Respond to Panel 105 Alarms at 271-AP

Tank Farm Alarm Procedure

TSR Compliance

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>
</thead>
<tbody>
<tr>
<td>H-4</td>
<td>10/09/2018</td>
<td>Operations Request</td>
<td>Removed references to LCO 3.5.</td>
</tr>
<tr>
<td>H-3</td>
<td>08/30/2017</td>
<td>WRPS-PER-17-1176</td>
<td>Modified alarm response steps for Annulus Leak Detected.</td>
</tr>
<tr>
<td>H-2</td>
<td>01/12/2017</td>
<td>Old exhauster removed in AP Farm</td>
<td>Removed alarms identified with old non-operating exhauster.</td>
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<tr>
<td>H-1</td>
<td>09/14/2016</td>
<td>New exhauster installed in AP Farm</td>
<td>Modified alarms identified with old non-operating exhauster and tied to new exhauster.</td>
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<tr>
<td>H-0</td>
<td>08/19/2015</td>
<td>PCA generated from Periodic Review</td>
<td>Corrected reference procedure TF-060-340 to TO-060-340</td>
</tr>
</tbody>
</table>

Panel ANN-105 Alarm Index

Alarm Description | Color | Page
---|---|---
1 .......... Supernate Pmp WT-P-005 Shutdown (WT-SDA-305) .......... White .......... 2
9 .......... Annulus Leak Detected Tank 105 (WSTA-LDA-125) .......... Yellow .......... 3

Figure 1: 241-AP-271 Instrument Building Alarm Panel ANN-105

RECORDS

No records are generated during the performance of this procedure.
Respond to Panel 105 Alarms at 271-AP

Facility: 241-AP-271 INSTRUMENT BUILDING

Panel: ANN-105

Alarm #: 1

Source: AP05A-WT-P-005

Setpoint: N/A

Alarm Class: Equipment Status

Alarm Description: Supernate pump WT-P-005 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.

- This alarm is expected when SN PUMP AP05A-WT-P-005 is shut down with the motor control center breaker shut.

Immediate Actions:

[1] CHECK that PUMP AP05A-WT-P-005 (pump P-105-1) status is OFF (STOP pushbutton not illuminated, START pushbutton illuminated).

[2] CHECK that pump amperage is "zero" per WT-II-305A on AP271-EDS-MCC-001, panel D2 (red light emitting diode readout).


Possible Causes:

1. Pump has automatically tripped from one of the following:
   - Motor overload
   - HI or LOW motor current
   - Blown motor control center breaker control circuit fuse.

2. Mechanical failure of pump.

3. Instrument malfunction.

References:

Drawings: H-14-020803, H-14-030003, Sht. 1
Facility: 241-AP-271 Instrument Building

Panel: ANN-105  Alarm #: 9

Source: AP105-WSTA-LDT-151  Setpoint: 0.25 inches ± 0.02 inches above the annulus bottom
   AP105-WSTA-LDT-152
   AP105-WSTA-LDT-153

Alarm Class: Environmental.

Alarm Description: Liquid detected by 241-AP-105 annulus ENRAF 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-AP-105, REQUEST MBD Operator shut down transfer.
[3] CHECK local displays of Annulus AP105-WSTA-LDT-151, AP105-WSTA-LDT-152, AP105-WSTA-LDT-153, for the following:
   • ENRAFs are not in alarm (HA indication will be in display for alarm condition)
   • Displacers are less than or equal to 0.25 inches from the bottom of the annulus tank.
   [5.1] IF annulus leak detectors show an increased level in the annulus, PERFORM the following:
      [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:

Facility: 241-AP-271 Instrument Building

Panel: ANN-105  Alarm #: 9

Source: AP105-WSTA-LDT-151  Setpoint: 0.25 inches ± 0.02 inches above the annulus bottom
AP105-WSTA-LDT-152
AP105-WSTA-LDT-153

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-14-020503, Sheet 4, H-2-90476 Sheet 3
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 Panel 105 Alarms at 271-AP

**Figure 1:** 241-AP-271 Instrument Building Alarm Panel ANN-105

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- **SUPERNATE PMP**
- **WT-P-005**
- **SHUTDOWN**
- (WT-SDA-305)

- **ANNULUS LEAK**
- **DETECTED**
- **TANK 105**
- *(WSTA-LDA-125)*