests to systems that may have caused unexpected condition.

4.0 EXIT CRITERIA

System has been isolated and/or repaired.

5.0 RECORDS

The performance of this procedure generates no records.