Respond to Panel 104 Alarms at 271-AP

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>
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<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>
</tr>
<tr>
<td>H-1</td>
<td>09/14/2016</td>
<td>New exhauster installed in AP Farm</td>
<td>Modified alarms related to old exhauster which no longer is used.</td>
</tr>
<tr>
<td>H-0</td>
<td>06/22/2015</td>
<td>Periodic review</td>
<td>Page 5, Step 3 fixed procedure # error from TF to TO.</td>
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Panel ANN-104 Alarm Index

<table>
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<tr>
<th>Alarm</th>
<th>Description</th>
<th>Color</th>
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<tr>
<td>1</td>
<td>Supernate Pmp WT-P-004 Shutdown (WT SDA 304)</td>
<td>White</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>Annulus Leak Detected Tank 104 (WSTA-LDA-124)</td>
<td>Yellow</td>
<td>3</td>
</tr>
</tbody>
</table>

RECORDS

No records are generated during the performance of this procedure.
Respond to Panel 104 Alarms at 271-AP

Facility: 241-AP-271 INSTRUMENT BUILDING

Panel: ANN-104  Alarm #:1

Source: AP04A-WT-P-004  Setpoint: N/A

Alarm Class: Equipment Status

Alarm Description: Supernate pump WT-P-004 is 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 AP04A-WT-P-004 is shut down with the motor control center breaker shut.

Immediate Actions:

[1] CHECK that PUMP AP04A-WT-P-004 (pump P-104-1) status is OFF (STOP pushbutton not illuminated, START pushbutton illuminated).

[2] CHECK that pump amperage is "zero" per WT-II-304A on AP271-EDS-MCC-001, panel D1 (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
Respond to Panel 104 Alarms at 271-AP

Facility: 241-AP-271 Instrument Building

Panel: ANN-104

Alarm #: 9

Source: AP104-WSTA-LDT-151
AP104-WSTA-LDT-152
AP104-WSTA-LDT-153

Setpoint: 0.25 inches ± 0.02 inches above the annulus bottom

Alarm Class: Environmental

Alarm Description: Liquid detected by 241-AP-104 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-104, REQUEST MBD Operator shut down transfer.

[3] CHECK local displays of Annulus ENRAFs AP104-WSTA-LDT-151, AP104-WSTA-LDT-152, AP104-WSTA-LDT-153 for the following:
   • ENRAFs are not in alarm. (HA indication will be in display for an 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:


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

Panel: ANN-104

Source: AP104-WSTA-LDT-151
         AP104-WSTA-LDT-152
         AP104-WSTA-LDT-153

Setpoint: 0.25 inches ± 0.02 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-14-020503, 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

(Continued)
**TSR Compliance**

**Respond to Panel 104 Alarms at 271-AP**

**Figure 1: 241-AP-271 Instrument Building Alarm Panel ANN-104**

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<table>
<thead>
<tr>
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<tr>
<td>11</td>
<td>12</td>
<td>13</td>
<td>W</td>
<td></td>
</tr>
</tbody>
</table>

- **SUPERNATE PMP**
  - WT-P-004
  - SHUTDOWN (WT-SDA-304)

- **ANNULUS LEAK DETECTED**
  - TANK 104 (WSTA-LDA-124)

- **SUPERNATE PMP**
  - WT-P-004
  - SHUTDOWN (WT-SDA-304)