Respond to Panel F Alarms at 242-S Evaporator

Technically Tank Farm Alarm Response Procedure

242-S Evaporator BLDG

USQ # TF-18-1416-S, Rev 0

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>
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<tr>
<td>I-1</td>
<td>10/09/2018</td>
<td>Operations Request</td>
<td>Removed references to LCO 3.5.</td>
</tr>
<tr>
<td>I-0</td>
<td>01/25/2016</td>
<td>Periodic Review</td>
<td>No technical changes were made during this periodic review.</td>
</tr>
<tr>
<td>H-0</td>
<td>11/20/2013</td>
<td>All changes are as a result of the periodic review process.</td>
<td>No technical changes were made during this periodic review.</td>
</tr>
<tr>
<td>G-2</td>
<td>05/03/2013</td>
<td>Global Change per ARP-T-431-00001 F-1. Inconsequential change to change procedure use type to Reference</td>
<td>Change procedure use type in the footer to Reference.</td>
</tr>
<tr>
<td>G-1</td>
<td>02/21/2013</td>
<td>DSA Implementation</td>
<td>Added new LCOs.</td>
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RECORDS

No records are generated during the performance of this procedure.
Facility: 242-S Evaporator Building

Panel: F  Alarm #: 1-6

Source: WT-LDA-130B  Setpoints: N/A

AMBER
LEAK DETECTED 241-SY PROCESS PITS (WT-LDA-130B)

Alarm Class: Environmental Impact

Alarm Description: A leak is detected in an SY process pit.

NOTE - Alarm Response Procedures are not designed for, nor intended to be applied to, "expected" alarms generated by approved work activities or procedures.

Immediate Actions:

[1] CHECK 241-SY-A and 241-SY-B valve pit leak detectors are not active AND IF 241-SY-A or 241-SY-B valve pit leak detectors are active, SHUTDOWN all physically connected transfer pumps.

[2] CHECK 241-SY-A flush pit leak detector is not active AND IF 241-SY-A flush pit leak detector is active, SHUTDOWN all physically connected transfer pumps.

[3] CHECK 241-SY-02A or 241-SY-02D leak detectors are not active AND IF 241-SY-02A or 241-SY-02D leak detectors are active, SHUTDOWN all physically connected transfer pumps.


Supplemental Actions:

[6] NOTIFY HPT.


(Continued on Next Page)
Facility: 242-S Evaporator Building

Panel: F     Alarm #: 1-6

Source: WT-LDA-130B    Setpoints: N/A

Possible Causes:

1. Liquid intrusion into valve pits, pump pits, or other process pits of 241-SY tank farm. See H-14-020831, Sheet 1.
2. Circuit failure of one of the leak detectors.

References:

Document: RPP-16922, Environmental Specification Requirements
          TF-AOP-011, Response to Chemical and/or Radiological Events
          TFC-ESHQ-ENV_FS-C-01, Environmental Notification
Facility: 242-S Evaporator Building

Panel: F  Alarm #: 1-7
Source: WT-LDA-531  Setpoints: 0.25 IN. WG

Alarm Class: N/A
Alarm Description: A leak is detected in an SY cleanout box.
(OUT OF SERVICE)

NOTE - Alarm Response Procedures are not designed for, nor intended to be applied to, "expected" alarms generated by approved work activities or procedures.

Immediate Actions: None

Supplemental Actions: None

Possible Causes: None

References:

Drawings: H-14-020831, Sheet 5, H-2-37761, H-2-37732, H-2-37735,
Document: RPP-16922, Environmental Specification Requirements
TF-AOP-011, Response to Chemical and/or Radiological Events
Respond to Panel F Alarms at 242-S Evaporator

Facility: 242-S Evaporator Building

Panel: F  Alarm #: 2-1

Source: N/A  Setpoints: N/A

Alarm Class: N/A

Alarm Description: A leak is detected in Pit-01C. (WSTA-WFA-104B)

(OUT OF SERVICE)

Immediate Actions:

None

Possible Causes:

None

References:

Drawings: Drawings H-2-71564, H-2-37761, H-14-020531
Document: None
Facility: 242-S Evaporator Building

Panel: F  
Alarm #: 2-2

Source: N/A  
Setpoints: N/A

Alarm Class: N/A

Alarm Description: A leak is detected in Pit-02C

(OUT OF SERVICE)

Immediate Actions:
None

Possible Causes:
None

References:
- Drawings: Drawings H-2-71564, H-2-37761, H-14-020531
- Document: None
Facility: 242-S Evaporator Building

Panel: F  Alarm #: 2-3

Source: N/A  Setpoints: N/A

Alarm Class: N/A

Alarm Description: A leak is detected in Pit-03C.

(OUT OF SERVICE)

Immediate Actions:

None

Possible Causes:

None

References:

Drawings: Drawings H-2-71564, H-2-37761, H-14-020531
Document: None
Facility: 242-S Evaporator Building

Panel: F  Alarm #: 3-2

Source: VTP-XA-441  Setpoints:  N/A

Alarm Class:  Technical Safety Requirements (LCO 3.1, DST Primary Tank Ventilation Systems, and LCO 3.4, DST Induced Gas Release Event Flammable Gas Control)

Alarm Description:  SY Primary A Train Exhauster is OFF.

NOTE - Alarm Response Procedures are not designed for, nor intended to be applied to, "expected" alarms generated by approved work activities or procedures.

Immediate Actions:

[1] IF Panel F Alarm #4-2, HIGH RADIATION 241-SY PRIMARY EXH A TRAIN (VTP-RAH-624) is lit, \textbf{RESPOND} per ARP-T-431-00003, BETA CAM HIGH RADIATION SY241-VTP-RAH-624 alarm.

Supplemental Actions:

[2] \textbf{NOTIFY} Shift Manager of findings AND \textbf{RESPOND} to alarm per ARP-T-431-00101 and ARP-T-431-00003 as appropriate.

[3] \textbf{REQUEST} Shift Manager \textbf{NOTIFY} Environmental per Environmental on-call list, TFC-ESHQ-ENV_FS-C-01.

Possible Causes:

1. Duct Heater HI dT.
2. Duct Heater LO dT.
4. Seal Pot LO Level.
5. Record Sample flow low.
8. High inlet vacuum.
9. Stack flow low
10. Loss of power.
12. Duct Heater HI dT.
13. Duct Heater LO dT.
15. Seal Pot LO Level.
16. Record Sample flow low.
17. Beta CAM flow low.
19. High inlet vacuum.
20. Stack flow low.
21. Loss of power.
22. Instrument malfunction.

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Facility: 242-S Evaporator Building

Panel: F  Alarm #: 3-2

Source: VTP-XA-441  Setpoints: N/A

WHITE

EXHAUSTERC FAIL/ GENERAL ALARM
SY PRIMARY EXH
A TRAIN
(VTP-XA-441)

(Continued)

References:

Documents:  ARP-T-431-00003, Respond to Alarms at SY241 A-Train Primary Exhauster.
            ARP-T-431-00101, Respond to Alarms in the 241-SY-271 Instrument Building
            TFC-ESHQ-ENV_FS-C-01, Environmental Notification
            HNF-SD-WM-TSR-006, Tank Farms Technical Safety Requirements
Respond to Panel F Alarms at 242-S Evaporator

**Facility:** 242-S Evaporator Building

**Panel:** F  
**Alarm #:** 3-6

**Source:** WT-LDA-281  
**Setpoints:** N/A

**Alarm Class:** Environmental Impact

**Alarm Description:** Leak detected 241-SY supernate lines 281 thru 284 (WT-LDA-281)

**NOTE** - Alarm Response Procedures are not designed for, nor intended to be applied to, "expected" alarms generated by approved work activities or procedures.

- These alarms are not physically connected to any active transfer lines.

**Immediate Actions:**

[1]  
**NOTIFY** Shift Manager AND  
**REQUEST** Shift Manager **NOTIFY** Environmental per Environmental on-call list, TFC-ESHQ-ENV_FS-C-01.

**Possible Causes:**

1. Loss of power.

**References:**

- **Drawings:** H-2-37735, H-2-72396, H-2-37761
- **Documents:** RPP-16922, Environmental Specification Requirements  
  TFC-ESHQ-ENV_FS-C-01, Environmental Notification
Facility: 242-S Evaporator Building

Panel: F  Alarm #: 4-1

Source: SUPERNATANT LINES  Setpoints: N/A

Alarm Class: N/A

Alarm Description: SN LINES OVERTEMP (INACTIVE)

NOTE - Alarm Response Procedures are not designed for, nor intended to be applied to, "expected" alarms generated by approved work activities or procedures.

Immediate Actions: No response required.
Facility: 242-S Evaporator Building

Panel: F  Alarm #: 4-2

Source: SY296-VTP-CAM-602  Setpoints:  3000 cpm

Alarm Class: Technical Safety Requirements (LCO 3.1, DST Primary Tank Ventilation Systems, and LCO 3.4, DST Induced Gas Release Event Flammable Gas Control)

Alarm Description: High radiation is detected on SY A Train Primary Exhauster system.

Automatic Actions:

1. A-Train Primary Exhauster shuts down.

NOTE - Alarm Response Procedures are not designed for, nor intended to be applied to, "expected" alarms generated by approved work activities or procedures.

Immediate Actions:

[1] RESPOND per ARP-T-431-00003, BETA CAM HIGH RADIATION SY241-VTP-RAH-624 alarm AND REQUEST Shift Manager NOTIFY Environmental per Environmental on-call list, TFC-ESHQ-ENV_FS-C-01.


Possible Causes:

1. High Radiation in A-Train Primary Exhaust air stream.
2. Alarm setpoint on CAM is set to low and background radiation level spikes have gone above the CAM alarm setpoint.
3. Breakthrough of primary and secondary high efficiency particulate air filters (HEPA).
5. High Beta radiation detected.
6. Failure of detector.
7. Power Failure.
8. Possible high radon.

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Respond to Panel F Alarms at 242-S Evaporator

Panel: F  Alarm #: 4-2

Source: SY296-VTP-CAM-602  Setpoints: 3000 cpm

HIGH RADIATION
241-SY
PRIMARY EXH
A TRAIN
(VTP-RAH-624)

(Continued)

References:


Document: ARP-T-431-00003, Respond to Alarms at 241-SY A-Train Primary Exhauster
RPP-16922, Environmental Specification Requirements
TFC-ESHQ-ENV_FS-C-01, Environmental Notification
HNF-SD-WM-TSR-006, Tank Farms Technical Safety Requirements
Facility: 242-S Evaporator Building

Panel: F  Alarm #: 4-3

Source: VTA-RAH-910C  Setpoints: 3000 cpm

Alarm Class: Environmental Impact

Alarm Description: High radiation is detected in SY Annulus Exhaust system.

NOTE - Alarm Response Procedures are not designed for, nor intended to be applied to, "expected" alarms generated by approved work activities or procedures.

Immediate Actions:

[1] **RESPOND** per ARP-T-431-00101, HIGH RAD ALARM ANNULUS EXHAUST STACK (VTA RAH 910B) alarm **AND**

**REQUEST** Shift Manager **NOTIFY** Environmental per Environmental on-call list, TFC-ESHQ-ENV_FS-C-01.

[2] **EXIT** this procedure.

Possible Causes:

1. Annulus exhaust system high radiation in SY farm.
2. Setpoint on CAM is set too low and background radiation level spikes have gone above CAM alarm setpoint.
3. Breakthrough of primary and secondary High-efficiency particulate air filters (HEPA).
5. Power failure.
6. Possible high radon.

References:


Respond to Panel F Alarms at 242-S Evaporator

Facility: 242-S Evaporator Building

Panel: F     Alarm #: 4-4
Source: VTP-RAH-301C     Setpoints: 3000 cpm

Alarm Class: Technical Safety Requirements (LCO 3.1, DST Primary Tank Ventilation Systems, and LCO 3.4, DST Induced Gas Release Event Flammable Gas Control)
Alarm Description: High radiation detected on SY B Train Primary Exhauster system.

Automatic Actions:
1. B-Train Primary Exhauster shuts down.
2. Warning bell sounds
3. Clear rotating beacon (XA-101) is ILLUMINATED
4. Red rotating beacon (XA-301) is ILLUMINATED
5. Vacuum pump shuts down.
6. Display Terminal MV-101 displays alarm message
7. Display Terminal MV-102 scrolls alarm message.

NOTE - Alarm Response Procedures are not designed for, nor intended to be applied to, "expected" alarms generated by approved work activities or procedures.

Immediate Actions:
[1] **RESPOND** per ARP-T-431-00004, SY241-VTP-RA-301 BETA HI RAD alarm AND **REQUEST** Shift Manager **NOTIFY** Environmental per Environmental on-call list, TFC-ESHQ-ENV_FS-C-01.
[2] **EXIT** this procedure.

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Facility: 242-S Evaporator Building

Panel: F  Alarm #: 4-4

Source: VTP-RAH-301C  Setpoints: 3000 cpm

Possible Causes:

1. High Radiation in B-Train Primary Exhaust air stream.
2. Alarm Setpoint on CAM is set to low and background radiation level spikes have gone above CAM alarm setpoint.
3. Breakthrough of primary and secondary high efficiency particulate air filters (HEPA).
5. High Beta radiation detected.
6. Failure of detector.
7. Power failure.
8. Possible high radon.

References:

Respond to Panel F Alarms at 242-S Evaporator

Facility: 242-S Evaporator Building

Panel: F  Alarm #: 4-5

Source: VTA-XA-910B  Setpoints: System Failure

Alarm Class: Environmental Impact

Alarm Description: A failure has occurred on the 241-SY Annulus Exhaust Stack monitoring system.

NOTE - Alarm Response Procedures are not designed for, nor intended to be applied to, "expected" alarms generated by approved work activities or procedures.

Immediate Actions:

[1] NOTIFY Shift Manager of findings AND REQUEST HPT to investigate the alarm.


Supplemental Actions:

[3] IF CAM is found to have failed, INITIATE repair or replacement.

Possible Causes:

1. Annulus exhauster radiation monitor failure in SY farm.
2. Loss of power to the monitor.
3. Loss of flow to the monitor.
4. Ongoing maintenance PM.

References:

Documents: TFC-ESHQ-ENV_FS-C-01, Environmental Notification
Facility: 242-S Evaporator Building

Panel: F  Alarm #: 4-6

Source: VTP-XA-301B  Setpoints: System Failure

Alarm Class: Technical Safety Requirements (LCO 3.1, DST Primary Tank Ventilation Systems, and LCO 3.4, DST Induced Gas Release Event Flammable Gas Control)

Alarm Description: There is a failure with the SY B Train Primary Exhaust Stack monitoring system.

Automatic Actions:
1. B-Train Exhauster may shut down.
2. Heater may shut down.

NOTE - Alarm Response Procedures are not designed for, nor intended to be applied to, "expected" alarms generated by approved work activities or procedures.

Immediate Actions:
[1] IF Panel F Alarm #4-4, HIGH RADIATION 241-SY PRIMARY EXH B TRAIN (VTP-RAH-301C) is lit, RESPOND per ARP-T-431-00004, SY241-VTP-RA-301 BETA HI RAD alarm.

Supplemental Actions:
[2] NOTIFY Shift Manager of findings AND RESPOND to alarm per ARP-T-431-00101 and ARP-T-431-00004 as appropriate.


Possible Causes:
1. Instrument failure.
2. Loss of power to CAM.
3. Low sample flow.
4. Ongoing maintenance PM.

References: