Tank Farm Alarm Response Procedure

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

CHANGE HISTORY (≤ LAST 5 REV-MODS )

<table>
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<tr>
<th>Rev-Mod</th>
<th>Release Date</th>
<th>Justification</th>
<th>Summary of Changes</th>
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<tr>
<td>H-2</td>
<td>10/09/2018</td>
<td>Periodic Review and updating requirements.</td>
<td>Removed references to LCO 3.5 and completed editorial changes.</td>
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<tr>
<td>H-1</td>
<td>08/30/2017</td>
<td>Operations request for consistency in ARPs</td>
<td>Mass change to Immediate action responses for SY-101. SY-102 &amp; AY-103 for consistency in when a transfer is in progress.</td>
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<tr>
<td>H-0</td>
<td>07/13/2016</td>
<td>Periodic Review</td>
<td>No changes.</td>
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<tr>
<td>G-1</td>
<td>08/21/2014</td>
<td>Inconsequential Change</td>
<td>Change Base Ops to Production Ops.</td>
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<tr>
<td>G-0</td>
<td>03/12/2014</td>
<td>Periodic review comment resolution.</td>
<td>Minor editorial changes to make procedure flow better.</td>
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ANN-101 or ANN-101-2 or ANN-101-3

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### Respond to Alarms in the 241-SY-271 Instrument Building

**ANN-102 or ANN-102-2 or ANN-102-3**

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### RECORDS

No records are generated during the performance of this procedure.
Respond to Alarms in the 241-SY-271 Instrument Building

Facility: 241-SY-271 Instrument Building

Panel: ANN-101-2  Alarm #: 02

Source: PDIT-210, 211, and 212  Setpoint: -0.3 inches WG

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

Alarm Description: HIGH PRESSURE TANK 101 (LOW VACUUM) (WST-PAHH-101), High pressure (low vacuum) in Tank 101-SY.

NOTE - Alarm Response Procedures are not designed for, nor intended to be applied to, "expected" alarms generated by approved work activities or procedures.
- This alarm can also be activated if all three (3) PDIT transmitters fail (PAX alarm function).

Immediate Actions:

[1] EVACUATE all personnel from SY Farm to a protected or upwind area.
[2] CONTROL further access to Farm AND AS directed by Shift Manager, STOP waste disturbing activities in SY Farm.
[6] CHECK alarms in 271-SY prior to restarting primary ventilation to determine alarms associated with ventilation system shutdown.

Supplemental Actions:

[8] CONTINUE to monitor system parameters AND NOTIFY Shift Manager of changing indications.

(Continued on Next Page)
Facility: 241-SY-271 Instrument Building

Panel: ANN-101-2  Alarm #: 02

Source: PDIT-210, 211, and 212  Setpoint: -0.3 inches WG

Possible Causes:
1. Primary Exhauster has shut down.
3. Dome intrusive work.
4. Open Riser, open pit drain and or missing sealing media on pit cover block(s), cracks, seams or penetrations that admit too much air to the Pit(s).
5. Failure of Pressure Transmitters.

References:

Drawings:  H-14-020631
Documents: TF-AOP-021, Response to Tank Farm Ventilation Upset
           TO-060-245, Operate SY241 Primary Exhauster Systems
           RPP-16922, Environmental Specification Requirements
           OSD-T-151-00007, Operating Specifications for the Double-Shell Storage Tanks
           HNF-SD-WM-TSR-006, Tank Farms Technical Safety Requirements
Respond to Alarms in the 241-SY-271 Instrument Building

Facility: 241-SY-271 Instrument Building

Panel: ANN-101-3  Alarm #: 03

Source: PDIT-210, 211, and 212  Setpoint: -5.5 inches WG

Alarm Class: Technical Safety Requirements (TSR LCO 3.4, DST Induced Gas Release Event Flammable Gas Control)

Alarm Description: LOW PRESSURE TANK 101 (HI VACUUM) (WST-PALL-101), Low pressure (high vacuum) in Tank 101-SY.

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 status of the following annunciators:
   - ANN-102-3 alarm 03 LOW PRESSURE TANK 102 (HI VACUUM) (WST-PALL-102)
   - ANN-103 alarm 03 LOW PRESSURE TANK 103 (HI VACUUM) (WST-PALL-103).


[6] IF directed by Shift Manager/OE, ADJUST tank vacuum by adjusting air flow of the inlet filters on tanks 101-SY, 102-SY and 103-SY.

Possible Causes:

1. Obstruction of air inlet such as a foreign object across an inlet screen.
2. Frost or ice buildup on the air inlet screen.
3. Dirty or plugged air inlet filter.
4. Vacuum or air flow rates of air inlets out of adjustment.
5. Instrument malfunction.

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Respond to Alarms in the 241-SY-271 Instrument Building

Facility: 241-SY-271 Instrument Building

Panel: ANN-101-3  Alarm #: 03

Source: PDIT-210, 211, and 212  Setpoint: -5.5 inches WG

WHITE
LOW PRESSURE TANK 101 (HI VACUUM) (WST-PALL-101)

References:

Drawings: H-14-020631
Documents: TO-060-245, Operate SY241 Primary Exhauster Systems
OSD-T-151-00007, Operating Specifications for the Double-Shell Storage Tanks
HNF-SD-WM-TSR-006, Tank Farms Technical Safety Requirements

(Continued)
Facility: 241-SY-271 Instrument Building

Panel: B-3 ANN-101  
Alarm #: 07

Source: SY101-WSTA-LDT-151  
SY101-WSTA-LDT-152  
SY101-WSTA-LDT-153

Setpoint: 0.25 inches ± 0.25 inches above the annulus bottom

Alarm Class: Environmental

Alarm Description: ANNULUS LEAK DETECTED TANK 101 (WSTA-LDA-107), Liquid detected by 241-SY-101 annulus leak detectors.

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:

[2] IF a transfer is in progress into or out of 241-SY-101, REQUEST MBD Operator shut down transfer.
[3] CHECK local displays of Annulus ENRAFs SY101-WSTA-LDT-151, SY101-WSTA-LDT-152, and SY101-WSTA-LDT-153 for the following:
   - ENRAFs are not in alarm
   - Displacers are less than 0.25 inches from the bottom of the annulus tank.
   [5.1] IF annulus leak detectors show increased level in the annulus.
      [5.1.1] Shift Manager EVALUATE TF-AOP-005 entry criteria.
      [5.1.2] Shift Manager NOTIFY maintenance to perform leak detection verification per 6-LDD-485.

Supplemental Actions:


(Continued on Next Page)
Respond to Alarms in the 241-SY-271 Instrument Building

Facility: 241-SY-271 Instrument Building

Panel: B-3 ANN-101
Source: SY101-WSTA-LDT-151
      SY101-WSTA-LDT-152
      SY101-WSTA-LDT-153
Alarm #: 07
Setpoint: 0.25 inches ± 0.25 inches above the annulus bottom

Possible Causes:
1. Waste leaking from primary tank to annulus.
2. Condensate, rainwater, snowmelt, or other water has entered the annulus from outside.
3. Instrument malfunction.
4. ENRAF performed a reset due to loss of power.
5. Time delay relay fails.

References:
Drawings: H-14-020531
Documents: RPP-16922, Environmental Specification Requirements
          OSD-T-151-00031, Operating Specifications for Tank Farm Leak Detection and
          Single Shell Tank Intrusion Detection, Table 3-1
          HNF-SD-WM-TSR-006, Tank Farms Technical Safety Requirements
          TF-AOP-005, Response to Unexpected Tank Temperature or Flammable Gas
          Increase or Level Change
          6-LDD-485, ENRAF Series 854 Annulus Leak Detection Gauges Calibration and
          Maintenance
Facility: 241-SY-271 Instrument Building

Panel: B-3 ANN-101  Alarm #: 08

Source: SY241-VTP-XA-101B  Setpoint: N/A

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

Alarm Description: EXHAUSTOR TROUBLE PRIMARY EXHAUST B TRAIN (SY271-VTP-XA-101B), Primary exhauster trouble B train.

Automatic Actions:
1. B-Train Primary Exhauster may shut down.
2. Vacuum pump may shut down.
3. 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 exhauster is shutdown, EVACUATE personnel from SY Farm to a protected or upwind area.
   [1.1] NOTIFY Shift Manager of alarms and actions.
   [1.2] REQUEST Shift Manager respond per TF-AOP-021.
         [1.2.1] IF directed by Shift Manager, STOP waste disturbing activities to SY Farm.


[3] REPORT findings to Shift Manager.

[4] RESPOND to other alarms per their associated Alarm Response Procedure.

Supplemental Actions:


[6] INITIATE work order to troubleshoot and repair or replace any degraded components.

(Continued on Next Page)
Facility: 241-SY-271 Instrument Building

Panel: B-3 ANN-101
Source: SY241-VTP-RA-301

Alarm #: 08
Setpoint: N/A

EXHAUSTER TROUBLE
PRIMARY EXHAUST B TRAIN
(SY271-VTP-XA-101B)

Possible Causes:

1. High Radiation in B-Train Primary Exhaust air stream.
2. Alarm Setpoint on CAM is set 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) have gone above the CAM alarm setpoint.
4. Instrumentation malfunction.
5. Beta HI Rad.
6. Heater temp HI.
7. Heater temp LO.
8. Seal Pot level HI.
9. Seal POT level LO.
10. Record Sample flow LO.
11. CAM sample flow LO.
13. High inlet vacuum.
14. Stack flow LO.
15. Loss of power.
17. Variable Frequency Drive failure.
18. TF-OPS-005 on 241-SY B-Train CAM.

(Continued on Next Page)
Facility: 241-SY-271 Instrument Building

Panel: B-3 ANN-101  Alarm #: 08
Source: SY241-VTP-RA-301  Setpoint: N/A

WHITE
EXHAUST TROUBLE
PRIMARY EXHAUST B TRAIN
(SY271-VTP-XA-101B)

References:

Drawings:  H-14-104831, H-14-104180, H-14-104826, H-14-104166, H-14-030031,
           H-2-140002, H-2-37746, H-2-815214, H-14-020131
Documents: RPP-16922, Environmental Specification Requirements
           TO-060-245, Operate SY241 Primary Exhauster Systems
           TF-AOP-021, Response to Tank Farm Ventilation Upset
           HNF-SD-WM-TSR-006, Tank Farm Technical Safety Requirement

(Continued)
Respond to Alarms in the 241-SY-271 Instrument Building

Facility: 241-SY-271 Instrument Building

Panel: B-3 ANN-101  Alarm #: 09

Source: SY271-VTP-PDT-182  Setpoint: 0.3 inches WG

LOW D/P PRIMARY EXHAUST B TRAIN (SY271-VTP-PDAL-182B)

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

Alarm Description: LOW D/P PRIMARY EXHAUST B TRAIN (SY271-VTP-PDAL-182B), Low differential pressure in primary exhaust HEPA filter

Automatic Actions:

1. Primary Exhauster B-Train 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] ENSURE exhauster is shutdown.
[2] EVACUATE personnel from SY Farm to a protected or upwind area.
[4] IF directed by Shift Manager, STOP waste disturbing activities in SY Farm.

Supplemental Actions:


Possible Causes:

1. The second (downstream) HEPA Filter, SY241-VTP-FLT-003, has had a gross breakthrough due to a spray leak or high pressure condition.
2. The second (downstream) HEPA Filter system has a low dP.
3. Incorrect differential pressure value input to the HEPA Filter DP interlock system PLC.

(Continued on Next Page)
Respond to Alarms in the 241-SY-271 Instrument Building

Facility: 241-SY-271 Instrument Building

Panel: B-3 ANN-101        Alarm #: 09

Source: SY271-VTP-PDT-182   Setpoint: 0.3” WG

References:

            H-14-020131, H-14-020231

Documents:   TO-060-245, Operate SY241 Primary Exhauster Systems
             RPP-16922, Environmental Specification Requirements
             OSD-T-151-00007, Operating Specifications for the Double-Shell Storage Tanks
             TF-AOP-021, Response to Tank Farm Ventilation Upset
             HNF-SD-WM- TSR-006, Tank Farms Technical Safety Requirements

(Continued)
Respond to Alarms in the 241-SY-271 Instrument Building

Facility: 241-SY-271 Instrument Building

Panel: B-3 ANN-101  Alarm #: 10
Source: SY241-VTP-PDT-180  Setpoint: 5.7 inches WG

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

Alarm Description: HIGH D/P PRIMARY EXHAUST B TRAIN (SY271-VTP-PDAH-180B), High differential pressure in primary exhaust HEPA filter.

Automatic Actions:
1. Primary Exhauster B-Train 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] ENSURE exhauster is shutdown.
[2] EVACUATE personnel from SY Farm to a protected or upwind area.
[3] NOTIFY Shift Manager TF-AOP-021 Entry Conditions have been met.
[4] IF directed by Shift Manager, STOP waste disturbing activities to SY Farm.

Supplemental Actions:
[5] CONTINUE to monitor system parameters AND
NOTIFY Shift Manager of changing indications.
[6] REQUEST Shift Manager to notify Maintenance to perform the following:
[6.1] DOWNLOAD DP Interlock system PLC memory.
[6.2] CHECK status indicators on SY241-VTP-ENCL-123.

Possible Causes:
1. One or both of the HEPA filters SY241-VTP-FLT-002 and -003 has become plugged. An examination of historical data should show a gradual increase in the DP over time.
2. The first (upstream) HEPA Filter Train has become saturated with condensation.
3. Incorrect differential pressure value input to the HEPA Filter DP Interlock system PLC.

(Continued on Next Page)
Respond to Alarms in the 241-SY-271 Instrument Building

Facility: 241-SY-271 Instrument Building

Panel: B-3 ANN-101                     Alarm #: 10

Source: SY241-VTP-PDT-180              Setpoint: 5.7 inches WG

Reference:


Documents: TO-060-245, Operate SY241 Primary Exhauster Systems
           RPP-16922, Environmental Specification Requirements
           OSD-T-151-00007, Operating Specifications for the Double-Shell Storage Tanks
           TF-AOP-021, Response to Tank Farm Ventilation Upset
           HNF-SD-WM-TSR-006, Tank Farms Technical Safety Requirements

HIGH D/P PRIMARY EXHAUST B TRAIN
(SY271-VTP-PDAH-180B)
Respond to Alarms in the 241-SY-271 Instrument Building

Facility: 241-SY-271 Instrument Building

Panel: ANN-102-2  
Alarm #: 02

Source: PDIT-220, -221 and -222  
Setpoint: -0.3 inches WG

WHITE HIGH PRESSURE TANK 102 (LOW VACUUM) (WST-PAHH-102)

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

Alarm Description: HIGH PRESSURE TANK 102 (LOW VACUUM) (WST-PAHH-101), High pressure (low vacuum) in Tank 102-SY.

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

- This alarm can also be activated if all three (3) PDIT transmitters fail (PAX alarm function).

Immediate Actions:

[1] EVACUATE all personnel from SY Farm to a protected or upwind area.
[2] CONTROL further access to farm.
[3] IF directed by Shift Manager, STOP waste disturbing activities in SY Farm.
[7] CHECK alarms in 271-SY prior to restarting primary ventilation to determine alarms associated with ventilation system shutdown.
[8] REPORT new alarms to the Shift Manager.

Supplemental Actions:

[9] CONTINUE to monitor system parameters AND
NOTIFY Shift Manager of changing indications.

(Continued on Next Page)
Facility: 241-SY-271 Instrument Building

Panel: ANN-102-2       Alarm #: 02

Source: PDIT-220, -221 and -222     Setpoint: -0.3 inches WG

References:
- Drawings: H-14-020631
- Documents: TO-060-245, Operate SY241 Primary Exhauster Systems
RPP-16922, Environmental Specification Requirements
OSD-T-151-00007, Operating Specifications for the Double-Shell Storage Tanks
TF-AOP-021, Response to Tank Farm Ventilation Upset
HNF-SD-WM-TSR-006, Tank Farms Technical Safety Requirements

Details:
- WHITE
- HIGH PRESSURE TANK 102
  (LOW VACUUM)
  (WST-PAHH-102)

Possible Causes:
1. Primary Exhauster has shut down.
3. Dome intrusive work.
4. Open Riser, open pit drain and or missing sealing media on pit cover block(s), cracks, seams or penetrations that admits to much air to the Pit(s).
5. Failure of Pressure Transmitters.
Respond to Alarms in the 241-SY-271 Instrument Building

Facility: 241-SY-271 Instrument Building

Panel: ANN-102-3  Alarm #: 03

Source: PDIT-220, -221 and -222  Setpoint: -5.5 inches WG

Alarm Class: Technical Safety Requirements (TSR LCO 3.4, DST Induced Gas Release Event Flammable Gas Control)

Alarm Description: LOW PRESSURE TANK 102 (HI VACUUM) (WST-PALL-102), Low pressure (high vacuum) in Tank 102-SY.

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 status of the following annunciators:
   - ANN-101-3 alarm 03 LOW PRESSURE TANK 101 (HI VACUUM) (WST-PALL-101)
   - ANN-103-3 alarm 03 LOW PRESSURE TANK 103 (HI VACUUM) (WST-PALL-103).


[5] REPORT findings to Shift Manager.

Supplemental Actions:

[6] IF directed by Shift Manager/OE, ADJUST tank vacuum by adjusting air flow of the inlet filters on tanks 101-SY, 102-SY and 103-SY.

(Continued on Next Page)
Facility: 241-SY-271 Instrument Building

Panel: ANN-102-3  Alarm #: 03

Source: PDIT-220, -221 and -222  Setpoint: -5.5 inches WG

Possible Causes:

1. Obstruction of air inlet such as a foreign object across an inlet screen.
2. Frost or ice buildup on the air inlet screen.
3. Dirty or plugged air inlet filter.
4. Vacuum or air flow rates of air inlets out of adjustment.
5. Instrument malfunction.

References:

Drawings: H-14-020631
Documents: TO-060-245, Operate SY241 Primary Exhauster Systems
          OSD-T-151-00007, Operating Specifications for the Double-Shell Storage Tanks
          HNF-SD-WM-TSR-006, Tank Farms Technical Safety Requirements
Facility: 241-SY-271 Instrument Building

Panel: B-3 ANN-102
Alarm #: 04

Sources:
<table>
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<th>Source</th>
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<tr>
<td>SY241-VTP-PDT-180</td>
<td>-0.5 inches WG (downscale failure)</td>
</tr>
<tr>
<td>SY241-VTP-PDT-182</td>
<td>11.0 inches WG (upscale failure)</td>
</tr>
</tbody>
</table>

Setpoint:

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

Alarm Description: D/P INTERLOCK TRANSMITTER FAILURE B TRAIN (SY271-VTP-XA-330), Differential pressure interlock transmitter failure.

Automatic Actions:
1. Primary Exhauster B-Train 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. ENSURE exhauster is shutdown.
2. EVACUATE personnel from SY Farm to a protected or upwind area.
3. NOTIFY Shift Manager of alarms and actions.
4. REQUEST Shift Manager respond per TF-AOP-021.
5. IF directed by Shift Manager, STOP waste disturbing activities to SY Farm.

Supplemental Actions:

6. IF directed by Shift Manager/OE, RESTART primary ventilation per TO-060-245.
7. CONTINUE to monitor system parameters AND NOTIFY Shift Manager of changing indications.
8. REQUEST Shift Manager to notify Maintenance to download DP Interlock System PLC memory.
9. CHECK status indicators on ENCL-123.
10. CHECK failed DP transmitter.

(Continued on Next Page)
Respond to Alarms in the 241-SY-271 Instrument Building

Facility: 241-SY-271 Instrument Building

Panel: B-3 ANN-102  Alarm #: 04

Source:          Setpoint:
SY241-VTP-PDT-180  -0.5 inches WG (downscale failure)
SY241-VTP-PDT-182  11.0 inches WG (upscale failure)

Possible Causes:

1. One or more of the High or Low DP Transmitters.
2. SY241-VTP-PDT-180/182 has failed.
3. Signals from at least one of the differential pressure transmitters have been interrupted.
4. Programmable Logic Controller has failed.
5. Electrical power to at least one of the differential pressure transmitters has failed.
6. Power loss and/or power supply failure.

References:

Documents: TO-060-245, Operate SY241 Primary Exhauster Systems
RPP-16922, Environmental Specification Requirements
TF-AOP-021, Response to Tank Farm Ventilation Upset
HNF-SD-WM-TSR-006, Tank Farms Technical Safety Requirements
Respond to Alarms in the 241-SY-271 Instrument Building

Facility: 241-SY-271 Instrument Building

Panel: B-3 ANN-102  Alarm #: 07
Source: SY102-WSTA-LDT-151  Setpoint: 0.25 inches ± 0.25 inches above the annulus bottom
SY102-WSTA-LDT-152
SY102-WSTA-LDT-153

Alarm Class: Environmental
Alarm Description: ANNULUS LEAK DETECTED TANK 102 (WSTA-LDA-112), Liquid detected by 241-SY-102 annulus leak detectors.

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:

[2] IF a transfer is in progress into or out of 241-SY-102, REQUEST MBD Operator shut down transfer.
[3] CHECK local displays of Annulus ENRAFs SY102-WSTA-LDT-151, SY102-WSTA-LDT-152, and SY102-WSTA-LDT-153 for the following:
   • ENRAFs are not in alarm
   • Displacers are less than 0.25 inches from the bottom of the annulus tank.
   [4.1] NOTIFY Shift Manager of alarm, actions and findings.
   [4.1.1] Shift Manager EVALUATE TF-AOP-005 entry criteria.
   [4.1.2] Shift Manager NOTIFY maintenance to perform leak detection verification per 6-LDD-485.

Supplemental Actions:

[5] Shift Manager NOTIFY Environmental On-Call per TF-REC-001.

(Continued on Next Page)
Respond to Alarms in the 241-SY-271 Instrument Building

Facility: 241-SY-271 Instrument Building

Panel: B-3 ANN-102

Alarm #: 07

Source: SY102-WSTA-LDT-151
SY102-WSTA-LDT-152
SY102-WSTA-LDT-153

Setpoint: 0.25 inches ± 0.25 inches above the annulus bottom

Possible Causes:

1. Waste leaking from primary tank to annulus.
2. Condensate, rainwater, snowmelt, or other water has entered the annulus from outside.
3. Instrument malfunction.
4. ENRAF performed a reset due to loss of power.

Time delay relay fails.

References:

Drawings: H-14-020531
Documents: RPP-16922, Environmental Specification Requirements
OSD-T-151-00031, Operating Specifications for Tank Farm Leak Detection and Single Shell Tank Intrusion Detection, Table 3-1
HNF-SD-WM-TSR-006, Tank Farms Technical Safety Requirements
TF-AOP-005, Response to Unexpected Tank Temperature or Flammable Gas Increase or Level Change
6-LDD-485, ENRAF Series 854 Annulus Leak Detection Gauges Calibration and Maintenance
Respond to Alarms in the 241-SY-271 Instrument Building

Facility: 241-SY-271 Instrument Building

Panel: B-3 ANN-102  Alarm #: 08

Source: ZSH-221, ZSH-223  Setpoint: N/A

Alarm Class: Equipment Status

Alarm Description: VALVE POSITION HI PRESS FLUSH PITS (WT-XA-804), Limit switch on Valve V-221 or V-223.

Automatic Actions:
1. Activates master pump 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] REQUEST Shift Manager to CONTACT Industrial Health about the following:
   • Extent of conditions to determine if additional PPE/monitoring is required
   • Performance of a brief with employees prior to releasing to field activities.

[2] Visually CHECK to see that Valve SYVPA-WT-V-223 on 241-SY-A Valve Pit is CLOSED.

[3] IF the alarm ("Valve Position VPA HI PRESS FLUSH PITS (WT-XA-804))" does not clear, CYCLE valve SYVPA-WT-V-223 and any other valves necessary per Shift Manager direction, to clear the alarm.


[5] ENSURE Valve SYVPA-WT-V-223 on the 241-SY-A Valve Pit is CLOSED.


Possible Causes:
1. Valves V-221 or V-223 are OPEN or not fully shut.
2. Maintenance work on or near Valve V-221, V-223.
3. Instrument failure.
4. Sticky limit switch on valve V-223.

References:
Drawings: H-2-822402
Facility: 241-SY-271 Instrument Building

Panel: B-3 ANN-102  Alarm #: 09

Source: CAM-910  Setpoint: 3000 cpm

Alarm Class: Equipment Status

Alarm Description: HIGH RAD ALARM ANNULUS EXHAUST STACK (VTA-RAH-910B), High Radiation in annulus exhaust air stream

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] EVACUATE all personnel from the SY farm.
[2] ENSURE that annulus exhauster is shut down.
[3] STOP all waste disturbing activities in SY Farm.
[5] CHECK status of the following annunciators:
   • Panel B-3, ANN-10X, Alarm 7, ANNULUS LEAK DETECTED TANK 10X, (WSTA-LDA-1XX).

Supplemental Actions:

[7] IF entering farm, DON Self Contained Breathing Apparatus and personal protective equipment until alarm is clear and farm is released by HPT.

(Continued on Next Page)
Respond to Alarms in the 241-SY-271 Instrument Building

Facility: 241-SY-271 Instrument Building

Panel: B-3 ANN-102

Alarm #: 09

Source: CAM-910

Setpoint: 3000 cpm

Supplemental Actions (Cont.):

[9] IF CAM is in alarm and filter paper readings are less than 3000 cpm, PERFORM the following:

[9.1] REQUEST HPT to reset the alarm.

[9.2] RESTART annulus exhaust system per TO-060-240.

[9.3] REQUEST HPT to perform TF-OPS-005.

[10] IF filter paper readings are greater than 3000 cpm and/or CAM alarm will not reset, PERFORM the following:

[10.1] NOTIFY Shift Manager of findings.

[10.2] ENSURE annulus exhaust system remains shut down.

[10.3] DISCONNECT record sampler and continuous air monitor vacuum pump from electrical outlet.


Possible Causes:

1. High Radiation in annulus exhaust air stream in SY-Farm.
2. 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 HEPA filters.

References:

Documents: TO-060-240, Operate SY241 Tank Farm Annulus Exhauster System

TF-OPS-005, DST Daily Cam and Record Sampler Inspections
Respond to Alarms in the 241-SY-271 Instrument Building

Facility: 241-SY-271 Instrument Building

Panel: B-3 ANN-102  Alarm #: 10

Source: SY241-VTP-RA-301  Setpoint: 3000 cpm

WHITE

HIGH RAD ALARM PRIMARY EXHAUST B TRAIN (VTP-RAH-301B)

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

Alarm Description: HIGH RAD ALARM PRIMARY EXHAUST STACK (SY271-VTP-RAH-301B), High radiation in Primary exhaust air stream.

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] EVACUATE all personnel in SY Farm to a protected or upwind location.

[2] ENSURE Primary Exhauster B-Train has shutdown.


[4] IF directed by Shift Manager, STOP waste disturbing activities in SY Farm.

[5] IF directed by Shift Manager/OE, RESTART alternate Primary ventilation train per TO-060-245 for A-Train.

Supplemental Actions:


(Continued on Next Page)
Respond to Alarms in the 241-SY-271 Instrument Building

Facility: 241-SY-271 Instrument Building

Panel: B-3 ANN-102

Source: SY241-VTP-RA-301

Alarm #: 10

Setpoint: 3000 cpm

Possible Causes:

1. High Radiation in B-Train Primary Exhaust air stream.
2. Alarm Setpoint on CAM is set 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) have gone above the CAM alarm setpoint.
4. Instrumentation malfunction.
5. High Beta radiation detected.
6. Failure of CAM detector.
7. Loss of power.

References:


Documents: RPP-16922, Environmental Specification Requirements

TO-060-245, Operate SY241 Primary Exhauster Systems

TF-AOP-021, Response to Tank Farm Ventilation Upset

HNF-SD-WM-TSR-006, Tank Farms Technical Safety Requirements

(Continued)
Respond to Alarms in the 241-SY-271 Instrument Building

Facility: 241-SY-271 Instrument Building

Panel: ANN-103-2  Alarm #: 02

Source: PDIT-230, -231 and -232  Setpoint: -0.3 inches WG

**WHITE**

| HIGH PRESSURE TANK 103 (LOW VACUUM) (WST-PAHH-103) |

**Alarm Class:** Technical Safety Requirement (TSR LCO 3.1 DST Primary Ventilation Systems, and LCO 3.4, DST Induced Gas Release Event Flammable Gas Control).

**Alarm Description:** HIGH PRESSURE TANK 103 (LOW VACUUM) (WST-PAHH-103), High pressure (low vacuum) in Tank 103-SY.

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

- This alarm can also be activated if all three (3) PDIT transmitters fail (PAX alarm function).

### Immediate Actions:

1. **EVACUATE** all personnel from SY Farm to a protected or upwind area.
2. **CONTROL** further access to farm.
3. **IF** directed by Shift Manager, **STOP** waste disturbing activities in SY Farm.
4. **CHECK** the following:
   - 242-S Panel F alarms
   - HMI for tank pressure indications.
5. **NOTIFY** Shift Manager of new alarms and actions taken.
6. **REQUEST** Shift Manager respond per TF-AOP-021.
7. **CHECK** alarms in 271-SY prior to restarting primary ventilation to determine alarms associated with ventilation system shutdown.
8. **REPORT** new alarms to Shift Manager.

**AND**

### Supplemental Actions:

9. **CONTINUE** to monitor system parameters AND **NOTIFY** Shift Manager of changing indications.

(Continued on Next Page)
Respond to Alarms in the 241-SY-271 Instrument Building

Facility: 241-SY-271 Instrument Building

Panel: ANN-103-2  Alarm #: 02
Source: PDIT-230, -231 and -232  Setpoint: -0.3 inches WG

Possible Causes:
1. Primary Exhauster has shut down.
3. Dome intrusive work.
4. Open Riser, open pit drain and or missing sealing media on pit cover block(s), cracks, seams or penetrations that admits too much air to the Pit(s).
5. Failure of Pressure Transmitters.

References:
Drawings: H-14-020631
Documents: TO-060-245, Operate SY241 Primary Exhauster Systems
RPP-16922, Environmental Specification Requirements
OSD-T-151-00007, Operating Specifications for the Double-Shell Storage Tanks
TF-AOP-021, Response to Tank Farm Ventilation Upset
HNF-SD-WM-TSR-006, Tank Farms Technical Safety Requirements
Respond to Alarms in the 241-SY-271 Instrument Building

Facility: 241-SY-271 Instrument Building

Panel: ANN-103-3  Alarm #: 03

Source: PDIT-230, -231 and -232  Setpoint: -5.5 inches WG

LOW PRESSURE TANK 103 (HI VACUUM) (WST-PALL-103)

Alarm Class: Technical Safety Requirements (TSR LCO 3.4, DST Induced Gas Release Event Flammable Gas Control).

Alarm Description: LOW PRESSURE TANK 103 (HI VACUUM) (WST-PALL-103), Low pressure (high vacuum) in Tank 103-SY.

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 status of the following annunciators:
   - ANN-101-3 alarm 03 LOW PRESSURE TANK 101 (HI VACUUM) (WST-PALL-101)
   - ANN-102-3 alarm 03 LOW PRESSURE TANK 102 (HI VACUUM) (WST-PALL-102).


[3]  CHECK air inlets for obstructions AND
   REMOVE any obstructions.


Supplemental Actions:

[6]  IF directed by Shift Manager/OE, ADJUST tank vacuum by adjusting air flow of the inlet filters on tanks 101-SY, 102-SY and 103-SY.

(Continued on Next Page)
Respond to Alarms in the 241-SY-271 Instrument Building

Facility: 241-SY-271 Instrument Building

Panel: ANN-103-3  Alarm #: 03

Source: PDIT-230, -231 and -232  Setpoint: -5.5 inches WG

WHITE

LOW PRESSURE TANK 103 (HI VACUUM) (WST-PALL-103)

(Continued)

Possible Causes:
1. Obstruction of air inlet such as a foreign object across an inlet screen.
2. Frost or ice buildup on the air inlet screen.
3. Dirty or plugged air inlet filter.
4. Vacuum or air flow rates of air inlets out of adjustment.
5. Instrument malfunction.

References:

Drawings:  H-14-020631
Documents:  TO-060-245, Operate SY241 Primary Exhauster Systems
            OSD-T-151-00007, Operating Specifications for the Double-Shell Storage Tanks
            HNF-SD-WM-TSR-006, Tank Farms Technical Safety Requirements
Facility: 241-SY-271 Instrument Building

Panel: B-3 ANN-103  

**Alarm #**: 04

Source: SY241-VTP-PDIT-435  
Setpoint: 5.7 inches WG

**Alarm Class**: Technical Safety Requirement (TSR LCO 3.1 DST Primary Ventilation Systems, and LCO 3.4, DST Induced Gas Release Event Flammable Gas Control).

**Alarm Description**: HI D/P PRIMARY EXHAUST A TRAIN HEPA FILTERS (SY271-VTP-PDAH-442), High differential pressure in primary exhaust A-Train HEPA filter.

**Automatic Actions**:
1. Primary exhaust fan will shut down.

**Immediate Actions**:

1. ENSURE exhauster is shut down.
2. EVACUATE personnel from SY Farm to a protected or upwind area.
3. NOTIFY Shift Manager TF-AOP-021 Entry Conditions have been met.
4. IF directed by Shift Manager, STOP waste disturbing activities to SY Farm.
5. CHECK status of the following annunciators in 242-S Evaporator Building:
   - 242-S Evaporator panel F alarm 4-2, HIGH RADIATION 241-SY PRIMARY EXH A TRAIN (VTP-RAH-624)
   - 242-S Evaporator panel F alarm 3-2, EXHAUSTER FAIL/GENERAL ALARM SY PRIMARY EXH A TRAIN (VTA-XA-441).
6. NOTIFY Shift Manager of findings.

**Supplemental Actions**:

7. CONTINUE to monitor system parameters.
8. NOTIFY Shift Manager of changing indications.

(Continued on Next Page)
Possible Causes:

1. The first (upstream) HEPA filter SY241-VTP-FLT-402 has become plugged. An examination of historical data should show a gradual increase in the DP over time.

2. The first (upstream) HEPA filter train has become saturated with condensation.

3. Incorrect differential pressure value input to the HEPA filter DP interlock system PLC.

References:


Documents: TO-060-245, Operate SY241 Primary Exhauster Systems
ARP-T-701-00006, Respond To Panel F Alarms at 242-S Evaporator
RPP-16922, Environmental Specification Requirements
OSD-T-151-00007, Operating Specifications for the Double-Shell Storage Tanks
TF-AOP-021, Response to Tank Farm Ventilation Upset
HNF-SD-WM-TSR-006, Tank Farms Technical Safety Requirements
Respond to Alarms in the 241-SY-271 Instrument Building

Facility: 241-SY-271 Instrument Building

Panel: B-3 ANN-103  Alarm #: 05

Source: SY241-VTP-PDIT-436  Setpoint: 0.3 inches WG


Alarm Description: LOW D/P PRIMARY EXHAUST A TRAIN HEPA FILTERS (SY271-VTP-PDAL-443), Low differential pressure Primary Exhaust B Train HEPA filter.

Automatic Actions:
1. Primary exhaust fan will 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] ENSURE exhauster is shut down.
[2] EVACUATE personnel from SY Farm to a protected or upwind area.
[3] NOTIFY Shift Manager TF-AOP-021 Entry Conditions have been met.
[4] IF directed by Shift Manager, STOP waste disturbing activities in SY Farm.

Supplemental Actions:

Possible Causes:
1. The second (downstream) HEPA filter, SY241-VTP-FLT-403, has had a gross breakthrough due to a spray leak or high pressure condition.
2. The second (downstream) HEPA filter system has a low DP.
3. Incorrect differential pressure value input to the HEPA filter DP interlock system PLC.

(Continued on Next Page)
Respond to Alarms in the 241-SY-271 Instrument Building

Facility: 241-SY-271 Instrument Building

Panel: B-3 ANN-103  Alarm #: 05

Source: SY241-VTP-PDIT-436  Setpoint: 0.3 inches WG

WHITE

LOW D/P PRIMARY EXHAUST
A TRAIN HEPA FILTERS
(SY271-VTP-PDAL-443)

(Continued)

References:

H-14-020231

Documents: TO-060-245, Operate SY241 Primary Exhaust Systems
ARP-T-701-00006, Respond To Panel F Alarms at 242-S Evaporator
RPP-16922, Environmental Specification Requirements
OSD-T-151-00007, Operating Specifications for the Double-Shell Storage Tanks
TF-AOP-021, Response to Tank Farm Ventilation Upset
HNF-SD-WM-TSR-006, Tank Farms Technical Safety Requirements
Facility: 241-SY-271 Instrument Building

Panel: B-3 ANN-103  Alarm #: 07

Source: SY103-WSTA-LDT-151  Setpoint: 0.25 inches ± 0.25 inches above the annulus bottom
SY103-WSTA-LDT-152
SY103-WSTA-LDT-153

Alarm Class: Environmental
Alarm Description: ANNULUS LEAK DETECTED TANK 103 (WSTA-LDA-117), Liquid detected by 241-SY-103 annulus leak detectors

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:


[2] IF a transfer is in progress into or out of 241-SY-103, REQUEST MBD Operator shut down transfer.

[3] CHECK local displays of the following Annulus ENRAFs:
- SY103-WSTA-LDT-151,
- SY103-WSTA-LDT-152, and
- SY103-WSTA-LDT-153.

[4] DETERMINE the following:
- ENRAFs are not in alarm
- Displacers are less than 0.25 inches from the bottom of the annulus tank.

[4.1] IF any ENRAF local alarm is activated or displacer level is equal to or greater than 0.25 inches, Immediately CONTACT Shift Manager.


[5.1] NOTIFY Shift Manager of alarm, actions and findings.

[5.1.1] Shift Manager EVALUATE TF-AOP-005 entry criteria.

[5.1.2] Shift Manager NOTIFY maintenance to perform leak detection verification per 6-LDD-485.

Supplemental Actions:


(Continued on Next Page)
Facility: 241-SY-271 Instrument Building

Panel: B-3 ANN-103

Alarm #: 07

Source: SY103-WSTA-LDT-151
SY103-WSTA-LDT-152
SY103-WSTA-LDT-153

Setpoint: 0.25 inches ± 0.25 inches above the annulus bottom

Possible Causes:
1. Waste leaking from primary tank to annulus.
2. Condensate, rainwater, snowmelt, or other water has entered the annulus from outside.
3. Instrument malfunction.
4. ENRAF performed a reset due to loss of power.
5. Time delay relay fails.

References:
Drawings: H-14-020531
Documents: RPP-16922, Environmental Specification Requirements
OSD-T-151-00031, Operating Specifications for Tank Farm Leak Detection and Single Shell Tank Intrusion Detection, Table 3-1
HNF-SD-WM-TSR-006, Tank Farms Technical Safety Requirements
TF-AOP-005, Response to Unexpected Tank Temperature or Flammable Gas Increase or Level Change
6-LDD-485, ENRAF Series 854 Annulus Leak Detection Gauges Calibration and Maintenance
Facility: 241-SY-271 Instrument Building

Panel: B-3 ANN-103  Alarm #: 08

Source: FIS121, FIS122, FIS123  Setpoint: 150 cfm, 0.18 inches WG

**Alarm Class:** Environmental Impact

**Alarm Description:** LOW AIR FLOW ANNULUS EXHAUST (VTA-FAL-121), Low air flow for annulus exhauster.

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** to see if Panel B-3 ANN-102 alarm 09 HIGH RAD ALARM ANNULUS EXHAUST STACK (VTA-RAH-910B) is alarming.

[2] **IF** annulus exhauster is not running **AND**

**IF** B-3 ANN-102 alarm 09 HIGH RAD ALARM ANNULUS EXHAUST STACK (VTA-RAH-910B) is NOT alarming, **ATTEMPT** to restart the Annulus Exhauster per TO-060-240.

**Supplemental Actions:**

[3] **CHECK** the status of the following annunciators:

- Panel B-3 ANN-101 alarm 07 ANNULUS LEAK DETECTED TANK 101 (WSTA-LDA-107)
- Panel B-3 ANN-102 alarm 07 ANNULUS LEAK DETECTED TANK 102 (WSTA-LDA-112)
- Panel B-3 ANN-103 alarm 07 ANNULUS LEAK DETECTED TANK 103 (WSTA-LDA-117).

[4] **NOTIFY** Shift Manager of findings.

**Possible Causes:**

1. Annulus Exhauster shutdown.
2. Mechanical problem or failure of the annulus ventilation system.
3. Supply valve(s) (in the annulus CAM cabinet(s)) to the flow indicator switch(s) is closed.

(Continued on Next Page)
Respond to Alarms in the 241-SY-271 Instrument Building

Facility: 241-SY-271 Instrument Building

Panel: B-3 ANN-103   Alarm #: 08

Source: FIS121, FIS122, FIS123   Setpoint: 150 cfm, 0.18 inches WG

References:

Documents: TO-060-240, Operate 241-SY Tank Farm Annulus Exhauster System
RPP-16922, Environmental Specification Requirements
Respond to Alarms in the 241-SY-271 Instrument Building

Facility: 241-SY-271 Instrument Building

Panel: B-3 ANN-103   Alarm #: 09

Source: PS720      Setpoint: -6.0 inches WG

Alarm Class: Equipment Status
Alarm Description: LOW PRESSURE FAN SHUTDOWN ANNULUS EXHAUST (VTA-XA-720), Low air pressure in annulus exhauster system.

Automatic Actions:
1. Annulus Exhaust Fan will 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] ENSURE the Annulus Exhauster is shut down.

Supplemental Actions:
[5] CHECK the HIGH RAD ALARM ANNULUS EXHAUST STACK (VTA-RAH-910B) ANN-102 ALARM 09 is not alarming.

Possible Causes:
1. Inlet filters plugged or iced over.
2. Inlet valves closed.

References:
Drawings: H-14-020231
Documents: TO-060-240, Operate 241-SY Tank Farm Annulus Exhauster System

OSD-T-151-00007, Operating Specifications for the Double-Shell Storage Tanks
Facility: 241-SY-271 Instrument Building

Panel: B-3 ANN-103    Alarm #: 10

Source:     Setpoint:
SY241-VTP-PDIT-435  -0.5 inches WG (downscale failure)
SY241-VTP-PDIT-436  11.0 inches WG (upscale failure)

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

Alarm Description: D/P PRIMARY EXHAUST A TRAIN INSTRUMENT FAILURE (SY271-VTP-XA-450), Diff. pressure Interlock Transmitter Failure B Train.

Automatic Actions:

1. Primary exhaust fan will 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] ENSURE exhauster is shut down.

[2] EVACUATE personnel from SY Farm to a protected or upwind area.

[3] NOTIFY Shift Manager TF-AOP-021 Entry Conditions are met.


[5] IF directed by Shift Manager, RESTART A-Train Primary Exhauster per TO-060-245, OR

IF shutdown caused by D/P transmitter failure AND

IF directed by Shift Manager, START the B-Train primary ventilation system per TO-060-245.

(Continued on Next Page)
Respond to Alarms in the 241-SY-271 Instrument Building

Facility: 241-SY-271 Instrument Building

Panel: B-3 ANN-103  Alarm #: 10
Source: SY241-VTP-PDIT-435  SY241-VTP-PDIT-436
Setpoint: -0.5 inches WG (downscale failure)  11.0 inches WG (upscale failure)

Supplemental Actions:

[8] REQUEST Shift Manager to notify Maintenance to perform the following:
   [8.1] DOWNLOAD DP interlock system PLC memory.
   [8.2] CHECK status indicators on SY241-VTP-ENCL-124 AND CHECK the failed DP transmitter.

Possible Causes:

1. One or more of the High or Low DP Transmitters SY241-VTP-PDIT-435, or -436 has failed.
2. Signals from at least one of the differential pressure transmitters have been interrupted.
3. Programmable Logic Controller has failed.
4. Electrical power to at least one of the differential pressure transmitters has failed.

References:

**Figure 1 - 241-SY-271 Instrument Building Alarm Panel B-3 ANN-101**

<table>
<thead>
<tr>
<th></th>
<th>HIGH PRESSURE TANK 101 (LOW VACUUM) (WST-PAH-313)</th>
<th>LOW PRESSURE TANK 101 (HI VACUUM) (WST-PAL-313)</th>
<th></th>
<th>SPARE</th>
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<tbody>
<tr>
<td>02</td>
<td>W</td>
<td>W</td>
<td>04</td>
<td>W</td>
</tr>
<tr>
<td>03</td>
<td>W</td>
<td>W</td>
<td>05</td>
<td>W</td>
</tr>
<tr>
<td>07</td>
<td>W</td>
<td>W</td>
<td>08</td>
<td>W</td>
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<td>08</td>
<td>W</td>
<td>W</td>
<td>09</td>
<td>W</td>
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<td>W</td>
<td>W</td>
<td>10</td>
<td>W</td>
</tr>
<tr>
<td>10</td>
<td>HIGH D/P PRIMARY EXHAUST B TRAIN (SY271-VTP-PDAP-180B)</td>
<td>LOW D/P PRIMARY EXHAUST B TRAIN (SY271-VTP-PDAL-182B)</td>
<td>08</td>
<td>W</td>
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<tr>
<td>07</td>
<td>ANNULUS LEAK DETECTED TANK 101 (WSTA-LDA-107)</td>
<td>EXHAUSTER TROUBLE PRIMARY EXHAUST B TRAIN (SY271-VTP-XA-101B)</td>
<td>08</td>
<td>W</td>
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<td>W</td>
<td>W</td>
<td>08</td>
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### Respond to Alarms in the 241-SY-271 Instrument Building

**Figure 2 - 241-SY-271 Instrument Building Alarm Panel B-3 ANN-102**

<table>
<thead>
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<th></th>
<th>Alarm Description</th>
<th>Location</th>
<th>Type</th>
<th>Reference</th>
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<tbody>
<tr>
<td>02</td>
<td>High Pressure Tank 102 (Low Vacuum) (WST-PAH-316)</td>
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<td>W</td>
<td></td>
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<tr>
<td>03</td>
<td>Low Pressure Tank 102 (Hi Vacuum) (WST-PAL-316)</td>
<td></td>
<td>W</td>
<td></td>
</tr>
<tr>
<td>04</td>
<td>D/P Interlock Transmitter Failure B Train (SY271-VTP-XA-330)</td>
<td></td>
<td>W</td>
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<td>05</td>
<td>Spare</td>
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<td>07</td>
<td>Annulus Leak Detected Tank 102 (WSTA-LDA-112)</td>
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<td>08</td>
<td>Valve Position Hi Press Flush Pits (WT-XA-804)</td>
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<td>09</td>
<td>High Rad Alarm Annulus Exhaust Stack (VTA-RAH-910B)</td>
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<td>10</td>
<td>High Rad Alarm Primary Exhaust B Train (SY271-VTP-RAH-301B)</td>
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### Respond to Alarms in the 241-SY-271 Instrument Building

**Figure 3 - 241-SY-271 Instrument Building Alarm Panel B-3 ANN-103**

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<tr>
<th>Alarm Type</th>
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<td>HIGH PRESSURE TANK 103 (LOW VACUUM) (WST-PAH-319)</td>
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<td>LOW PRESSURE TANK 103 (HI VACUUM) (WST-PAL-319)</td>
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<td>HI D/P PRIMARY EXHAUST A TRAIN HEPA FILTERS (SY271-VTP-PDAH-442)</td>
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<td>LOW D/P PRIMARY EXHAUST A TRAIN HEPA FILTERS (SY271-VTP-PDAL-443)</td>
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<td>ANNULUS LEAK DETECTED TANK 103 (WSTA-LDA-117)</td>
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<td>LOW AIR FLOW ANNULUS EXHAUST (VTA-FAL-121)</td>
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<td>LOW PRESSURE FAN SHUTDOWN ANNULUS EXHAUST (VTA-XA-720)</td>
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<td>D/P PRIMARY EXHAUST A TRAIN INSTRUMENT FAILURE (SY271-VTP-XA-450)</td>
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<table>
<thead>
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<th>Alarm Type</th>
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