## RCA HVAC System Alarm Response

**Tank Farm Alarm Response Procedure**

**Effluent Treatment Facility**

**USQ Not Required – ETF is a Hazard Category 3 Radiological Facility**

### 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>A-3</td>
<td>09/18/2018</td>
<td>Changes from Periodic Review</td>
<td>Change the description for the first alarm HVAC PDAL-45A-005 to read &quot;RCA HVAC PDAL-45A-005 (TFD Room Diff Press Low)&quot;</td>
</tr>
<tr>
<td>A-2</td>
<td>02/05/2018</td>
<td>Operations Request</td>
<td>Corrected set-point to 4.5 in. on pages 21 and 22.</td>
</tr>
<tr>
<td>A-1</td>
<td>05/23/2016</td>
<td>Update Setpoint to Drawing Modification</td>
<td>Correct setpoint on pages 19 and 20 - Alarm HVAC RCA PDAL-45A002L. Update title to RCA HVAC System Alarm Response (consistent with other ETF alarm responses).</td>
</tr>
<tr>
<td>A-0</td>
<td>10/07/2015</td>
<td>Conversion to WRPS Format</td>
<td>New Procedure; Supersedes ETF-PRO-AR-51369 (ARP-45-002)</td>
</tr>
</tbody>
</table>

---

**RCA HVAC System**

<table>
<thead>
<tr>
<th>Alarm</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>HVAC PDAL-45A005</td>
<td>3</td>
</tr>
<tr>
<td>HVAC RCA EX FAN ATTEMPT FAIL</td>
<td>4</td>
</tr>
<tr>
<td>HVAC RCA 45A-F1A-A</td>
<td>5</td>
</tr>
<tr>
<td>HVAC RCA 45A-F1B-A</td>
<td>6</td>
</tr>
<tr>
<td>HVAC RCA 45A-F1C-A</td>
<td>7</td>
</tr>
<tr>
<td>HVAC RCA AHU ATTEMPT FAIL</td>
<td>8</td>
</tr>
<tr>
<td>HVAC TAH-45A001</td>
<td>9</td>
</tr>
<tr>
<td>HVAC TAL-45A001</td>
<td>10</td>
</tr>
<tr>
<td>HVAC TAH-45A007</td>
<td>11</td>
</tr>
<tr>
<td>HVAC TAL-45A007</td>
<td>12</td>
</tr>
<tr>
<td>HVAC TAH-45A006</td>
<td>13</td>
</tr>
<tr>
<td>HVAC TAL-45A006</td>
<td>14</td>
</tr>
<tr>
<td>HVAC AHU A FAN ALARM 45B-F1A</td>
<td>15</td>
</tr>
<tr>
<td>HVAC AHU B FAN ALARM 45B-F1B</td>
<td>16</td>
</tr>
<tr>
<td>HVAC RCA 45B-EVU010-A</td>
<td>17</td>
</tr>
</tbody>
</table>
HVAC RCA 45B-EVU009-A ........................................................................................................ 18  
HVAC RCA PDAL-45A002L .................................................................................................. 19  
RCA OUTLET PRESSURE L .................................................................................................. 21  
RCA AHU A PREHT COIL .................................................................................................... 23  
RCA AHU A FIN HT COIL ALRM ......................................................................................... 24  
RCA AHU B PREHT COIL ALRM ......................................................................................... 25  
RCA AHU B FIN HT COIL ALRM ......................................................................................... 26  
HVAC RCA AHU-A EVAP MED ALARM .............................................................................. 27  
HVAC RCA AHU-B EVAP MED ALARM .............................................................................. 28  

RECORDS

No records are generated during the performance of this procedure.
HVAC PDAL-45A005

DESCRIPTION: RCA HVAC PDAL-45A-005 (TFD Room Diff Press Low)
Setpoint: 0.00 in. W.C.
Alarm Location: PDIT-45A005
Graphic: Alarm Summary Screen
Indications: N/A

NOTE - Alarm response procedures are not designed for, nor intended to be applied to, “expected” alarms generated by approved work activities or procedures.

Automatic Actions:

None.

Immediate Actions:

[1] (CRO) REQUEST SOE perform the following actions, as specified:
   [1.1] (SOE) SHUT DOWN 45B-EVU-10 (dryer room air handling unit) per ETF-45-002.
   [1.2] (CRO/SOM) EVALUATE need to shut down Thin Film Dryer.
   [1.3] (SOE) CHECK RCA exhaust fan operation per ETF-45-002.
   [1.4] (SOE) CHECK condition of dryer room exhaust duct filter AND REQUEST Maintenance replace, if necessary.

Possible Causes:

1. Loss of RCA exhaust fans.
2. Dirty dryer room exhaust duct filter.

References:

Drawings: H-2-89021, Sheet 1
          H-2-89306.
HVAC RCA EX FAN ATTEMPT FAIL

DESCRIPTION: HVAC RCA EXHAUST FAN ATT FAIL
Setpoint: Logic permissive(s) not met
Alarm Location: Logic generated alarm
Graphic: Alarm Summary Screen
Indications: N/A

NOTE - Alarm response procedures are not designed for, nor intended to be applied to, “expected” alarms generated by approved work activities or procedures.

Automatic Actions:
1. Alternate exhaust fan combination starts.

Immediate Actions:
[1] (CRO) REQUEST SOE perform the following actions as specified:
[1.1] (SOE) CHECK alternate exhaust fan combination started.
[1.2] (SOE) CHECK the system damper configuration per ETF-45-002.
[1.3] (SOE) ENSURE the selected exhaust fan is in AUTO.

Possible Causes:
1. Associated exhaust filter system inlet or outlet damper is closed.
2. Associated exhaust fan failed to start or is in MANUAL.

References:
Drawings: H-2-89021, Sheet 1
H-2-89306.
HVAC RCA 45A-F1A-A

DESCRIPTION: HVAC RCA EXHAUST FAN A (45A-F1A-A)
Setpoint: Logic permissive(s) not met
Alarm Location: Logic generated alarm
Graphic: Alarm Summary Screen
Indications: N/A

NOTE - Alarm response procedures are not designed for, nor intended to be applied to, “expected” alarms generated by approved work activities or procedures.

Automatic Actions:
1. If the fan not running and the alarm is in, will not allow AUTO operation if A-B or A-C exhaust fan combination selected.

Immediate Actions:
[1] (CRO) REQUEST SOE perform the following actions as specified:
[1.1] (SOE) SELECT a B-C fan combination for AUTO operation.
[1.2] (SOE) CHECK breaker MCC-3 (45B-F-1A) CLOSED.
[1.3] (SOE) IF breaker is tripped, REQUEST Maintenance troubleshoot and reset.

Possible Causes:
1. Breaker MCC-3 (45B-F-1A) OPEN/TRIPPED.
3. Control fuses blown.

References:
Drawings: H-2-89021, Sheet 1
H-2-89306.
Documents: None.
HVAC RCA 45A-F1B-A

DESCRIPTION: HVAC RCA EXHAUST FAN B (45A-F1B-A)
Setpoint: Logic permissive(s) not met
Alarm Location: Logic generated alarm
Graphic: Alarm Summary Screen
Indications: N/A

NOTE - Alarm response procedures are not designed for, nor intended to be applied to, “expected” alarms generated by approved work activities or procedures.

Automatic Actions:
1. If fan is not running and alarm is in, will not allow AUTO operation if A-B or B-C exhaust fan combination selected.

Immediate Actions:
[1] (CRO) REQUEST SOE perform the following actions as specified:
[1.1] (SOE) SELECT the A-C fan combination for AUTO operation.
[1.2] (SOE) CHECK breaker MCC-4 (45B-F-1B) CLOSED.
[1.3] (SOE) IF the breaker is tripped, REQUEST Maintenance troubleshoot and reset.

Possible Causes:
1. Breaker MCC-4 (45B-F-1B) OPEN/TRIPPED.
3. Control fuses blown.

References:
Drawings: H-2-89021, Sheet 1
H-2-89306.
Documents: None.
HVAC RCA 45A-F1C-A

DESCRIPTION: HVAC RCA EXHAUST FAN C (45A-F1C-A)
Setpoint: Logic permissive(s) not met
Alarm Location: Logic generated alarm
Graphic: Alarm Summary Screen
Indications: N/A

NOTE - Alarm response procedures are not designed for, nor intended to be applied to, “expected” alarms generated by approved work activities or procedures.

Automatic Actions:
1. If fan not running and alarm is in, will not allow AUTO operation if A-C or B-C exhaust fan combination selected.

Immediate Actions:
[1] (CRO) REQUEST SOE perform the following actions as specified:
[1.1] (SOE) SELECT A-B fan combination for AUTO operation.
[1.2] (SOE) CHECK breaker MCC-4 (45A-F-1C) CLOSED.
[1.3] (SOE) IF breaker is tripped, REQUEST Maintenance troubleshoot and reset.

Possible Causes:
1. Breaker MCC-4 (45A-F-1C) OPEN/TRIPPED.
3. Control fuses blown.

References:
Drawings: H-2-89021, Sheet 1
H-2-89306.
Documents: None.
HVAC RCA AHU ATTEMPT FAIL

**DESCRIPTION:** HVAC RCA AHU ATT FAIL

Setpoint: Logic permissive(s) not met

Alarm Location: Logic generated alarm

Graphic: Alarm Summary Screen

Indications: N/A

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

**Automatic Actions:**

1. Alternate AHU (unit not selected) starts.

**Immediate Actions:**

1. (CRO) **REQUEST** SOE perform the following actions as specified:
   1.1. (SOE) **CHECK** the Alternate AHU started.
   1.2. (SOE) **ENSURE** system alignment per ETF-45-002.
   1.3. (SOE) **GO TO** the applicable ARP for following AHU alarms if annunciated:
      - HVAC RCA AHU A FAN ALARM (45B-F-1A)
      - HVAC RCA AHU B FAN ALARM (45B-F-1B).

**Possible Causes:**

1. Associated inlet damper 45B-CD-1A (1B) failed closed or AUTO not selected.
2. Selected AHU AUTO HS is not selected.
3. One of following alarms is on selected AHU:
   - HVAC RCA AHU A FAN ALARM (45B-F-1A)
   - HVAC RCA AHU B FAN ALARM (45B-F-1B).

**References:**

Drawings: H-2-89021, Sheet 1
          H-2-89306.

HVAC TAH-45A001

DESCRIPTION: HVAC RCA TEMP HI (TAH-45A001)
Setpoint: 86°F
Alarm Location: TT-45A001
Graphic: Alarm Summary Screen
Indications: N/A

NOTE - Alarm response procedures are not designed for, nor intended to be applied to, “expected” alarms generated by approved work activities or procedures.

Automatic Actions:
None.

Immediate Actions:

[1] (CRO) REQUEST SOE perform the following actions as specified:
[1.1] (SOE) ENSURE CWS alignment per ETF-45B-001.
[1.2] (SOE) ENSURE RCA HVAC system alignment per ETF-45-002.

Possible Causes:
1. Loss of HVAC CWS.
2. Loss of HVAC CWS Control (TIC-45A001-1).
3. Loss of RCA AHU Final Heating Coil Control (TIC-45A001-2).
4. Loss of HVAC RCA.
5. CWS not in operation and ambient temperatures are elevated.

References:

Drawings: H-2-89021, Sheet 1
H-2-89306.

Documents: ETF-45-002, RCA HVAC System Operation
ETF-45B-001, HVAC Chilled Water System Operation.
**HVAC TAL-45A001**

<table>
<thead>
<tr>
<th>DESCRIPTION:</th>
<th>HVAC RCA TEMP LO (TAL-45A001)</th>
</tr>
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<tbody>
<tr>
<td>Setpoint:</td>
<td>61°F</td>
</tr>
<tr>
<td>Alarm Location:</td>
<td>TT-45A001</td>
</tr>
<tr>
<td>Graphic:</td>
<td>Alarm Summary Screen</td>
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<tr>
<td>Indications:</td>
<td>N/A</td>
</tr>
</tbody>
</table>

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

**Automatic Actions:**

None.

**Immediate Actions:**

[1] (CRO) **REQUEST** SOE ensure CWS alignment per ETF-45B-001.

**Possible Causes:**

1. Loss of HVAC CWS Control (TIC-45A001-1).
2. Loss of RCA AHU Final Heating Coil Control (TIC-45A001-2).

**References:**

- **Drawings:** H-2-89021, Sheet 1
  H-2-89306.

- **Documents:** ETF-45B-001, HVAC Chilled Water System Operation.
HVAC TAH-45A007

DESCRIPTION: HVAC RCA DRYER ROOM TEMP HI (TAH-45A007)
Setpoint: 105°F
Alarm Location: TT-45A007
Graphic: Alarm Summary Screen
Indications: N/A

NOTE - Alarm response procedures are not designed for, nor intended to be applied to, “expected” alarms generated by approved work activities or procedures.

Automatic Actions:
None.

Immediate Actions:
[1] (CRO) REQUEST SOE perform the following actions as specified:
[1.1] (SOE) ENSURE CWS alignment per ETF-45B-001.
[1.2] (SOE) ENSURE 45B-EVU-10 is in operation.
[1.3] (CRO/SOM) EVALUATE need to shut down Thin Film Dryer.

Possible Causes:
1. Loss of HVAC CWS or system not in operation.
2. Loss of HVAC CWS control (TIC-45A007).
3. Loss of Dryer Room AHU (45B-EVU-10) or system not in operation.

References:
Drawings: H-2-89021, Sheet 1
H-2-89306.
HVAC TAL-45A007

DESCRIPTION: HVAC RCA DRYER ROOM TEMP LO (TAL-45A007)

Setpoint: 61°F
Alarm Location: TT-45A007
Graphic: Alarm Summary Screen
Indications: N/A

NOTE - Alarm response procedures are not designed for, nor intended to be applied to, “expected” alarms generated by approved work activities or procedures.

Automatic Actions:
None.

Immediate Actions:

[1] (CRO) REQUEST SOE perform the following actions as specified:
[1.1] (SOE) ENSURE RCA HVAC system alignment per ETF-45-002.
[1.2] (SOE) ENSURE CWS alignment per ETF-45B-001.

Possible Causes:

1. Loss of HVAC CWS Control (TIC-45A007).

References:

Drawings: H-2-89021, Sheet 1
H-2-89306.
Documents: ETF-45-002, RCA HVAC System Operation
ETF-45B-001, HVAC Chilled Water System Operation.
HVAC TAH-45A006

DESCRIPTION: HVAC RCA TEMP VAPOR COMP TEMP HI (TAH-45A006)
Setpoint: 105°F
Alarm Location: TT-45A006
Graphic: Alarm Summary Screen
Indications: N/A

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] (CRO) REQUEST SOE perform the following actions as specified:

[1.1] (SOE) ENSURE CWS alignment per ETF-45B-001, and is online.

[1.2] (SOE) CHECK Vapor Compressor area AHU (45B-EVU009) operation per ETF-45-002.

[1.3] (CRO/SOM) IF CWS and AHU are both online and functioning properly, EVALUATE the need to shut down evaporator systems.

Possible Causes:

1. Loss of HVAC CWS or system not in operation.
2. Loss of HVAC CWS Control (TIC-45A006).
3. Loss of Vapor Compressor Area AHU (45B-EVU009) or system not in operation.

References:

Drawings: H-2-89021, Sheet 1
H-2-89306.

Documents: ETF-45B-001, HVAC Chilled Water System Operation
ETF-45-002, RCA HVAC System Operation.
## HVAC TAL-45A006

**DESCRIPTION:** HVAC RCA VAPOR COMPRESSOR AREA TEMP LO (TAL-45A006)

- **Setpoint:** 61°F
- **Alarm Location:** TT-45A006
- **Graphic:** Alarm Summary Screen
- **Indications:** N/A

### NOTE

Alarm response procedures are not designed for, nor intended to be applied to, “expected” alarms generated by approved work activities or procedures.

### Automatic Actions:

None.

### Immediate Actions:

1. (CRO) **REQUEST** SOE perform the following actions as specified:
   1.1. (SOE) **ENSURE** RCA HVAC system alignment per ETF-45-002.
   1.2. (SOE) **ENSURE** CWS alignment per ETF-45B-001.

### Possible Causes:

1. Loss of HVAC CWS Control (TIC-45A006).
2. HVAC RCA Low Temperature (see HVAC RCA TEMP LO, TAL-45A001).

### References:

- **Drawings:** H-2-89021, Sheet 1
  H-2-89306.
- **Documents:** ETF-45-002, RCA HVAC System Operation
  ETF-45B-001, HVAC Chilled Water System Operation.
HVAC AHU A FAN ALARM 45B-F-1A

DESCRIPTION: HVAC RCA AHU A FAN ALRM (45B-F-1A)
Setpoint: Logic permissive(s) not met
Alarm Location: Logic generated alarm
Graphic: Alarm Summary Screen
Indications: N/A

NOTE - Alarm response procedures are not designed for, nor intended to be applied to, “expected” alarms generated by approved work activities or procedures.

Automatic Actions:
1. AHU A cannot be used in AUTO operation.

Immediate Actions:
[1] (CRO) REQUEST SOE perform the following actions as specified:
[1.1] (SOE) ENSURE RCA HVAC system alignment per ETF-45-002.
[1.2] (SOE) CHECK circuit breaker MCC-4 (45B-F-1A) CLOSED.
[1.3] (SOE) IF breaker tripped, REQUEST Maintenance troubleshoot and reset.
[1.4] (SOE) ENSURE AHU B for AUTO operation per ETF-45-002.

Possible Causes:
1. Circuit breaker MCC-4 (45B-F-1A) OPEN/TRIPPED.
3. Control fuses blown.

References:
Drawings: H-2-89021, Sheet 1
H-2-89306.
HVAC AHU B FAN ALARM 45B-F-1B

DESCRIPTION: HVAC RCA AHU B FAN ALRM (45B-F-1B)
Setpoint: Logic permissive(s) not met
Alarm Location: Logic generated alarm
Graphic: Alarm Summary Screen
Indications: N/A

NOTE - Alarm response procedures are not designed for, nor intended to be applied to, “expected” alarms generated by approved work activities or procedures.

Automatic Actions:
1. AHU B cannot be used in AUTO operation.

Immediate Actions:
[1] (CRO) REQUEST SOE perform the following actions as specified:
[1.1] (SOE) ENSURE RCA HVAC system alignment per ETF-45-002.
[1.2] (SOE) CHECK circuit breaker MCC-4 (45B-F-1B) CLOSED.
[1.3] (SOE) IF breaker tripped, REQUEST Maintenance troubleshoot and reset.
[1.4] (SOE) ENSURE AHU A for AUTO operation per ETF-45-002.

Possible Causes:
1. Circuit breaker MCC-4 (45B-F-1B) OPEN/TRIPPED.
3. Control fuses blown.

References:
Drawings: H-2-89021, Sheet 1
H-2-89306.
HVAC RCA 45B-EVU010-A

DESCRIPTION: HVAC RCA EVU-10 BREAKER OPEN (45B-EVU10-A)
Setpoint: Logic permissive(s) not met
Alarm Location: Logic generated alarm
Graphic: Alarm Summary Screen
Indications: N/A

NOTE - Alarm response procedures are not designed for, nor intended to be applied to, “expected” alarms generated by approved work activities or procedures.

Automatic Actions:
None.

Immediate Actions:

[1] IF CWS is OFF and AHU-10 is OFF, EXIT this ARP.

[2] (CRO) REQUEST SOE perform the following actions as specified:
[2.1] (SOE) ENSURE 45B-EVU10-A aligned per ETF-45-002 and is operational.
[2.2] (SOE) CHECK circuit breaker MCC-4 (45B-EVU-10) CLOSED.
[2.3] (SOE) IF breaker tripped, REQUEST Maintenance troubleshoot and reset.

Possible Causes:

1. Circuit breaker MCC-4 (45B-EVU-10) OPEN/TRIPPED.
3. Control fuses blown.

References:

Drawings: H-2-89021, Sheet 1
H-2-89306.

HVAC RCA 45B-EVU009-A

DESCRIPTION: HVAC RCA EVU-9 BREAKER OPEN (45B-EVU9-A)
Setpoint: Logic permissive(s) not met
Alarm Location: Logic generated alarm
Graphic: Alarm Summary Screen
Indications: N/A

NOTE - Alarm response procedures are not designed for, nor intended to be applied to, “expected” alarms generated by approved work activities or procedures.

Automatic Actions:
None.

Immediate Actions:
[1] IF the CWS is OFF and AHU-10 is OFF, EXIT this ARP.
[2] (CRO) REQUEST SOE perform the following actions as specified:
  [2.1] (SOE) ENSURE 45B-EVU9-A aligned per ETF-45-002 and is operational.
  [2.2] (SOE) CHECK circuit breaker MCC-4 (45B-EVU-9) CLOSED.
  [2.3] (SOE) IF breaker tripped, REQUEST Maintenance troubleshoot and reset.

Possible Causes:
3. Control fuses blown.

References:
Drawings: H-2-89021, Sheet 1
          H-2-89306.
HVAC RCA PDAL-45A002L

DESCRIPTION: PROCESS AREA DIFFERENTIAL PRESSURE HIGH
(PDAL-45A002L ≥ AH)
Setpoint: -0.5 in. W.C.
Alarm Location: Average differential pressure of:
PDIT-45001A, (PDIT-45A001B), [PDIT-45A001C], or {PDT-45A001D}
Graphic: Alarm Summary Screen
Indications: N/A

NOTE - Alarm response procedures are not designed for, nor intended to be applied to, “expected” alarms generated by approved work activities or procedures.

Automatic Actions:
1. RCA HVAC shuts down.

Immediate Actions:
[1] (CRO) REQUEST SOE perform the following actions as specified:
  [1.1] (SOE) CHECK RCA HVAC SHUTDOWN.
  [1.2] (CRO) ENSURE MTT SHUTDOWN per ETF-60-002.
  [1.3] (CRO) ENSURE STT SHUTDOWN per ETF-60I-003, ETF-60J-001, ETF-80C-001, ETF-60J-005, and ETF-60I-008.
  [1.4] (CRO) ENSURE VOG SHUTDOWN per ETF-45D-001.
  [1.5] (CRO) ENSURE Chem Make-Up SHUTDOWN per ETF-65C-001.
  [1.6] (SOE/CRO) ENSURE all components being operated in MANUAL are in a safe configuration.

[2] ENSURE Central Shift Manager has been notified of exhauster shutdown.

[3] ENSURE ETF/LERF Environmental Field Representative (EFR) has been notified by phone or email.

Possible Causes:
1. PDC-45A002A OR (PDC-45A002B) OR [PDC-45A002C] failure.
2. PDIC-45A002 failure.

(Continued on Next Page)
### HVAC RCA PDAL-45A002L

**DESCRIPTION:** PROCESS AREA DIFFERENTIAL PRESSURE HIGH  
(PDAL-45A002L≥AH)  
**Setpoint:** -0.5 in. W.C.  
**Alarm Location:** Average differential pressure of:  
PDIT-45001A, (PDIT-45A001B), [PDIT-45A001C], or {PDT-45A001D}  
**Graphic:** Alarm Summary Screen  
**Indications:** N/A

(Continued)

**References:**

- **Drawings:**
  - H-2-89021, Sheet 1  
  - H-2-89306.

- **Documents:**
  - ETF-45D-001, Vessel Off-Gas System Operation  
  - ETF-60-002, Integrated MTT Operation  
  - ETF-60I-003, Evaporator Systems Operation  
  - ETF-60I-008, Secondary Waste Receiving Tank Operation  
  - ETF-60J-001, Thin Film Dryer Operation  
  - ETF-60J-005, Concentrate Tank System Operation  
  - ETF-65C-001, Chemical Feed System Operation  
  - ETF-80C-001, Drum Handling System Operation.
RCA OUTLET PRESSURE L

DESCRIPTION: RCA HVAC EXHAUST DUCT PRESSURE LOW (PAL-45A008≤AL)
Setpoint: -4.5 in. W.C.
Alarm Location: PIT-45A008
Graphic: Alarm Summary Screen
Indications: N/A

NOTE - Alarm response procedures are not designed for, nor intended to be applied to, “expected” alarms generated by approved work activities or procedures.

Automatic Actions:
1. RCA HVAC shuts down.

Immediate Actions:
[1] (CRO) REQUEST SOE perform the following actions as specified:
   [1.1] (SOE) CHECK RCA HVAC SHUTDOWN.
   [1.2] (CRO) ENSURE MTT SHUTDOWN per ETF-60-002.
   [1.3] (CRO) ENSURE STT SHUTDOWN per ETF-60I-003, ETF-60J-001, ETF-80C-001, ETF-60J-005, and ETF-60I-008.
   [1.4] (CRO) ENSURE VOG SHUTDOWN per ETF-45D-001.
   [1.5] (CRO) ENSURE Chem Make-Up SHUTDOWN per ETF-65C-001.
   [1.6] (SOE/CRO) ENSURE all components being operated in MANUAL are in a safe configuration.

[2] ENSURE Central Shift Manager has been notified of exhauster shutdown.

[3] ENSURE ETF/LERF Environmental Field Representative (EFR) has been notified by phone or email.

Possible Causes:
1. PDC-45A002A OR (PDC-45A002B) OR [PDC-45A002C] failure.
2. PDIC-45A002 failure.

(Continued on Next Page)
RCA OUTLET PRESSURE L

DESCRIPTION: RCA HVAC EXHAUST DUCT PRESSURE LOW (PAL-45A008≤AL)
Setpoint: -4.5 in. W.C.
Alarm Location: PIT-45A008
Graphic: Alarm Summary Screen
Indications: N/A

References:

Drawings: H-2-89021, Sheet 1
          H-2-89306.
Documents: ETF-45-002, RCA HVAC System Operation
          ETF-45B-001, HVAC Chilled Water System Operation
          ETF-45D-001, Vessel Off-Gas System Operation
          ETF-60-002, Integrated MTT Operation
          ETF-60I-003, Evaporator Systems Operation
          ETF-60I-008, Secondary Waste Receiving Tank Operation
          ETF-60J-001, Thin Film Dryer Operation
          ETF-60J-005, Concentrate Tank System Operation
          ETF-65C-001, Chemical Feed System Operation
          ETF-80C-001, Drum Handling System Operation.
RCA AHU A PREHT COIL

DESCRIPTION: HVAC RCA AHU A PREHEATER TRIPPED
Setpoint: Logic permissive(s) not met
Alarm Location: Logic generated alarm
Graphic: Alarm Summary Screen
Indications: N/A

NOTE - Alarm response procedures are not designed for, nor intended to be applied to, “expected” alarms generated by approved work activities or procedures.

Automatic Actions:
None.

Immediate Actions:
[1] (CRO) REQUEST SOE perform the following actions as specified:
[1.1] (SOE) CHECK Main Switchgear MSWGR-2 (45B-E-1A) CLOSED.
[1.2] (SOE) IF the switchgear tripped, REQUEST Maintenance troubleshoot and reset.
[1.3] (SOE) ON graphic HVAC-SOE, MONITOR RCA temperature TI-45A001.
[1.4] IF RCA temperature decreases below 60°F, SWITCH to the alternate supply AHU (45B-EVU-1B) per ETF-45-002.
[1.5] (SOE) ON graphic HVAC-SOE, MONITOR exhaust stack flow on FIC-45E001.
[1.6] IF Exhaust Stack flow drops below 40,000 cfm, SWITCH to the alternate supply AHU (45B-EVU-1B) per ETF-45-002.

Possible Causes:
1. Main Switchgear MSWGR-2 (45B-E-1A) OPEN/TRIPPED.
2. Heater thermal cutouts tripped.
3. Control fuses blown.
4. Air flow too low or failed air flow switch.

References:
Drawings: H-2-89021, Sheet 1
H-2-89306.
RCA AHU A FIN HT COIL ALRM

DESCRIPTION: HVAC RCA AHU A FINAL HEATER TRIPPED
Setpoint: Logic permissive(s) not met
Alarm Location: Logic generated alarm
Graphic: Alarm Summary Screen
Indications: N/A

NOTE - Alarm response procedures are not designed for, nor intended to be applied to, “expected” alarms generated by approved work activities or procedures.

Automatic Actions:
None.

Immediate Actions:
[1] (CRO) REQUEST SOE perform the following actions as specified:
  [1.1] (SOE) CHECK main switchgear MSWGR-2 (45B-E-2A) CLOSED.
  [1.2] (SOE) IF the switchgear tripped, REQUEST Maintenance troubleshoot and reset.
  [1.3] (SOE) ON graphic HVAC-SOE, MONITOR RCA temperature TI-45A001.
  [1.4] IF RCA temperature decreases below 60°F, SWITCH to the alternate supply AHU (45B-EVU-1B) per ETF-45-002.
  [1.5] (SOE) ON graphic HVAC-SOE, MONITOR Exhaust Stack Flow on FIC-45E001.
  [1.6] IF the Exhaust Stack flow drops below 40,000 cfm, SWITCH to the alternate supply AHU (45B-EVU-1B) per ETF-45-002.

Possible Causes:
1. Main Switchgear MSWGR-2 (45B-E-2A) open/tripped.
2. Heater thermal cutouts tripped.
3. Control fuses blown.
4. Air flow too low or failed air flow switch.

References:
Drawings: H-2-89021, Sheet 1
H-2-89306.
RCA HVAC System Alarm Response

RCA AHU B PREHT COIL ALRM

DESCRIPTION: HVAC RCA AHU B PREHEATER TRIPPED
Setpoint: Logic permissive(s) not met
Alarm Location: Logic generated alarm
Graphic: Alarm Summary Screen
Indications: N/A

NOTE - Alarm response procedures are not designed for, nor intended to be applied to, “expected” alarms generated by approved work activities or procedures.

Automatic Actions:
None.

Immediate Actions:

[1] (CRO) REQUEST SOE perform the following actions as specified:
[1.1] (SOE) CHECK main switchgear MSWGR-2 (45B-E-1B) CLOSED.
[1.2] (SOE) IF switchgear tripped, REQUEST Maintenance troubleshoot and reset.
[1.3] (SOE) ON graphic HVAC-SOE, MONITOR RCA temperature TI-45A001.
[1.4] IF RCA temperature decreases below 60°F, SWITCH to the alternate supply AHU (45B-EVU-1A) per ETF-45-002.
[1.5] (SOE) ON graphic HVAC-SOE, MONITOR exhaust stack flow on FIC-45E001.
[1.6] IF Exhaust Stack flow drops below 40,000 cfm, SWITCH to the alternate supply AHU (45B-EVU-1A) per ETF-45-002.

Possible Causes:

1. Main Switchgear MSWGR-2 (45B-E-1B) OPEN/TRIPPED.
2. Heater thermal cutouts tripped.
3. Control fuses blown.
4. Air flow too low or failed air flow switch.

References:

Drawings: H-2-89021, Sheet 1
H-2-89306.
RCA AHU B FIN HT COIL ALRM

DESCRIPTION: HVAC RCA AHU B FINAL HEATER TRIPPED
Setpoint: Logic permissive(s) not met
Alarm Location: Logic generated alarm
Graphic: Alarm Summary Screen
Indications: N/A

NOTE - Alarm response procedures are not designed for, nor intended to be applied to, “expected” alarms generated by approved work activities or procedures.

Automatic Actions:

None.

Immediate Actions:

[1] (CRO) REQUEST SOE perform the following actions as specified:
   [1.1] (SOE) CHECK Main Switchgear MSWGR-2 (45B-E-2B) CLOSED.
   [1.2] (SOE) IF switchgear tripped, REQUEST Maintenance troubleshoot and reset.
   [1.3] (SOE) ON graphic HVAC-SOE, MONITOR RCA temperature TI-45A001.
   [1.4] IF RCA temperature decreases below 60°F, SWITCH to the alternate supply AHU (45B-EVU-1A) per ETF-45-002.
   [1.5] (SOE) ON graphic HVAC-SOE, MONITOR exhaust stack flow on FIC-45E001.
   [1.6] IF Exhaust Stack flow drops below 40,000 cfm, SWITCH to the alternate supply AHU (45B-EVU-1A) per ETF-45-002.

Possible Causes:

1. Main Switchgear MSWGR-2 (45B-E-2B) open/tripped.
2. Heater thermal cutouts tripped.
3. Control fuses blown.
4. Air flow too low or failed air flow switch.

References:

Drawings: H-2-89021, Sheet 1
           H-2-89306.
**HVAC RCA AHU-A EVAP MED ALARM**

**DESCRIPTION:** HVAC RCA EVAPORATIVE MEDIA PUMP BREAKER OPEN (45B-EM-1A)

**Setpoint:** Logic permissive(s) not met

**Alarm Location:** Logic generated alarm

**Graphic:** Alarm Summary Screen

**Indications:** N/A

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

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**Automatic Actions:**

None.

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**Immediate Actions:**

[1] (CRO) **REQUEST** SOE perform the following actions as specified:

[1.1] (SOE) **ENSURE** breakers DP-2-21, DP-2-23 are OFF per ETF-45-002.

[1.2] (SOE) **ON** MCS graphic HVAC-SOE, **ENSURE** 45B-EM-1A in MANUAL OFF.

[1.3] (SOE) **ON** MCS graphic HVAC-SOE, **ENSURE** handswitch evaporator media pumps not required is ON per ETF-45-002.

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**Possible Causes:**

1. Evaporator media pumps are not required.

2. Handswitch is not turned ON.

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**References:**

**Drawings:** H-2-89021, Sheet 1

H-2-89306.

**Documents:** ETF-45-002, RCA HVAC System Operation.
HVAC RCA AHU-B EVAP MED ALARM

DESCRIPTION: HVAC RCA EVAPORATIVE MEDIA PUMP BREAKER OPEN (45B-EM-1A)

Setpoint: Logic permissive(s) not met
Alarm Location: Logic generated alarm
Graphic: Alarm Summary Screen
Indications: N/A

NOTE - Alarm response procedures are not designed for, nor intended to be applied to, “expected” alarms generated by approved work activities or procedures.

Automatic Actions:
None.

Immediate Actions:

[1] (CRO) REQUEST SOE perform the following actions as specified:
   [1.1] (SOE) ENSURE breakers DP-2-21, DP-2-23 are OFF per ETF-45-002.
   [1.2] (SOE) ON graphic HVAC-SOE, ENSURE 45-EM-1B in MANUAL OFF.
   [1.3] (SOE) ON graphic HVAC-SOE, ENSURE handswitch evaporator media pumps not required is ON per ETF-45-002.

Possible Causes:

1. Handswitch on MCS graphic RCA HVAC Evaporator media pumps not required is not turned ON.

References:

Drawings: H-2-89021, Sheet 1
          H-2-89306.