# Start, Stop and Operate 241-AZ-702 Building Ventilation System

## Tank Farm Plant Operating Procedure

### AY & AZ Farm Ventilation

USQ # TF-18-1741-D, 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-3</td>
<td>07/25/2017</td>
<td>Change to TFC-PLN-167</td>
<td>Updated Section 3.1 White Label statement to match recent changes to TFC-PLN-167.</td>
</tr>
<tr>
<td>H-2</td>
<td>01/26/2017</td>
<td>To address WRPS-PER-2016-1232</td>
<td>Replaced the Hazard Risk Category 0 statement. Appendix 2 changed switch position for Switch For RIAS-AZ702K3-1 and RIAS-AZ702K3-1 Local ON/OFF Switch. Deleted Step 5.5.8. Deleted Section 5.6.</td>
</tr>
<tr>
<td>H-1</td>
<td>06/16/2016</td>
<td>Records management request</td>
<td>Updated records section to latest requirements.</td>
</tr>
<tr>
<td>H-0</td>
<td>05/19/2016</td>
<td>Periodic Review</td>
<td>Added step 3.1.2 regarding precautions for Non-electrical workers accessing electrical enclosures. Updated Radcon statement at step 3.2.1. Corrected the title of a performance document.</td>
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1.0 PURPOSE

1.1 Purpose

This procedure provides instructions for starting, stopping and operating the 241-AZ-702 Building ventilation system.

1.2 Scope

This procedure applies to equipment and instrumentation associated with the 241-AZ-702 building ventilation system and the building ventilation control system.

2.0 INFORMATION

2.1 General Information

The function of the 241-AZ-702 Building Ventilation System is to provide a negative differential pressure in the 241-AZ-702 building and Primary Ventilation Cell with respect to atmospheric pressure under normal operating conditions. The Primary Ventilation Cell contains the High Efficiency Mist Eliminator (HEME, AZ-K1-9-1), the condensate seal pot (AZ-PC-SP-1), and the primary condenser (AZ-K1-8-1), which are part of the 241-AY and 241-AZ primary tank ventilation system (VTP). A secondary function of the 241-AZ-702 Building Ventilation System is to provide cooling for the electronic components in the Equipment and Instrumentation Rooms located in the 241-AZ-702 building.

The 241-AZ-702 Building Ventilation System operates intermittently and exhausts through stack 296-A-43. This system is used to support current surveillance, maintenance activities, operations or decommissioning, decontamination, and cleanup activities within the 702 AZ building. Many activities associated with stack 296-A-43 other than normal surveillance, maintenance, and operation support will be or are regulated and/or permitted under the appropriate regulations and/or permits for the activity being performed and the emission units associated with the activity.

241-AZ-702 Building ventilation system consists of the following components:

Air conditioning intake unit:
- Filter
- Electric heating coil
- Direct expansion cooling coil
- Fan (1678 SCFM).
2.1 General Information (Cont.)

Ventilation manifold and isolation dampers:
- Primary vent filter room A
- Electrical/instrument room A
- Stack monitor room
- Electrical/instrument room B
- Primary vent filter room B.

Recirculation ducts, cross vents, isolation dampers and manifold to intake unit:
- Electrical/instrument room A
- Stack monitor room
- Electrical/instrument room B.

Two exhaust ducts run from each primary filter vent room (A and B). The two flow paths are:
- From filter vent room into a HEPA filter, through a motor operated valve, then to primary vent cell, isolation valve and then to building filter exhaust trains;
- OR
  
  From filter vent room, through an isolation damper, directly to building filter exhaust trains.

Filter exhaust trains A and B which include:
- Pre-filters
- HEPA filters
- Exhaust fans
- Stack
- Train isolation dampers.

2.2 Terms and Definitions
- SCFM - Standard Cubic Feet Per Minute
- WC - Water Column
- MCS - Monitoring Control System.
3.0 PRECAUTIONS AND LIMITATIONS

3.1 Personnel Safety

3.1.1 Personnel trained in the operation of breakers and disconnects will wear the following PPE as a minimum:
- Hearing protection
- Non-melting (untreated natural fiber) pants and long-sleeved shirt
- Safety glasses
- Leather or insulating gloves.

3.1.2 Non-electrical worker accessing electrical enclosures must ensure the following:
- The enclosure must have a white label indicating that it has been evaluated.
- The work activity within the enclosure does not involve:
  - Reaching around or moving electrical equipment
  - Contacting electrical connectors/connections
  - By-passing protective shielding/barriers.

3.1.2.1 Stop and notify management if these conditions cannot be met, or if discrepancies exist (e.g. conflicting or missing labels, missing or damaged protective barriers).

3.2 Radiation and Contamination Control

3.2.1 When this procedure is worked in radiological areas, an approved radiological work permit (RWP) is required. If radiological conditions or work performed falls outside the scope of the RWP, all work activities must be discontinued until a new or revised RWP has been issued in accordance with TFC-ESHQ-RP_RWP-C-03, ALARA Work Planning.
3.3 Environmental Compliance

3.3.1 All planned and unplanned outages of Tank Farm ventilation systems, abatement control equipment, and exhaust monitoring systems, must be reported to Central Shift Office and Environmental per TFC-ESQH-ENV_FS-C-01. Environmental will determine and make the required notifications pertaining to ventilation system outages.

3.3.2 The following equipment is required Abatement Control Technology. Any change in operational status (i.e., Shutdown, bypass or startup) of this equipment must be reported to Central Shift Office and Environmental per the Environmental On-call List. Notification must be made in advance for planned activities.
   - Prefilter
   - HEPA filters
   - Exhaust Fan
   - Isolation Damper.

3.4 Limits

RPP-11413, Ventilation System In-service Requirements

RPP-16922, Environment Specification Requirements

4.0 PREREQUISITES

4.1 Performance Documents

The following procedure/drawings may be needed to perform this procedure:
   - TO-060-356, Perform 702-AZ Exhauster Monitor and Control System Operations
   - Drawings: H-2-131370, and H-14-021307 Sheets 1, 2, and 3.

4.2 Field Preparations

4.2.1 ENSURE the following conditions are met before the building ventilation system is placed into service:
   - Shift Manager has approved ventilation system adjustment
   - The MCS is in service per TO-060-356
   - Stack record sampler monitoring system is ready for service.
   - HPT has been notified prior to starting building exhaust system
   - TMACS operator has been notified, prior to starting or stopping building supply system, building exhaust system, or air conditioning unit.
## 4.2 Field Preparations (Cont.)

4.2.2 IF performing an exhauster start-up after a greater than 30 day shutdown, VERIFY the following differential pressure gauges, and temperature gauges have been calibrated within the last 365 days and HEPA filters have been challenge (aerosol) tested within the last 365 days in accordance with RPP-16922. *(RPP-11413, RPP-16922)*

<table>
<thead>
<tr>
<th>Vent Sub-System</th>
<th>Sub-System Equipment Id. Number (EIN)</th>
<th>EAM PM Id</th>
<th>(√ or OS) If Calibrations/Tests are current or Out of Service/Specifications</th>
<th>(N/A) If Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>296-A-43 dp</td>
<td>PDT-AZ702K204-1</td>
<td>ET-006453</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PDT-AZ702K204-2</td>
<td>ET-006454</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PDT-AZ702K303-1A</td>
<td>ET-006456</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PDT-AZ702K303-1B</td>
<td>ET-006458</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PDT-AZ702K304-1A</td>
<td>ET-006459</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PDT-AZ702K304-1B</td>
<td>ET-006460</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exhaust HEPA Filter Challenge Tests</td>
<td>AZ702-K2-4-1</td>
<td>ET-006992</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>AZ702-K2-4-2</td>
<td>ET-007048</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>AZ702-K3-4-1A</td>
<td>ET-006988</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>AZ702-K3-4-1B</td>
<td>ET-007050</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Special Instructions:

1. With the exception of aerosol testing of filters (using a work package), DO NOT start exhauster until all required Calibrations/Tests are current.

________________________________________  /  ______________________________________  /  ________________
Signature  Print (First and Last)  Date
Shift Manager /OE
5.0  PROCEDURE

NOTE - Sections and activities may be performed simultaneously, or any logical order, as directed by Shift Manager/OE.

5.1  System Configuration

5.1.1 IF system configuration is known, COMPLETE individual sections as directed by Shift Manager.

5.1.2 IF system configuration is not known, COMPLETE Section 5.2 AND CONTINUE to individual sections, per Shift Manager direction.

5.2  Pre-Start Checks

5.2.1 IF not already done, PERFORM login at the MCS Work Station as follows:

5.2.1.1 ENTER account identifier.

5.2.1.2 ENTER password.

Damper Alignment Checks

5.2.2 ENSURE dampers are positioned as indicated in Appendix 1.

Breaker and Switch Position Checks

5.2.3 ENSURE personnel trained in the operation of breakers and disconnects dons PPE (refer to Section 3.1).

5.2.4 ENSURE breakers and switches are positioned as indicated in Appendix 2.

Align System for Normal Operation

5.2.5 ENSURE heat temperature controller on TIC-AZ702K206-1 (located in stack monitor room) is set to 62 °F.

5.2.6 ENSURE cooling temperature controller on TIC-AZ702K206-1 (located in stack monitor room) is set to 68 °F.

5.2.7 SET air conditioning unit OFF/HEAT/AUTO/COOL switch (located in stack monitor room) to “AUTO”.

5.2.8 TURN local/remote switch (located in stack monitor room) HS-AZ702K206-1A1 to “Remote” position.
5.2 Pre-Start Checks (Cont.)

NOTE - Room differential pressure cannot be established until room temperature returns to less than 90 °F and dampers are closed.

The following valves automatically open when associated room temperature is greater than 110 °F, and close at 90 °F:
- MK-AZ702K2-6A and MK-AZ702K2-6B
- MK-AZ702K2-7A and MK-AZ702K2-7B
- MK-AZ702K2-8A and MK-AZ702K2-8B.

5.2.9 **CLOSE** the following valves from Graphic Screen 22BldTmp in order listed:
- MK-AZ702K2-6A
- MK-AZ702K2-6B
- MK-AZ702K2-7A
- MK-AZ702K2-7B
- MK-AZ702K2-8A
- MK-AZ702K2-8B.

5.2.9.1 **CLICK** on the valve to be closed (in the order listed above).
5.2.9.2 **CLICK** on “Manual mode” button.
5.2.9.3 **CLICK** on “Apply” button.
5.2.9.4 **CONFIRM** “Manual mode” button appears on top icon bar of faceplate.
5.2.9.5 **CLICK** on “Close” button.
5.2.9.6 **CLICK** on “Apply” button.
5.2.9.7 **CONFIRM** the “Close” icon appears on top icon bar of faceplate.
5.2.9.8 **CONFIRM** the valve closes.
5.2.9.9 **CLOSE** faceplate.
5.2.9.10 **REPEAT** Steps 5.2.9.1 through 5.2.9.9 to close all valves listed in Step 5.2.9.
5.2 Pre-Start Checks (Cont.)

5.2.10 SET each of the following controllers on Graphic Screen 19 to the setting listed in the table below as follows:

<table>
<thead>
<tr>
<th>ROOM</th>
<th>VALVE</th>
<th>CONTROLLER</th>
<th>SETTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLT Rm A PDC</td>
<td>MK-AZ702K204-1</td>
<td>PDC-702K2-2</td>
<td>-0.25 inches WC</td>
</tr>
<tr>
<td>FLT Rm B PDC</td>
<td>MK-AZ702K204-2</td>
<td>PDC-702K2-3</td>
<td>-0.25 inches WC</td>
</tr>
<tr>
<td>Vent Cell PDC</td>
<td>MK-AZ702K3-1</td>
<td>PDC-702K3-1</td>
<td>-1.5 inches WC</td>
</tr>
</tbody>
</table>

5.2.10.1 CLICK on the valve to be automatically controlled (in the order listed above).

5.2.10.2 CLICK on “Auto” button.

5.2.10.3 CLICK on “Apply” button.

5.2.10.4 CONFIRM “Auto” icon appears on top icon bar of faceplate.

5.2.10.5 CLICK on setpoint window.

5.2.10.6 ADJUST setpoint to desired vacuum.

5.2.10.7 CLICK on “Apply” button.

5.2.10.8 CONFIRM setpoint appears in the setpoint window.

5.2.10.9 CONFIRM setpoint appears in the valve setpoint window.

5.2.10.10 CLOSE faceplate.

5.2.10.11 REPEAT Steps 5.2.10.1 through 5.2.10.10 to adjust setpoints of each valve listed in table of Step 5.2.10.

5.2.11 CHECK vent building stack Record Air Sampler is ready for service.
5.2 Pre-Start Checks (Cont.)

5.2.12 SET each of the following controllers on Graphic Screen 21 to the setting listed in the table below as follows:

<table>
<thead>
<tr>
<th>VALVE</th>
<th>CONTROLLER</th>
<th>SETTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>MV-AZ702K3-1</td>
<td>FIC-AZ702K3-1</td>
<td>AUTO</td>
</tr>
<tr>
<td>MV-AZ702K3-2</td>
<td>FIC-AZ702K3-2</td>
<td>AUTO</td>
</tr>
</tbody>
</table>

5.2.12.1 CLICK on the valve to be placed in AUTO.

5.2.12.2 CLICK on “Auto” button.

5.2.12.3 CLICK on “Apply” button.

5.2.12.4 CONFIRM “Auto” icon appears on top icon bar of faceplate.

5.2.12.5 CLOSE faceplate.

5.2.12.6 REPEAT Steps 5.2.12.1 through 5.2.12.5 to place next valve in AUTO (see table above).

Establish Flow Control Setpoints

5.2.13 ENSURE each of the following controllers (Graphic Screen 20) are set as listed in the table below:

<table>
<thead>
<tr>
<th>VALVE</th>
<th>CONTROLLER (&quot;Vent PIC&quot;)</th>
<th>SETTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>MK-AZ702K305-1A</td>
<td>PIC-702K35-1A</td>
<td>-2.0 inches WC</td>
</tr>
<tr>
<td>MK-AZ702K305-1B</td>
<td>PIC-702K35-1B</td>
<td>-2.0 inches WC</td>
</tr>
</tbody>
</table>

5.2.13.1 CLICK on the controller’s Vent PIC.

5.2.13.2 CLICK on “Auto” button.

5.2.13.3 CLICK on “Apply” button.

5.2.13.4 CONFIRM “Auto” icon appears on top icon bar of faceplate.
5.2 Pre-Start Checks (Cont.)

5.2.13.5 CLICK on setpoint window.
5.2.13.6 ADJUST setpoint to desired vacuum.
5.2.13.7 CLICK on “Apply” button.
5.2.13.8 CONFIRM setpoint appears in the setpoint window.
5.2.13.9 CONFIRM setpoint appears in the valve setpoint window.
5.2.13.10 CLOSE faceplate.
5.2.13.11 REPEAT Steps 5.2.13.1 through 5.2.13.10 to adjust setpoint of next valve listed in table of Step 5.2.13.

Align Fan Suction Dampers for Manual Operation

5.2.14 ENSURE each of the following controllers (Graphic Screen 20) are set as listed in the table below:

<table>
<thead>
<tr>
<th>VALVE</th>
<th>SETTING</th>
<th>POSITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>MK-AZ702K3-2A</td>
<td>MANUAL</td>
<td>CLOSED</td>
</tr>
<tr>
<td>MK-AZ702K3-2B</td>
<td>MANUAL</td>
<td>CLOSED</td>
</tr>
</tbody>
</table>

5.2.14.1 CLICK on the valve to be placed in MANUAL.
5.2.14.2 CLICK on “Manual mode” button.
5.2.14.3 CLICK on “Apply” button.
5.2.14.4 CONFIRM “Manual mode” icon appears on top icon bar of faceplate.
5.2.14.5 CLICK on “Close” button.
5.2.14.6 CONFIRM valve closure in the top icon bar of faceplate.
5.2.14.7 CONFIRM valve closure in the valve closed icon.
5.2.14.8 CLOSE faceplate.
5.2.14.9 REPEAT Steps 5.2.14.1 through 5.2.14.8 to place next valve in MANUAL (see table above).
5.3 Operate Building Ventilation System in MANUAL Mode

NOTE - The following identifies the activities in this section and associated steps.
- Start Air Conditioning Unit
- Stop Air Conditioning Unit
- Start Filter Train in MANUAL Mode
- Shut Down Filter Train in MANUAL Mode
- Switch Exhaust Fans in MANUAL Mode.

Start Air Conditioning Unit

5.3.1 IF requested by Shift Manager, **START** air conditioning unit on Graphic Screen 19 AZ702-K2-6-1 AND

PLACE air conditioning unit AZ702-K2-6-1 (located in stack monitor room) in "AUTO" as follows:

5.3.1.1 **ENSURE** the heat temperature controller for TIC-AZ702K206-1 (located in stack monitor room) is set to 62 °F.

5.3.1.2 **ENSURE** the cooling temperature controller for TIC-AZ702K206-1 (located in stack monitor room) is set to 68 °F.

5.3.1.3 **ENSURE** air conditioning unit OFF/HEAT/AUTO/COOL switch is set to AUTO.

5.3.1.4 **TURN** local/remote HS AZ702K206-1A1 switch (located in stack monitor room) to “Remote” position.

5.3.1.5 **CLICK** on air conditioning fan AZ702-K2-6-1.

5.3.1.6 **CLICK** on “Manual mode” button.

5.3.1.7 **CLICK** on “Apply” button.

5.3.1.8 **CONFIRM** “Manual mode” icon appears on top icon bar of faceplate.

5.3.1.9 **CLICK** on “Start” button.

5.3.1.10 **CLICK** on “Apply” button.

5.3.1.11 **CONFIRM** air conditioning fan AZ702-K2-6-1 is ON.
5.3 Operate Building Ventilation System in MANUAL Mode (Cont.)

5.3.1.12 RETURN to AUTO.

5.3.1.13 CLICK on “Auto” button.

5.3.1.14 CLICK on “Apply” button.

5.3.1.15 CONFIRM “Auto” icon appears on top icon bar of faceplate.

Stop Air Conditioning Unit

5.3.2 IF requested by Shift Manager, STOP air conditioning unit on Graphic Screen 19 AZ702-K2-6-1 as follows:

5.3.2.1 ENSURE local/remote switch (located in stack monitor room) HS-AZ702K206-1A1 is in “Remote” position.

5.3.2.2 CLICK on air conditioning fan AZ702-K2-6-1.

5.3.2.3 CLICK on “Manual mode” button.

5.3.2.4 CLICK on “Apply” button.

5.3.2.5 CONFIRM “Manual mode” icon appears on top icon bar of faceplate.

5.3.2.6 CLICK on “Stop” button.

5.3.2.7 CLICK on “Apply” button.

5.3.2.8 CONFIRM air conditioning fan AZ702-K2-6-1 is OFF.

Start Filter Train in MANUAL Mode

NOTE - Backup fan will not start when starting fan is in Manual mode.

- If the exhauster is started in Manual mode, a macro shutdown will not be possible.

5.3.3 REQUEST permission from Shift Manager to start desired fan.

5.3.4 IF ventilation has been down for 30 days or more, ENSURE Step 4.2.2 has been performed prior to proceeding with this section. (RPP-11413, RPP-16922)

5.3.5 ENSURE pre-start checks in Section 5.2 have been completed.

5.3.6 NOTIFY TMACS operator that fan is being started.
5.3 Operate Building Ventilation System in MANUAL Mode (Cont.)

5.3.7 OPEN desired valve(s) on Graphic Screen 20 as follows:

5.3.7.1 CLICK on desired valve.
5.3.7.2 CLICK on “Manual mode” button.
5.3.7.3 CLICK on “Apply” button.
5.3.7.4 CONFIRM “Manual mode” icon appears on top icon bar of faceplate.
5.3.7.5 CLICK on “Open” button.
5.3.7.6 CLICK on “Apply” button.
5.3.7.7 CONFIRM valve opens.

5.3.8 START desired exhaust fan(s) as follows:

5.3.8.1 CLICK on desired exhaust fan.
5.3.8.2 CLICK on “Manual mode” button.
5.3.8.3 CLICK on “Apply” button.
5.3.8.4 CONFIRM “Manual mode” icon appears on top icon bar of faceplate.
5.3.8.5 CLICK on “Start” button.
5.3.8.6 CLICK on “Apply” button”.
5.3.8.7 CONFIRM Exhaust fan is ON.
5.3.8.8 IF exhaust fan does not start, NOTIFY Shift Manager.
5.3.8.9 NOTIFY Shift Manager and TMACS operator that the desired building ventilation fan has successfully started.
5.3.8.10 REQUEST HPT to confirm proper operation of vent building stack Record Sampler.

5.3.9 CONFIRM FI-702K3-3 indicates a flow rate of > 700 SCFM on graphic screen 21.
5.3 Operate Building Ventilation System in MANUAL Mode (Cont.)

Switch Exhaust Fans in MANUAL Mode

NOTE - Backup fan will not start when starting fan is in Manual mode.

5.3.10 REQUEST permission from Shift Manager to switch to desired fan.

5.3.11 IF ventilation has been down for 30 days or more, ENSURE Step 4.2.2 has been performed prior to proceeding with this section. (RPP-11413, RPP-16922)

5.3.12 ENSURE pre-start checks in Section 5.2 have been completed.

5.3.13 NOTIFY TMACS operator of exhaust fan switch.

5.3.14 ENSURE Duty Standby is in Manual mode.

5.3.15 ENSURE non–running train is in Manual mode.

5.3.16 STOP desired exhaust fan as follows:

5.3.16.1 CLICK on desired exhaust fan.

5.3.16.2 CLICK on “Manual mode” button.

5.3.16.3 CLICK on “Apply” button.

5.3.16.4 CONFIRM “Manual mode” icon appears on top icon bar of faceplate.

5.3.16.5 CLICK on “Stop” button.

5.3.16.6 CLICK on “Apply” button.

5.3.16.7 CONFIRM desired Exhaust fan is OFF.

5.3.17 CLOSE desired valve as follows:

5.3.17.1 CLICK on desired valve.

5.3.17.2 CLICK on “Manual mode” button.

5.3.17.3 CLICK on “Apply” button.

5.3.17.4 CONFIRM “Manual mode” icon appears on top icon bar of faceplate.

5.3.17.5 CLICK on “Close” button.
5.3 Operate Building Ventilation System in MANUAL Mode (Cont.)

5.3.17.6 CLICK on “Apply” button.

5.3.17.7 CONFIRM valve closes.

5.3.17.8 CLOSE faceplate.

5.3.18 OPEN desired valve as follows:

5.3.18.1 CLICK on desired valve.

5.3.18.2 CLICK on “Manual mode” button.

5.3.18.3 CLICK on “Apply” button.

5.3.18.4 CONFIRM “Manual mode” icon appears on top icon bar of faceplate.

5.3.18.5 CLICK on “Open” button.

5.3.18.6 CLICK on “Apply” button.

5.3.18.7 CONFIRM valve opens.

5.3.18.8 CLOSE faceplate.

5.3.19 START desired exhaust fan as follows:

5.3.19.1 CLICK on desired exhaust fan.

5.3.19.2 CLICK on “Manual mode” button.

5.3.19.3 CLICK on “Apply” button.

5.3.19.4 CONFIRM “Manual mode” icon appears on top icon bar of faceplate.

5.3.19.5 CLICK on “Start” button.

5.3.19.6 CLICK on “Apply” button.

5.3.19.7 CONFIRM desired Exhaust fan is ON.

5.3.19.8 IF exhaust fan does not start, NOTIFY Shift Manager.

5.3.19.9 RETURN to Step 5.3.1 to Start AC unit.
5.3 Operate Building Ventilation System in MANUAL Mode (Cont.)

5.3.20 REQUEST HPT to CONFIRM proper operation of vent building stack Record Sampler.

5.3.21 CONFIRM Fl-702K3-3 indicates a flow rate of > 700 SCFM on Graphic Screen 21.

5.3.22 NOTIFY Shift Manager and TMACS operator that the building ventilation fan has successfully switched.

Shut Down in MANUAL/LOCAL Mode

5.3.23 REQUEST permission from Shift Manager to shut down desired fan.

5.3.24 NOTIFY TMACS operator that desired exhaust fan is being shut down.

5.3.25 CONFIRM Duty standby face plate is in “Manual” mode.

5.3.26 STOP desired exhaust fan as follows:

5.3.26.1 CLICK on desired exhaust fan.

5.3.26.2 CLICK on “Manual mode” button.

5.3.26.3 CLICK on “Apply” button.

5.3.26.4 CONFIRM “Manual mode” icon appears on top icon bar of faceplate.

5.3.26.5 CLICK on “Stop” button.

5.3.26.6 CLICK on “Apply” button.

5.3.26.7 CONFIRM exhaust fan is OFF.

5.3.27 CLOSE desired valve as follows:

5.3.27.1 CLICK on desired valve.

5.3.27.2 CLICK on “Manual mode” button.

5.3.27.3 CLICK on “Apply” button.

5.3.27.4 CONFIRM “Manual mode” icon appears on top icon bar of faceplate.
5.3 Operate Building Ventilation System in MANUAL Mode (Cont.)

5.3.27.5 CLICK on “Close” button.
5.3.27.6 CLICK on “Apply” button.
5.3.27.7 CONFIRM valve closes.

5.3.28 RESET Building Macro as follows:

5.3.28.1 CLICK on Building Macro button.
5.3.28.2 CLICK on “Reset Seq” button.
5.3.28.3 CLICK on “Apply” button.
5.3.28.4 CONFIRM “Macro Status” indicates READY.

5.3.29 NOTIFY Shift Manager and TMACS operator that the desired building ventilation fan has successfully shut down.

Switch Filter Trains Using DUTY STANDBY Faceplate

5.3.30 REQUEST permission from Shift Manager to switch fan.
5.3.31 NOTIFY Shift Manager and TMACS operator of exhaust fan switch.
5.3.32 SWITCH Duty and Standby fans as follows:

5.3.32.1 CLICK on running exhaust fan.
5.3.32.2 CLICK on “Auto mode” button.
5.3.32.3 CLICK on “Apply” button.
5.3.32.4 CONFIRM “Auto mode” icon appears on top icon bar of faceplate.
5.3.32.5 CLICK on non-running exhaust fan.
5.3.32.6 CLICK on “Auto mode” button.
5.3.32.7 CLICK on “Apply” button.
5.3.32.8 CONFIRM “Auto mode” icon appears on top icon bar of faceplate.
5.3.32.9 CLICK on DUTY STANDBY faceplate.
5.3 Operate Building Ventilation System in MANUAL Mode (Cont.)

5.3.32.10 CLICK on Duty button for the non-running fan.

5.3.32.11 CLICK on “Apply” button.

5.3.32.12 CONFIRM the selected fan is in Duty mode.

5.3.32.13 CONFIRM the other fan is in Standby mode.

5.3.32.14 CONFIRM the Graphic Screen 20 indicates the same conditions.

5.3.32.15 IF fans do not switch, NOTIFY Shift Manager.

5.3.33 CONFIRM proper operation of vent building stack Record Sampler.

5.3.34 CONFIRM FI-702K3-3 indicates a flow rate of > 700 SCFM.

5.3.35 NOTIFY Shift Manager and TMACS operator that the building ventilation fan has successfully switched.

5.4 Operate Building Ventilation System in MACRO Mode

NOTE - This section contains the following activities and associated steps.

- Start desired Filter Train in MACRO Mode
- Shut down desired Filter Train in MACRO Mode.

Start Desired Filter Train in MACRO Mode

5.4.1 REQUEST permission from Shift Manager to start desired fan.

5.4.2 IF ventilation has been down for 30 days or more, ENSURE Step 4.2.2 has been performed prior to proceeding with this section. (RPP-11413, RPP-16922)

5.4.3 ENSURE pre-start checks in Section 5.2 have been completed.

5.4.4 NOTIFY Shift Manager and TMACS operator that fan is being started.

5.4.5 CLICK on Building Macro button.
5.4 Operate Building Ventilation System in MACRO Mode (Cont.)

5.4.6 CLICK on Duty Standby faceplate.

5.4.6.1 CLICK on “Manual mode” button.

5.4.6.2 CLICK on “Apply” button.

5.4.6.3 CONFIRM “Manual mode” icon appears on top icon bar of faceplate.

5.4.6.4 CLICK on desired Duty fan button.

5.4.6.5 CLICK on “Apply” button.

5.4.6.6 CONFIRM desired fan is in Duty mode.

5.4.6.7 CONFIRM other fan is in Standby mode.

5.4.6.8 CLICK on “Auto” button.

5.4.6.9 CLICK on “Apply” button.

5.4.6.10 CONFIRM “Auto” icon appears on top icon bar of faceplate.

5.4.6.11 CLOSE faceplate.

5.4.6.12 CLICK on “AC Offline” button.

5.4.6.13 CLICK on “Apply” button.

5.4.6.14 CONFIRM the “AC Offline” button turns to “AC Online” and is green.

5.4.6.15 CONFIRM “Macro Status” in center of screen reads READY.

5.4.7 IF “Macro Status” does not indicate READY, PERFORM the following.

5.4.7.1 CLICK on “Reset Seq” button.

5.4.7.2 CLICK on “Apply” button.

5.4.7.3 CONFIRM “Macro Status” indicates READY.

5.4.8 CLICK “Startup” button.

5.4.9 CLICK on “Apply” button.
5.4 Operate Building Ventilation System in MACRO Mode (Cont.)

5.4.10 CONFIRM “Macro Status” in center of screen begins macro sequence readout.

5.4.11 CONFIRM Exhaust fan is ON.

5.4.12 IF exhaust fan does not start, NOTIFY Shift Manager.

5.4.12.1 CLICK on “Reset Seq” button.

5.4.12.2 CLICK on “Apply” button.

5.4.12.3 CONFIRM “Macro Status” indicates READY.

5.4.13 REQUEST HPT to CONFIRM proper operation of vent building stack Record Sampler.

5.4.14 CONFIRM FI-702K3-3 indicates a flow rate of > 700 scfm on graphic screen 21.

5.4.15 NOTIFY Shift Manager and TMACS operator that the building ventilation fan has successfully started.

Shut Down Desired Filter Train in MACRO Mode

5.4.16 REQUEST permission from Shift Manager to shut down desired fan.

5.4.17 NOTIFY TMACS operator that fan is being shut down.

5.4.18 CLICK on Building Macro button.

5.4.19 IF running fan is not in AUTO mode, PERFORM the following:

5.4.19.1 CLICK on desired fan faceplate.

5.4.19.2 CLICK on “Auto mode” button.

5.4.19.3 CLICK on “Apply” button.

5.4.19.4 CONFIRM “Auto mode” icon appears on top icon bar of faceplate.

5.4.20 CLOSE faceplate.

5.4.21 CLICK on “AC Online” button.
5.4 Operate Building Ventilation System in MACRO Mode (Cont.)

5.4.22 CLICK on “Apply” button.

5.4.23 CONFIRM the “AC Online” button changes to “AC Offline.”

5.4.24 CONFIRM “Macro Status” in center of screen reads Building Macro Running.

5.4.25 IF “Macro Status” does not indicate Building Macro Running, PERFORM the following:

5.4.25.1 CLICK on “Reset Seq” button.

5.4.25.2 CLICK on “Apply” button.

5.4.25.3 CONFIRM “Macro Status” indicates READY.

5.4.25.4 RETURN to Section 5.3 to shut down in Manual Mode.

5.4.26 CLICK “Shutdown” button.

5.4.27 CLICK on “Apply” button.

5.4.28 CONFIRM “Macro Status” in center of screen [reads Ready].

5.4.29 CONFIRM the following:
- AC unit is shut down
- Desired Damper is closed
- Desired fan is shut down.

5.4.30 IF AC unit does not shut down, PERFORM the following:

5.4.30.1 NOTIFY the Shift Manager.

5.4.30.2 RETURN to Section 5.3 to manually shutdown the AC unit.

5.4.31 IF desired damper and/or the desired fan does not shut down, PERFORM the following:

5.4.31.1 NOTIFY the Shift Manager.

5.4.31.2 RETURN to Section 5.3 to manually close the desired damper and/or shutdown the desired fan.

5.4.32 NOTIFY Shift Manager and TMACS operator that the building ventilation fan has successfully shut down.
5.5 **Start Up the Building Stack Monitoring System**

5.5.1 **ENSURE** personnel trained in the operation of breakers and disconnects dons PPE (refer to Section 3.1).

5.5.2 **TURN** breaker #31 in Panel PP-5 ON.

5.5.3 **CLOSE** switch SW-2 inside ENCL-AZ702K3-1.

**NOTE** - If a building exhaust fan is running, expect Sample Pumps to start when HS-AZ702K311-1 or HS-AZ702K311-2 is placed into AUTO.

5.5.4 **ENSURE** both Sample Pump Motor Switches (AZ702-K-11-1 and AZ702-K-11-2) are ON.

5.5.5 **TURN** HS-AZ702K311-1 and HS-AZ702K311-2 to AUTO.

5.5.6 **CHECK** FI-702K3-1 and FI-702K3-2 are reading approximately 1.5 SCFM.

5.5.7 **NOTIFY** Shift Manager and TMACS operator, Building Stack Monitoring System is being started.

5.5.8 **CHECK** all local alarms are reset.
5.6 Transfer Operation of Building Ventilation System from MCS Control to Local Manual Control and Back to MCS Control

NOTE - This section is written with the assumption that:
- Building Ventilation system is ready for operation or has been operating.
- Plant conditions will allow operation of exhaust system along with various support systems.

- This section of the procedure aligns the ventilation system and its support systems for Local Manual operation to allow for maintenance activities associated with the MCS.

- This section of the procedure is for operation of the vent system when there is, or may be a loss of LCU 1 and LCU 2 and/or the Shift Manager has directed Local Manual operation of the system.

- Drawing H-2-131370 sheet 1 identifies fuses.

5.6.1 NOTIFY Environmental Compliance, prior to placing any component in local manual control, per the Environmental On-Call List.

5.6.2 ENSURE personnel trained in the operation of breakers and disconnects dons PPE (refer to Section 3.1).

5.6.3 REMOVE the fuses (listed in the table below) located inside cabinet TBFU1 in the E/I Room, to take Local Manual control of valves.

<table>
<thead>
<tr>
<th>VALVE</th>
<th>FUSE #</th>
<th>LOCATED INSIDE CABINET</th>
<th>IN E/I ROOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>MK-AZ702K204-2</td>
<td>F3</td>
<td>TB-LCU4-3C</td>
<td>B</td>
</tr>
<tr>
<td>MK-AZ702K3-1</td>
<td>F4</td>
<td>TB-LCU4-3C</td>
<td>B</td>
</tr>
<tr>
<td>MK-AZ702K204-1</td>
<td>F5</td>
<td>TB-LCU4-3C</td>
<td>B</td>
</tr>
<tr>
<td>MK-AZ702K3-2A</td>
<td>F8</td>
<td>TB-LCU4-3C</td>
<td>B</td>
</tr>
<tr>
<td>MK-AZ702K3-2B</td>
<td>F9</td>
<td>TB-LCU4-3C</td>
<td>B</td>
</tr>
<tr>
<td>MK-AZ702K2-6A</td>
<td>F8</td>
<td>TB-LCU1-2C</td>
<td>A</td>
</tr>
<tr>
<td>MK-AZ702K2-6B</td>
<td>F9</td>
<td>TB-LCU1-2C</td>
<td>A</td>
</tr>
<tr>
<td>MK-AZ702K2-7A</td>
<td>F6</td>
<td>TB-LCU1-2C</td>
<td>A</td>
</tr>
<tr>
<td>MK-AZ702K2-7B</td>
<td>F7</td>
<td>TB-LCU1-2C</td>
<td>A</td>
</tr>
<tr>
<td>MK-AZ702K2-8A</td>
<td>F6</td>
<td>TB-LCU2-2C</td>
<td>B</td>
</tr>
<tr>
<td>MK-AZ702K2-8B</td>
<td>F7</td>
<td>TB-LCU2-2C</td>
<td>B</td>
</tr>
</tbody>
</table>
5.6 Transfer Operation of Building Ventilation System from MCS Control to Local Manual Control and Back to MCS Control (Cont.)

5.6.4 PLACE Damper MK-AZ702K3-2A or MK-AZ702K3-2B for the operating fan to open using the \(\frac{1}{16}\) inch wrench located by the controller.

5.6.5 PLACE Damper MK-AZ702K3-2A or MK-AZ702K3-2B for the idle fan to CLOSE position using the \(\frac{1}{16}\) inch wrench located by the controller.

5.6.6 IF taking Local Manual control of operating Exhaust Fan, PLACE Fan Start/Stop/Remote switch, HS-AZ702K305-1A1 or HS-AZ702K305-1B1 in START position.

5.6.7 IF taking Local Manual control of non-operating Exhaust Fan, PLACE Fan Start/Stop/Remote switch, HS-AZ702K305-1A1 or HS-AZ702K305-1B1 in STOP position.

5.6.8 IF taking Local Manual control of Building Air Conditioning Unit, PLACE Air Conditioning Local/Remote switch, HS-AZ702K206-1A1 in LOCAL position.

5.6.9 WHEN directed by the Shift Manager, RETURN operation of Building Ventilation System to MCS control by performing the following steps:

5.6.9.1 PLACE Fan Start/Stop/Remote switch, HS-AZ702K305-1A1 in REMOTE.

5.6.9.2 PLACE Fan Start/Stop/Remote switch, HS-AZ702K305-1B1 in REMOTE.

5.6.9.3 PLACE Air Conditioning Local/Remote switch, HS-AZ702K206-1A1 in REMOTE.

5.6.10 ENSURE personnel trained in the operation of breakers and disconnects dons PPE (refer to Section 3.1).

5.6.11 INSTALL the fuses (listed in the table in Step 5.6.3) located inside cabinet TBFU1 in the E/I Room, to RETURN control of valves to MCS.

5.6.12 IF directed by Shift Manager, START Building Ventilation system from MCS using appropriate section(s) of this procedure.
5.7 Records

5.7.1 **PERFORM** the following for records identified within this procedure.

5.7.1.1 **RECORD** the number of times the record was generated in applicable column

**OR**

**PLACE** a check mark (✔) in the N/A column.

5.7.1.2 **SUBMIT** the package for verification of completed records.

<table>
<thead>
<tr>
<th>Records Submittal Checklist</th>
<th>Number of times completed</th>
<th>N/A (✔)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>4.2 Field Preparations</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 4.2.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>FWS/OE/Shift Manager SEND</strong></td>
<td>the completed records to the Central Shift Office for records retention.</td>
<td></td>
</tr>
<tr>
<td>__________________________</td>
<td>__________________________</td>
<td></td>
</tr>
<tr>
<td>Signature</td>
<td>Print (First and Last)</td>
<td>Date</td>
</tr>
<tr>
<td>FWS/OE/Shift Manager</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The record custodian identified in the Company Level Records Inventory and Disposition Schedule (RIDS) is responsible for record retention in accordance with TFC-BSM-IRM_DC-C-02.
## Appendix 1: Damper Alignment

### Monitor and Control System Graphic Screen 19

<table>
<thead>
<tr>
<th>VALVE</th>
<th>VALVE FUNCTION</th>
<th>POSITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>MK-AZ702K204-1</td>
<td>Primary Vent Filter Room A path to the Primary Vent Cell through the high-efficiency particulate air filter</td>
<td>NOT CLOSED</td>
</tr>
<tr>
<td>MK-AZ702K204-2</td>
<td>Primary Vent Filter Room B path to the Primary Vent Cell through the high-efficiency particulate air filter</td>
<td>NOT CLOSED</td>
</tr>
</tbody>
</table>

### Monitor and Control System Graphic Screen 20

<table>
<thead>
<tr>
<th>VALVE</th>
<th>VALVE FUNCTION</th>
<th>POSITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>MK-AZ702K3-2A</td>
<td>Building Exhaust Filter Train A Discharge valve</td>
<td>CLOSED</td>
</tr>
<tr>
<td>MK-AZ702K3-2B</td>
<td>Building Exhaust Filter Train B Discharge valve</td>
<td>CLOSED</td>
</tr>
</tbody>
</table>

The manual valves in the table below marked with an * in the position column are used for balancing the building air flow. They will be set during vent and balance and should not be moved unless needed for maintenance isolation. Changing their position may require vent and balance to be performed again. **The following configuration can be seen on Graphic Screen 19**

<table>
<thead>
<tr>
<th>VALVE</th>
<th>VALVE FUNCTION</th>
<th>POSITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>MK-AZ702K2-2A</td>
<td>Primary Vent Filter Room A ventilation supply</td>
<td>* THROTTLED</td>
</tr>
<tr>
<td>MK-AZ702K2-2B</td>
<td>Primary Vent Filter Room A ventilation exhaust bypass</td>
<td>* THROTTLED</td>
</tr>
<tr>
<td>MK-AZ702K2-3A</td>
<td>Primary Vent Filter Room B ventilation supply</td>
<td>* THROTTLED</td>
</tr>
<tr>
<td>MK-AZ702K2-3B</td>
<td>Primary Vent Filter Room B ventilation exhaust bypass</td>
<td>* THROTTLED</td>
</tr>
<tr>
<td>MK-AZ702K2-4A</td>
<td>Electrical/Instrument Room A ventilation supply</td>
<td>* THROTTLED</td>
</tr>
<tr>
<td>MK-AZ702K2-4B</td>
<td>Electrical/Instrument Room A exhaust</td>
<td>* THROTTLED</td>
</tr>
<tr>
<td>MK-AZ702K2-5A</td>
<td>Electrical/Instrument Room B ventilation supply</td>
<td>* THROTTLED</td>
</tr>
<tr>
<td>MK-AZ702K2-5B</td>
<td>Electrical/Instrument Room B exhaust</td>
<td>* THROTTLED</td>
</tr>
<tr>
<td>MK-AZ702K2-1A1</td>
<td>Stack Monitor Room ventilation supply</td>
<td>* THROTTLED</td>
</tr>
<tr>
<td>MK-AZ702K2-1A2</td>
<td>Stack Monitor Room ventilation supply</td>
<td>* THROTTLED</td>
</tr>
<tr>
<td>MK-AZ702K2-1B</td>
<td>Stack Monitor Room ventilation exhaust</td>
<td>* THROTTLED</td>
</tr>
<tr>
<td>HV-AZ702K3-1</td>
<td>Stack Monitor Pump AZ702-K3-11-1 suction valve</td>
<td>OPEN</td>
</tr>
<tr>
<td>HV-AZ702K3-2</td>
<td>Stack Monitor Pump AZ702-K3-11-2 suction valve</td>
<td>OPEN</td>
</tr>
<tr>
<td>HV-AZ702K3-1A5</td>
<td>Vent Bldg Stack Beta/Gamma Sample Flow Transmitter Isolation Valve</td>
<td>OPEN</td>
</tr>
<tr>
<td>HV-AZ702K3-1A6</td>
<td>Vent Bldg Beta/Gamma Sample Flow Transmitter Isolation Valve</td>
<td>OPEN</td>
</tr>
<tr>
<td>HV-AZ702K3-2A5</td>
<td>Bldg Vent Stack Record Sample Flow Transmitter Isolation Valve</td>
<td>OPEN</td>
</tr>
<tr>
<td>HV-AZ702K3-2A6</td>
<td>Bldg Vent Stack Record Sample Flow Transmitter Isolation Valve</td>
<td>OPEN</td>
</tr>
</tbody>
</table>
### Appendix 1: Damper Alignment (Cont.)

(Sheet 2 of 2)

<table>
<thead>
<tr>
<th>VALVE</th>
<th>VALVE FUNCTION</th>
<th>POSITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>HV-AZ702K3-3A5</td>
<td>FIT-AZ702K3-3/TT-AZ702K3-3 Stack Flow Transmitter Isolation Valve</td>
<td>OPEN</td>
</tr>
<tr>
<td>HV-AZ702K3-3A6</td>
<td>FIT-AZ702K3-3/TT-AZ702K3-3 Stack Flow Transmitter Isolation Valve</td>
<td>OPEN</td>
</tr>
<tr>
<td>MK-AZ702K3-1A</td>
<td>Exhaust Filter Train A inlet</td>
<td>* OPEN</td>
</tr>
<tr>
<td>MK-AZ702K305-1A</td>
<td>Exhaust Filter Train A Discharge</td>
<td>* OPEN</td>
</tr>
<tr>
<td>MK-AZ702K3-1B</td>
<td>Exhaust Filter Train B Inlet</td>
<td>* OPEN</td>
</tr>
<tr>
<td>MK-AZ702K305-1B</td>
<td>Exhaust Filter Train B Discharge</td>
<td>* OPEN</td>
</tr>
<tr>
<td>HV-AZ702K2-2A</td>
<td>PDT-AZ702K2-2 Isolation Valve</td>
<td>OPEN</td>
</tr>
<tr>
<td>HV-AZ702K2-1A</td>
<td>PDT-AZ702K2-1 Isolation Valve</td>
<td>OPEN</td>
</tr>
<tr>
<td>HV-AZ702K2-3A</td>
<td>PDT-AZ702K2-3 Isolation Valve</td>
<td>OPEN</td>
</tr>
<tr>
<td>HV-AZ702K204-1A</td>
<td>PDT-AZ702K204-1 Isolation (High Side)</td>
<td>OPEN</td>
</tr>
<tr>
<td>HV-AZ702K204-1B</td>
<td>PDT-AZ702K204-1 Isolation (Low Side)</td>
<td>OPEN</td>
</tr>
<tr>
<td>HV-AZ702K204-2A</td>
<td>PDT-AZ702K204-2 Isolation (High Side)</td>
<td>OPEN</td>
</tr>
<tr>
<td>HV-AZ702K204-2B</td>
<td>PDT-AZ702K204-2 Isolation (Low Side)</td>
<td>OPEN</td>
</tr>
<tr>
<td>HV-AZ702K3-1A</td>
<td>PDT-AZ702K3-1 Isolation Valve</td>
<td>OPEN</td>
</tr>
<tr>
<td>HV-AZ702K3-1B</td>
<td>PDT-AZ702K3-1 Isolation Valve</td>
<td>OPEN</td>
</tr>
<tr>
<td>HV-AZ702K304-1A</td>
<td>LG-AZ702K304-1A Inlet Isolation</td>
<td>CLOSED</td>
</tr>
<tr>
<td>HV-AZ702K304-1B</td>
<td>LG-AZ702K304-1B Inlet Isolation</td>
<td>CLOSED</td>
</tr>
<tr>
<td>HV-AZ702K3-2B</td>
<td>Header Sensing Line Isolation Valve For PT-AZ702K305-1</td>
<td>OPEN</td>
</tr>
<tr>
<td>HV-AZ702K3-1A1</td>
<td>PDT-AZ702K303-1A Isolation (High Side)</td>
<td>OPEN</td>
</tr>
<tr>
<td>HV-AZ702K3-1A2</td>
<td>PDT-AZ702K303-1A Isolation (Low Side)</td>
<td>OPEN</td>
</tr>
<tr>
<td>HV-AZ702K3-1A3</td>
<td>PDT-AZ702K303-1A Isolation (Low Side)</td>
<td>OPEN</td>
</tr>
<tr>
<td>HV-AZ702K3-1B1</td>
<td>PDT-AZ702K303-1B Isolation (High Side)</td>
<td>OPEN</td>
</tr>
<tr>
<td>HV-AZ702K3-1B2</td>
<td>PDT-AZ702K303-1B Isolation (Low Side)</td>
<td>OPEN</td>
</tr>
<tr>
<td>HV-AZ702K3-1B3</td>
<td>PDT-AZ702K303-1B Isolation (Low Side)</td>
<td>OPEN</td>
</tr>
<tr>
<td>HV-AZ702K3-1A4</td>
<td>Vent Building Stack Monitor Beta Sample Return Line Drain Valve</td>
<td>CLOSED</td>
</tr>
<tr>
<td>HV-AZ702K3-2A4</td>
<td>Vent Building Stack Monitor Beta Sample Return Line Drain Valve</td>
<td>CLOSED</td>
</tr>
</tbody>
</table>
### Appendix 2: Breaker and Switch Alignment

<table>
<thead>
<tr>
<th>BREAKER/SWITCH</th>
<th>LOCATION</th>
<th>FUNCTION</th>
<th>POSITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS-702-K26-1</td>
<td>Monitor and Control System</td>
<td>Monitor and Control System AZ-702 Bldg Air Conditioning Control</td>
<td>STOP</td>
</tr>
<tr>
<td>HS-702-K26-1A</td>
<td>Monitor and Control System</td>
<td>Monitor and Control System AZ-702 Bldg Air Conditioning Control</td>
<td>AUTO</td>
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<tr>
<td>HS-702-K35-1A</td>
<td>Monitor and Control System</td>
<td>Monitor and Control System AZ-702 Bldg Exh Fan A Control</td>
<td>STOP</td>
</tr>
<tr>
<td>HS-702-K35-1B</td>
<td>Monitor and Control System</td>
<td>Monitor And Control System AZ-702 Bldg Exh Fan B Control</td>
<td>STOP</td>
</tr>
<tr>
<td>AZ-702K2-6-1</td>
<td>AZ-702 Roof</td>
<td>Local Disconnect Switch For AZ-702K2-6-1</td>
<td>CLOSED/ON</td>
</tr>
<tr>
<td>HS-AZ702K206-1A1</td>
<td>Stack Monitor Room</td>
<td>Local Disconnect Switch For AZ-702K2-6-1</td>
<td>REMOTE</td>
</tr>
<tr>
<td>AZ702K305-1A1</td>
<td>AZ-702 Exhaust Fan Room</td>
<td>Exh Fan Local Control Switch</td>
<td>REMOTE</td>
</tr>
<tr>
<td>A-AZ702K305-1A1</td>
<td>AZ-702 Exhaust Fan Room</td>
<td>Local Disconnect Switch For AZ702-K3-5-1A</td>
<td>CLOSED/ON</td>
</tr>
<tr>
<td>AZ702K305-1B1</td>
<td>AZ-702 Exhaust Fan Room</td>
<td>Exh Fan Local Control Switch</td>
<td>REMOTE</td>
</tr>
<tr>
<td>B-AZ702K305-1B1</td>
<td>AZ-702 Exhaust Fan Room</td>
<td>Local Disconnect Switch For AZ702-K3-5-1B</td>
<td>CLOSED/ON</td>
</tr>
<tr>
<td>PP-16, NO. 1</td>
<td>Stack Monitor Room</td>
<td>Exhaust Fan AZ702-K3-5-1A</td>
<td>CLOSED/ON</td>
</tr>
<tr>
<td>PP-16, NO. 2</td>
<td>Stack Monitor Room</td>
<td>XFMR T-3/PP-5</td>
<td>CLOSED/ON</td>
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<tr>
<td>PP-16, NO. 3</td>
<td>Stack Monitor Room</td>
<td>Air Conditioner AZ702-K2-6-1</td>
<td>CLOSED/ON</td>
</tr>
<tr>
<td>PP-16, NO. 4</td>
<td>Stack Monitor Room</td>
<td>Exhaust Fan AZ703-K3-5-1B</td>
<td>CLOSED/ON</td>
</tr>
<tr>
<td>PP-5, NO. 31</td>
<td>Stack Monitor Room</td>
<td>ENCL-AZ702K3-1L-1</td>
<td>CLOSED/ON</td>
</tr>
<tr>
<td>PP-5, NO. 33</td>
<td>Stack Monitor Room</td>
<td>ENCL-AZ702K3-1L-2</td>
<td>CLOSED/ON</td>
</tr>
<tr>
<td>HS-AZ702K-311-2</td>
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<td>Local Switch For AZ702-K311-2</td>
<td>AUTO</td>
</tr>
<tr>
<td>HS-AZ702K-311-1</td>
<td>Stack Monitor Room</td>
<td>Local Switch For AZ702-K311-1</td>
<td>AUTO</td>
</tr>
<tr>
<td>SW-2</td>
<td>Stack Monitor Room</td>
<td>SWITCH FOR AZ702-K311-1 and AZ702-K311-2</td>
<td>CLOSED</td>
</tr>
<tr>
<td>PM-1</td>
<td>Stack Monitor Room</td>
<td>Switch For FIT-AZ702K3-1 and FIT-AZ703K3-2</td>
<td>ON</td>
</tr>
<tr>
<td>SW-1</td>
<td>Stack Monitor Room</td>
<td>Switch For Sample Cabinet Heater and Stack Enclosure Fan</td>
<td>CLOSED</td>
</tr>
</tbody>
</table>
Figure 1 - 702-AZ Ventilation System Simplified Diagram

Start, Stop and Operate 241-AZ-702 Building Ventilation System

- CONTINUOUS
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Figure 2 - 702-AZ Air Conditioning Unit AZ702-K2-6-1 Simplified Diagram