Changes “Other Than Inconsequential” Require These Additional Reviews:

Radiological Controls
Lee Livesey’s Organization

USQ # EV-17-1740-S, Rev 0

<table>
<thead>
<tr>
<th>Rev-Mod</th>
<th>Release Date</th>
<th>Justification</th>
<th>Summary of Changes</th>
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<tbody>
<tr>
<td>G-1</td>
<td>12/04/2017</td>
<td>Operations request</td>
<td>Added Step 2.1.2 to address recording step completion. Changed RECORD section to generate no records.</td>
</tr>
<tr>
<td>G-0</td>
<td>09/19/2016</td>
<td>Periodic review comment incorporation.</td>
<td>Editorial clarifications and for consistency with other ERPs. Update Records section to current standard.</td>
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<tr>
<td>F-0</td>
<td>10/07/2015</td>
<td>Periodic review comment incorporation.</td>
<td>PCA to incorporate comments from Periodic Review. Added step to notify CSM, removed vague phrases, added bullets to step and corrected records</td>
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<tr>
<td>E-0</td>
<td>05/19/2014</td>
<td>Periodic review comment incorporation.</td>
<td>Modified verbiage in Initiating Conditions. Modified Radiologically to Radiological.</td>
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<tr>
<td>D-1</td>
<td>01/06/2014</td>
<td>Operations request</td>
<td>In general: Deleted BED functions that in now handled by Central Shift Manager. Deleted Limit AC 5.7.3 that does not apply and TSR Compliance from header. Reworded some steps for consistency between ERPs. Added a common exit criteria if emergency is terminated IAW RLEP 3.4.</td>
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242-A Respond to Waste-Feed Release Into Pump Room or Evaporator Room or Catastrophic Failure of Tank TK-C-100

NOTE - This procedure is not intended to be used as a standalone procedure. It is a guide for the 242-A Shift Manager (SM) to ensure appropriate actions are performed in the event of an emergency and is designed to augment applicable DOE 0223 “Emergency Plan Implement Procedure.”

- This is a guide to assist the operator and Shift Manager in placing the facility in a safe configuration.
- Steps in this procedure may be performed simultaneously or in any logical order, depending on situational needs.
- The attached Duty Card is to be completed by the A-1 operator. The Shift Manager has the responsibility to follow and complete all procedural steps. Not all procedural step are included in the duty card.
- Any change to the body of this procedure requires review of Attachment 1 to determine if changes to Attachment 1 are also required.
- This procedure involves operating 480 volt breakers/disconnects and requires PPE consisting of hearing protection, non-melting (untreated natural fiber) pants and long-sleeve shirt, safety glasses and leather or insulating gloves.
- This procedure may involve operating steam systems, and requires PPE consisting of leather gloves, safety glasses, and long sleeve natural fiber shirts.

1.0 INITIATING CONDITIONS

- WFI-SUMP-1 (red alarm), PUMP RM SUMP CORRECD WT FACTR (HIGH HIGH) and visual confirmation of a spill in the Evaporator room or Pump room.
- Visual confirmation of a waste release outside of building confinement.
- Catastrophic failure of tank TK-C-100.
2.0 ACTIONS

2.1 Initial Actions

2.1.1 IF a rapid facility shutdown or a facility evacuation is required, ACTIVATE one of the seismic shutdown switches.

2.1.2 WHEN performing Step 2.1.3, WRITE time of step completion on the laminated Duty Card AND RECORD time of step completion in the A-1 or Shift Manager logbook.

2.1.3 DIRECT control room operator to perform actions per Attachment 1.

2.1.4 IMMEDIATELY NOTIFY Central Shift Office (CSM) for emergency categorization and classification.

2.1.5 IF a waste-feed release into pump room or evaporator room or catastrophic leak from TK-C-100 is indicated, DETERMINE if K-1 ventilation system has failed as confirmed by 2 of the following 3 indicators:

Indicators
- PDI-K1-305 Rm. A Pressure
- PDIC-K1-304 Rm. B Pressure
- PDIC-K1-303 Rm. C Pressure.

2.1.6 DETERMINE if K2 ventilation system is running.

2.1.7 IF a loss of negative pressure has occurred in radiological controlled (hot side) area(s) and K2 ventilation system is not running, CONSIDER facility evacuation.

2.1.8 DIRECT all non-essential personnel to the lunch room, or equivalent safe area if building occupancy is unsafe, for HPT surveys.

2.1.8.1 REPORT any contamination detected, unusual odors or health symptoms to Shift Manager.

2.1.9 IF personnel are found to be contaminated, SEGREGATE them from others.

2.1.9.1 PROVIDE aide to injured personnel.

2.1.9.2 START decontamination process of any contaminated personnel.
2.1 Initial Actions (Cont.)

2.1.10 **ISOLATE** the affected areas.

2.1.11 **PERFORM** habitability surveys of non-radiological safe areas with the following:
- Operators
- IHTs
- HPTs.

2.1.12 **IF** radiological and/or chemical monitoring is/are needed, **PERFORM** radiological and chemical (VOCs and ammonia) monitoring.

2.1.13 **DON** proper PPE (Applicable only to personnel remaining within the 242-A facility).

2.1.14 **EVALUATE** need to evacuate, or to remain in a non-radiological safe area in the 242-A facility **AND**

**IMPLEMENT** appropriate action to either take cover or evacuate per TF-ERP-001.

2.1.15 **PROVIDE** the following to BED:
- Facility status
- Personnel accountability
- Location of personnel.

2.2 Follow-up Actions

2.2.1 **IF** K1 ventilation system is off (loss of negative pressure in radiological areas), **SECURE** radiological areas (e.g., doors taped).

2.2.2 **ASSIST** in the development of a mitigation plan to terminate chemical / high radiation condition or release.

2.2.3 **PERFORM** TO-600-060 to complete shutdown actions.
3.0  RECOVERY

3.1  Termination/Exit Criteria

- Confinement in 242-A Evaporator is confirmed or restored
- K1 ventilation system restored
- Spill/leak contained
- Radiation and chemical (VOCs and ammonia) readings have returned to an acceptable level
- Emergency is terminated in accordance RLEP 3.4 Event Termination, Reentry and Recovery.

3.2  Reentry and Recovery

3.2.1  IF K1 and/or K2 ventilation system(s) is off (negative pressure {less than 0.0 inches water gage} in radiological controlled areas), REQUEST stationary operating engineer to return system(s) to service.

3.2.2  CONFIRM all radiation monitoring equipment is operating.

3.2.3  CONFIRM facility equipment and systems are operating normally.
4.0 RECORDS

The performance of this procedure generates no records.
242-A Respond to Waste-Feed Release Into Pump Room or Evaporator Room or Catastrophic Failure of Tank TK-C-100

Attachment 1 - Waste-Feed Release Into Pump Rm or Evap Rm or Catastrophic failure of Tank TK-C-100 Duty Card

TIME LINE

TIME LINE

WFI-SUMP-1 High High
- Visual conformation of waste spill in pump room
- Visual conformation of waste spill outside confinement building
- Catastrophic failure of Tank TK-C-100

CHECK K1/K2 ventilation system is in operation on VCS HMI

PERFORM personnel protective actions
- DIRECT all non-essential personnel to the lunch room
- SECURE effected area

NOTIFY Shift Manager of actions taken

Evap. In Process Mode?
- NO
- YES

G-301 Shutdown Feed Pump P-102-AW

G-301 Is P-102-AW OFF
- NO
- YES

G-301 CLOSE HV-CA1-1

G-301 Is HV-CA1-1 CLOSED
- NO
- YES

G-301 DIRECT ER-2 Operator to CLOSE feed valve AW02E-WT-V-105 in AW Farm 02E Feed Pit

G-15 Shutdown Slurry Pump PB-2

G-15 Is PB-2 Shutdown
- NO
- YES

G-15 PLACE HV-CA1-2 to MANUAL BLOCK

G-13 LOWER FIC-EA1-1 steam flow to 0 output

NOTE
- PPE consisting of hearing protection, non-melting (untreated natural fiber) pants and long-sleeve shirt, safety glasses and leather or insulating gloves is required to operate 480 breakers/disconnects.
- PPE consisting of leather gloves, safety glasses, and long sleeve natural fiber shirts is required when operating steam systems.

WARNING
Electrical breakers can arc and spark when operated. Standing directly in front of an electrical breaker while operating can result in burns and electrical shock.

GO TO Recovery in TF-ERP-EVAP-015

GO TO Recovery section of TF-ERP-EVAP-015
242-A Respond to Waste-Feed Release Into Pump Room or Evaporator Room or Catastrophic Failure of Tank TK-C-100

Attachment 1 - Waste-Feed Release Into Pump Rm or Evap Rm or Catastrophic failure of Tank TK-C-100 Duty Card (Cont.)

TIME LINE

G-13

G-16

G-16

G-16

G-12

G-12

G-12

FV-EA-1-1 CLOSED (Air ON)

G-16

START taking Vacuum off of the Vacuum Condenser System

Vacuum has been removed

CLOSE HVEC2/3-1

OPEN HV-EC1-1

HV-EC1-1 OPEN

SHUTDOWN PB-1 Pump

PB-1 SHUTDOWN

PLACE HV-CA1-7 and HV-CA1-9 to DUMP position

A

NO

DIRECT operator to manually CLOSE H-30

NO

WAIT until vacuum has been removed

CLOSE HVEC2/3-1

OPEN HV-EC1-1

DIRECT operator to manually OPEN HV-EC1-1

NO

OPEN breaker A-1 on MCC-3

GO TO recovery section of TF-ERP-EVAP-015

WARNING
Failure to wear leather gloves, safety glasses, and long sleeve natural fiber shirts when operating steam systems could result in personnel injury.

NOTE
PPE consisting of hearing protection, non-melting (untreated natural fiber) pants and long-sleeve shirt, safety glasses and leather or insulating gloves is required to operate 480 breakers/disconnects

WARNING
Electrical breakers can arc and spark when operated. Standing directly in front of an electrical breaker while operating can result in burns and electrical shock.