Respond to Monitor Control System Graphic #05 Raw Water Supply Alarms

Tank Farm Alarm Response Procedure

AY/AZ Farm

USQ # GCX-2

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Records

No records are generated during the performance of this procedure.
1.0 PURPOSE

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

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.
Facility: AY/AZ Primary Ventilation

Graphic: 05

Alarm #: PI-AZRW-1 LOW

Source: PT-AZRW-1

Setpoint: 20.0 psig

Diagram:

YELLOW

PI-AZRW-1 LOW

Alarm Class: Plant Stability.
Alarm Description: Raw Water Supply Pressure Low (L).

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 - Strainer differential pressure High Alarm Setpoint is 9.00 psig.

[2] IF differential pressure is high or increasing, SWITCH strainers.


Supplemental Actions:

[4] IF strainer differential pressure is not normal, PERFORM the following:

NOTE - Normal Raw Water flow varies between 0 and 10 gpm per operating cooling tower.

[4.1] OBSERVE reading on FI-AZRW-1 for indication of Raw Water flow.

[4.2] OBTAIN local pressure indication from PI-AZRW-1A.

[4.3] IF Raw Water supply pressure is less than 20.0 psig, CONTACT Water Utilities AND

CONFIRM Raw Water System is operating normally.

[4.4] OBTAIN local pressure indication at PI-AZRW-1B.

[4.5] ENSURE PI-AZRW-1B isolation valve HV-AZRW-7 is fully OPEN and the associated instrument tubing is not damaged or leaking.

(Continued on Next Page)
Facility: AY/AZ Primary Ventilation

Graphic: 05 Alarm #: PI-AZRW-1 LOW

Source: PT-AZRW-1 Setpoint: 20.0 psig

Possible Causes:
1. Plugged Duplex Strainer AZ-RW-F-1.
2. Failed Pressure Control Valve PCV-AZRW-1.

References:
Drawings: H-14-021807, Sheet 3.

CAUTION
Operating cooling towers without sufficient raw water pressure can damage the cooling tower pan re-circulation pumps due to absence of water in the pan.

[5] NOTIFY Shift Manager of actions and findings AND REQUEST cooling towers be shut down.
Facility: AY/AZ Primary Ventilation

Graphic: 05  
Alarm #: PDI-AZRWF-1 HIGH

Source: PDIT-AZRWF-1  
Setpoint: 9.0 psig

Alarm Class: Plant Stability.
Alarm Description: Raw Water Strainer Differential Pressure High (H).

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 strainer high differential pressure using MCS screen 05 AND IF strainer differential pressure is not high, NOTIFY Shift Manager of findings.
2. IF differential pressure is equal to or greater than 9.00 psig, SWITCH to the other strainer at AZ-RW-F-1.
3. IF high differential pressure alarm clears, NOTIFY Shift Manager of actions and findings.

Supplemental Actions:

4. IF differential pressure is still high, PERFORM the following:
   4.1 REMOVE the standby strainer.
   4.2 CLEAN the standby strainer.
   4.3 REINSTALL the standby strainer.
   4.4 PLACE cleaned strainer in service.
5. ENSURE PDIT-AZRWF-1 isolation valves HV-AZRW-4 and HV-AZRW-5 are OPEN.
6. NOTIFY Shift Manager of actions and findings.

Possible Causes:

1. Duplex Strainer AZ-RW-F-1 clogged.
2. Pressure Control Valve PCV-AZRW-1 failed closed.
3. Instrument Malfunction.

References:

Drawings: H-14-021807, Sheet 3.
Facility: AY/AZ Primary Ventilation

Graphic: 05  Alarm #: PDI-AZRWF-1 OBJECT ERROR

Source: PDIT-AZRWF-1  Setpoint: N/A

Alarm Class: Plant Stability.
Alarm Description: Raw Water Strainer Differential Pressure Indicator Failure- Object Error (OE).

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] NOTIFY Shift Manager of findings AND DETERMINE when strainer needs to be shifted.

Possible Causes:

1. Lifted lead, broken wire, loss of power, loss of communication.
2. Sensor failure.
3. Equipment malfunction.
4. Maintenance PM.

References:

Drawings: H-14-021807, Sheet 3.
Facility: AY/AZ Primary Ventilation

Graphic: 05  Alarm #: FI-AZRW-1 HIGH

Source: FT-AZRW-1  Setpoint: 30 gpm

Alarm Class: Plant Stability.
Alarm Description: Raw Water System Sustained High Flow Rate Alarm.

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] MONITOR FI-AZRW-1 for flow rate.
[2] IF outside hose bibs are being used or any other type of activity is causing excessive water usage, EXIT this ARP AND NOTIFY Shift Manager of alarm cause.
[3] IF there is no apparent cause, MONITOR the locations where raw water is in use to check for excessive usage AND CHECK the following:
   • A cooling tower may be filling and the drain valve may have been left open inadvertently
   • There may be a break in the line in the raw water room.
[4] IF a leak is found, CLOSE appropriate valve to isolate water OR IF directed by Shift Manager, PERFORM other actions.

Possible Causes:

1. Lifted lead, broken wire, loss of power, loss of communication.
2. Sensor failure.
3. Equipment malfunction.
4. Raw water in use.
5. Raw water leak.

References:

Drawings: H-14-021807, Sheet 3.