RESPOND TO MONITOR CONTROL SYSTEM GRAPHIC #19 BUILDING VENT SUPPLY ALARMS

USQ # GCX-2

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-0</td>
<td>06/22/2015</td>
<td>Periodic review.</td>
<td>Add procedure title to referenced procedure number.</td>
</tr>
<tr>
<td>G-1</td>
<td>09/15/2014</td>
<td>Corrected Graphic reference..</td>
<td>Engineering request to address changes to the MCS software. Modified screen name to just a number.</td>
</tr>
<tr>
<td>G-0</td>
<td>07/26/2013</td>
<td>All changes are as a result of the periodic review process.</td>
<td>Globally changed/deleted vague phrases. Modified wording in Section 3.0.</td>
</tr>
<tr>
<td>F-2</td>
<td>05/02/2013</td>
<td>Global Change per ARP-T-251-00003 G-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>F-1</td>
<td>11/09/2010</td>
<td>Engineering/Operations request</td>
<td>Updated alarms to match new programming for MCS upgrade.</td>
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GRAPHIC #19 BUILDING VENT SUPPLY ALARM INDEX

ANNUNCIATOR #2-3

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<td>1......PDAH-702K24-1, Filter Room A HEPA AZ-702K24-1 Diff. Press. High</td>
<td>Yellow</td>
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<tr>
<td>2......PDAH-702K24-2, Filter Room B HEPA AZ-702K24-2 Diff. Press. High</td>
<td>Yellow</td>
<td>5</td>
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<td>6......PDAL-702K2-2, PV Filter Room A Delta P LO</td>
<td>Yellow</td>
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<td>7......PDAL-702K2-3, Filter Room B Delta P LO</td>
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<td>8......PDI-702K2-7, Filter Room A&amp;B/Vent Cell Diff. Press. Low</td>
<td>Yellow</td>
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<td>9......PDAL-702K2-8, Filter Room A&amp;B/Stack Monitor Room Diff. Press. Low</td>
<td>Yellow</td>
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<td>10.....PDAL-702K3-1, Primary Vent Cell Delta P LO</td>
<td>Yellow</td>
<td>15</td>
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<td>11.....AZ702-K2-6-1, Air Conditioning Unit AZ702-K2-6-1 Status (Fault)</td>
<td>Yellow</td>
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RECORDS

No records are generated during the performance of this procedure.
Initiating Monitor Control System On Line

1.0 PURPOSE

1.1 This attachment provides guidance to operators for responding to alarms associated with the AY/AZ ventilation system.

1.2 Section 2.0 provides guidance to operators for starting up the Monitor and Control System so that they may determine current alarm status if the system is not on line when they report to the control room.

2.0 OPERATION

2.1 IF system does not respond, and appears to be locked, REFER to procedure TO-060-356, Perform 702-AZ Exhauster Monitor and Control System Operations for instructions on re-setting and re-booting system AND RETURN to this procedure.

2.2 OPERATE system in accordance with procedure TO-060-356.

3.0 ENVIRONMENTAL COMPLIANCE

Tank farm ventilation systems and exhaust monitoring systems are regulated under Washington State Administrative Code (WAC) Chapters 173-400, 173-401, 173-460 and 246-247 and applicable Notices of Construction (NOC) issued to ensure compliance with these regulations. To ensure reporting requirements are met, all planned and unplanned outages of, or problems with tank farm ventilation and exhaust monitoring systems, abatement control equipment, and sampling and monitoring instruments must be reported to the Central Shift Office and Environmental per TFC-OPS-OPER-56 and TFC-ESHQ-ENV-FS-C-01.
Facility: 702-AZ Building Ventilation

Graphic: 19  Alarm #: 1

Source: PDI-702K24-1  Setpoint: 0.60 inches WC

Alarm Class: Equipment Status

Alarm Description: PDAH-702K24-1, Filter Room A HEPA AZ-702K24-1 Diff. Press. High

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 HEPA filter AZ702K2-4-1 high differential pressure using PDI-702K24-1 on graphic screen #19.

[2] CHECK that controller for primary ventilation cell supply valve MK-AZ702K204-1 has not failed using graphic screen #19.


[5] IF PDI-702K24-1 for MK-AZ702K204-1 does not appear to be controlling properly in automatic mode, PLACE PDIC-702K2-2 in MANUAL AND ADJUST, to establish differential pressure less than 0.60 inches WC.


[8] NOTIFY Shift Manager of actions and findings.

Possible Causes:

1. HEPA AZ-702K24-1 plugged.

   NOTE - MK-AZ702K204-1 fails in place on a loss of power.

2. Controller for MK-AZ702K204-1 failed.

3. Instrument malfunction.

4. Inlet screen to HEPA filter plugged.


(Continued on Next Page)
Facility: 702-AZ Building Ventilation

Graphic: 19  Alarm #: 1

Source: PDI-702K24-1  Setpoint: 0.60 inches WC

References:
Drawings: H-14-021307, Sheet 1
Respond to Monitor Control System Graphic #19 Building Vent Supply Alarms

Facility: 702-AZ Building Ventilation

Graphic: 19  Alarm #: 2

Source: PDI-702K24-2  Setpoint: 0.60 inches WC

Alarm Class: Equipment Status
Alarm Description: PDAH-702K24-2, Filter Room B HEPA AZ-702K24-2 Diff. Press. High

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] CHECK that controller for primary ventilation cell supply valve MK-AZ702K204-2 has not failed using graphic screen #19.


[5] IF PDIC-702K24-2 for MK-AZ702K204-2 does not appear to be controlling properly in automatic mode, PLACE PDIC-702K2-3 in MANUAL AND ADJUST, to establish differential pressure less than 0.60 inches WC.


[7] NOTIFY Shift Manager of actions and findings.

(Continued on Next Page)
Facility: 702-AZ Building Ventilation

Graphic: 19  
Alarm #: 2

Source: PDI-702K24-2  
Setpoint: 0.60 inches WC

Possible Causes:
1. HEPA AZ-702K24-2 plugged.
   NOTE - MK-AZ702K204-2 fails in place on a loss of power.
3. Instrument malfunction.
4. Inlet screen to HEPA filter plugged.

References:
- Drawings: H-14-021307, Sheet 1
Facility: 702-AZ Building Ventilation

Graphic: 19  Alarm #: 6

Source: PDI-702K2-2  Setpoint: -0.20 inches WC

Alarm Class: Environmental Impact
Alarm Description: PDAL-702K2-2, PV Filter Room A Delta P LO.

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] **CHECK** that controller for primary ventilation cell supply valve MK-AZ702K204-1 has not failed using graphic screen #19.


[5] **IF** PDI-702K2-2 for MK-AZ702K204-1 does not appear to be controlling properly in automatic mode, **PLACE** PDIC-702K2-2 in MANUAL **AND** **ADJUST**, to establish differential pressure less than -0.20 inches WC.


[7] **IF** HEPA differential pressure is high, **GO TO** Alarm Response Procedure for high HEPA differential pressure PDI-702K24-1.

[8] **CHECK** stack flow for a decreased flow rate.

[9] **ENSURE** doors to Filter Room A are CLOSED.

[10] **NOTIFY** Shift Manager of actions and findings.

(Continued on Next Page)
Facility: 702-AZ Building Ventilation

Graphic: 19  
Alarm #: 6

Source: PDI-702K2-2  
Setpoint: -0.20 inches WC

Possible Causes:

1. Filter Room A doors open.
3. PDIC-702K2-2 controller for MK-AZ702K204-1 malfunctioning.
5. Vent cell outlet damper MK-AZ702K3-1 closed.

References:

Drawings: H-14-021307, Sheet1
Facility: 702-AZ Building Ventilation

Graphic: 19  Alarm #: 7

Source: PDI-702K2-3  Setpoint: -0.20 inches WC

Alarm Class: Environmental Impact
Alarm Description: PDAL-702K2-3, Filter Room B Delta P LO.

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** the low differential pressure alarm on MONITOR CONTROL SYSTEM using filter room B differential pressure indicator PDI-702K2-3.

2. **CHECK** that controller for primary ventilation cell supply valve MK-AZ702K204-2 has not failed using graphic screen #19.

3. **COMPARE** position of MK-AZ702K204-2 with position of MK-AZ702K204-1.

4. **COMPARE** Filter Room B pressure on PDI-702K2-3 with Filter Room A pressure on PDI-702K2-2.

5. **IF** PDIC-702K2-3 for MK-AZ702K204-2 does not appear to be controlling properly in automatic mode, **PLACE** PDIC-702K2-3 in MANUAL AND **ADJUST**, to establish differential pressure less than 0.20 inches WC.


7. **IF** HEPA differential pressure is high, **GO TO** Alarm Response Procedure for high HEPA differential pressure PDI-702K24-2.

8. **CHECK** stack flow for a decreased flow rate.

9. **ENSURE** doors to Filter Room B are CLOSED.

10. **NOTIFY** Shift Manager of actions and findings.

(Continued on Next Page)
Facility: 702-AZ Building Ventilation

Graphic: 9 Alarm #: 7

Source: PDI-702K2-3 Setpoint: -0.20 inches WC

Possible Causes:
1. Filter Room B doors open.
3. PDIC-702K2-3 controller for MK-AZ702K204-2 malfunctioning.
5. Vent cell outlet damper MK-AZ702K3-1 closed.

References:
Drawings: H-14-021307, Sheet 1
Facility: 702-AZ Building Ventilation

Graphic: 19  Alarm #: 8

Source: PDI-702K2-7  Setpoint: -0.10 inches WC

Alarm Class: Environmental Impact
Alarm Description: PDAL-702K2-7, Filter Room A&B/Vent Cell Diff. Press. Low

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:

NOTE - Normal Vent Cell press = -1.50 inches WC
Normal Filter Rm A press = -0.25 inches WC
Normal Filter Rm B press = -0.25 inches WC
Normal Differential Press = -1.25 inches WC


[3] CHECK differential pressures on PDI-702K3-1 (vent cell), PDI-702K2-2 (Filter Room A) and PDI-702K2-3 (Filter Room B).

[4] IF any of the above indications are in alarm, GO TO the following applicable alarm response in this procedure.

• PDAL-702K3-1, VENT CELL DIFFERENTIAL PRESSURE LO
• PDAL-702K2-2, FILTER ROOM A DIFFERENTIAL PRESSURE LO
• PDAL-702K2-3, FILTER ROOM B DIFFERENTIAL PRESSURE LO


(Continued on Next Page)
Facility: 702-AZ Building Ventilation

Graphic: 19 Alarm #: 8

Source: PDI-702K2-7 Setpoint: -0.10 inches WC

Possible Causes:

1. Improper modulation of controller for valves MK-AZ702K204-1, MK-AZ702K204-2 and/or MK-AZ702K3-1.
2. Primary vent cell cover block seal leakage.
3. Instrument malfunction.
4. Vent cell outlet damper MK-AZ702K3-1 closed.

References: Drawings: H-14-021307, Sheet 1
Facility: 702-AZ Building Ventilation

Graphic: 19  Alarm #: 9

Source: PDI-702K2-8  Setpoint: -0.10 inches WC

Alarm Class: Environmental Impact
Alarm Description: PDAL-702K2-8, Filter Room A&B/Stack Monitor Room Diff. Press. Low

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:

   NOTE - Normal Vent Cell press = -1.50 inches WC
   Normal Filter Rm A press = -0.25 inches WC
   Normal Filter Rm B press = -0.25 inches WC
   Normal Differential Press = -1.25 inches WC


   [3] CHECK differential pressures on PDI-702K2-1 (stack monitoring room), PDI-702K2-2 (Filter Room A) and PDI-702K2-3 (Filter Room B).

   [4] IF any of the above indications are in alarm, GO TO the following applicable alarm response in this procedure.

      • PDAL-702K2-1, STACK MON ROOM DIFFERENTIAL PRESSURE LO
      • PDAL-702K2-2, FILTER ROOM A DIFFERENTIAL PRESSURE LO
      • PDAL-702K2-3, FILTER ROOM B DIFFERENTIAL PRESSURE LO


(Continued on Next Page)
Possible Causes:

1. Failed filter room A or B discharge damper controller MK-702K204-1 or MK-702K204-2.
2. Failed primary vent cell discharge valve controller MK-702K3-1.
3. Instrument malfunction.
4. Failure of building Air Conditioning unit.
5. Building exhaust fan failure cell outlet damper MK-AZ702K3-1 closed.

References:

Drawings:  H-14-021307, Sheet 1
Respond to Monitor Control System Graphic #19 Building Vent Supply Alarms

Facility: 702-AZ Building Ventilation

Graphic: 19  Alarm #: 10

Setpoint: -1.40 in. WG

Source: PDI-702K3-1

Alarm Class: Environmental Impact

Alarm Description: PDAL-702K3-1, Primary Vent Cell Delta P LO.

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 the primary ventilation cell low differential pressure by using MONITOR CONTROL SYSTEM indication for PDI-702K3-1 on graphic screen #19.

[2] IF low differential pressure is verified, GO TO graphic screen #20 building exhaust AND

CHECK operation of the running exhaust fan.

[3] IF there is a problem with the in-service exhaust train, PERFORM the following;

[3.1] PLACE the running fan Pressure Differential Indicating Controller in MANUAL AND

ADJUST, to establish building vent stack flow rate of more than 800 scfm, OR

TRANSFER operation to the other train.

[3.2] IF low differential pressure condition is corrected by transferring operation to the other train, NOTIFY Shift Manager of actions and findings.


[5] IF the controller appears to have failed, GO TO MANUAL MODE AND

ADJUST, to establish differential pressure ≥ 0.75 in. W.G. in the vent cell.


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Facility: 702-AZ Building Ventilation

Graphic: 19  Alarm #: 10

Source: PDI-702K3-1  Setpoint: -1.40 in. WG

Possible Causes:
1. Exhaust train HEPA AZ702K3-4-1A or AZ702K3-4-1B plugged.
2. Exhaust train pre-filter AZ702K3-1A OR AZ702K3-1B plugged.
3. Discharge damper controller PDIC-702K3-1 closed.
6. Excessive vent cell air in-leakage.

References:
Drawings: H-14-021307, Sheet 1
Respond to Monitor Control System Graphic #19 Building Vent Supply Alarms

Facility: 702-AZ Building Ventilation

Graphic: 19  Alarm #: 11

Source: AZ702-K2-6-1  Setpoint: N/A

Alarm Class: Environmental Impact

Alarm Description: AZ702-K2-6-1, Air Conditioning Unit AZ702-K2-6-1 Status (Fault)

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:


NOTE - Failure of air conditioning Unit AZ702-K2-6-1 may lead to a slow heat up of the 702-AZ Building. Temperatures above 110° F are considered harmful to the Local Control Unit equipment.

[2] PLACE dampers MK-AZ702K204-1 and MK-AZ702K204-2 into MANUAL AND OPEN to 100% position.

[3] PLACE damper MK-AZ702K3-1 into MANUAL AND ADJUST, to establish more than 800 scfm.


Possible Causes:

1. Instrument malfunction.
2. Equipment malfunction.

References:

Drawings: H-14-021307, Sheet 1