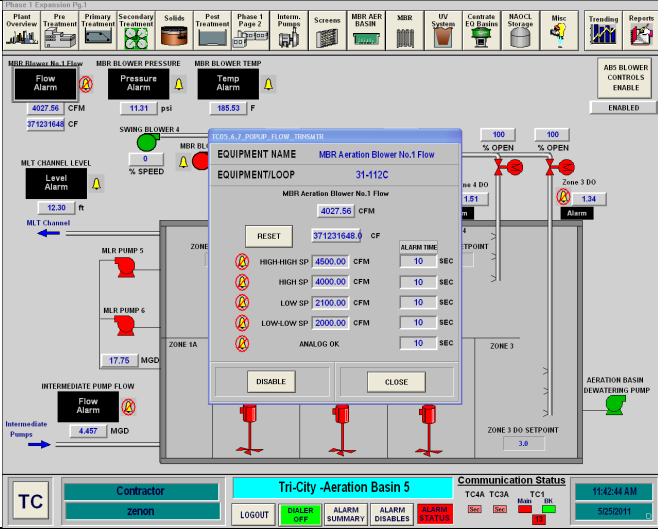


## 6.4.6 MBR Aeration Basin #5 Alarms

The MBR aeration basin #5 alarms include:

1. MBR Blower #1 Flow Alarm
2. MBR Blower Pressure Alarm
3. MBR Blower Temp Alarm
4. MLT Channel Level Alarm
5. Intermediate Pump Flow Alarm
6. Zone #3, Zone #4, Zone #5 or Zone #6 DO Alarm

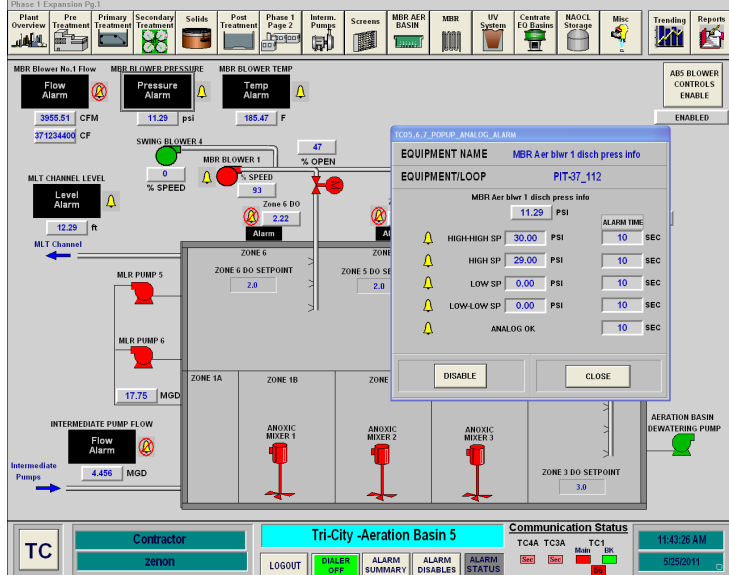
### MBR Blower #1 Flow Alarm

Alarm Summary	
Title	MBR Blower Flow Alarm
Tag Number(s)	
Location	Blower Building
Alarm Location(s)	SCADA, Aeration Basin #5 Main Screen
Notes	This alarm is when the blower has exceeded its maximum setpoint flow. This flow set-point is set on the MBR Blower #1 control screen at the blower
Last Update	November 2, 2012
	
Possible Cause	Suggested Response
Oxygen Demand is Too High	Check plant loading
DO Control Valves are wide open	Check on the Master Blower Control Panel in the MBR Electrical Room to determine if air control valves are functioning properly

### MBR Blower Pressure Alarm

Alarm Summary	
Title	MBR Blower Pressure Alarm

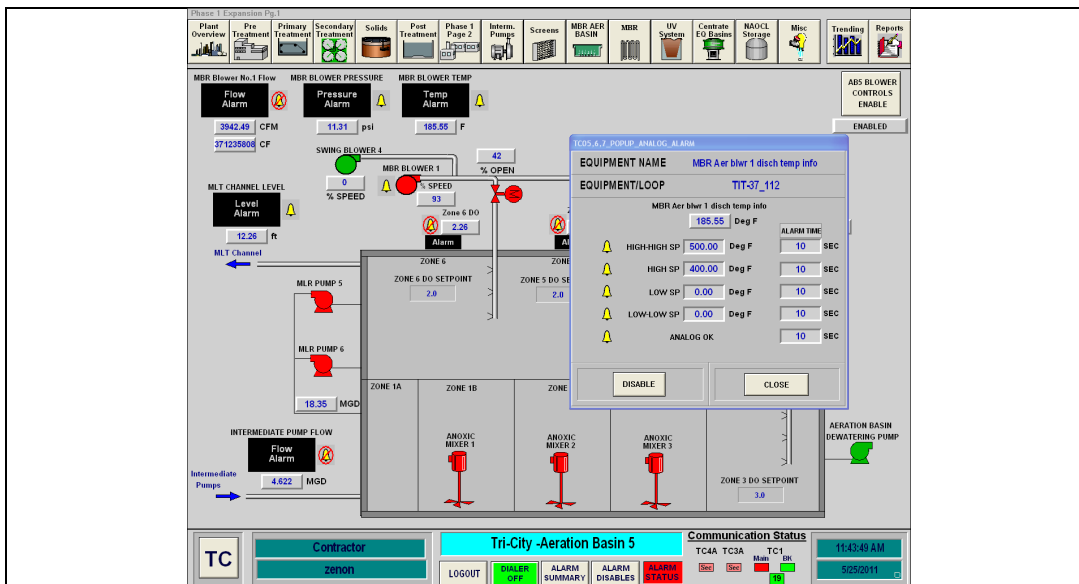
Tag Number(s)	
Location	Blower Building
Alarm Location(s)	SCADA, Aeration Basin #5 Main Screen
Notes	This alarm is when the blower has exceeded its maximum setpoint discharge pressure. This pressure set-point is set on the MBR Blower #1 control screen at the blower
Last Update	November 2, 2012



Possible Cause	Suggested Response
Air control valves are closed	Check on the Master Blower Control Panel in the MBR Electrical Room to determine if air control valves are functioning properly

### MBR Blower Temp Alarm

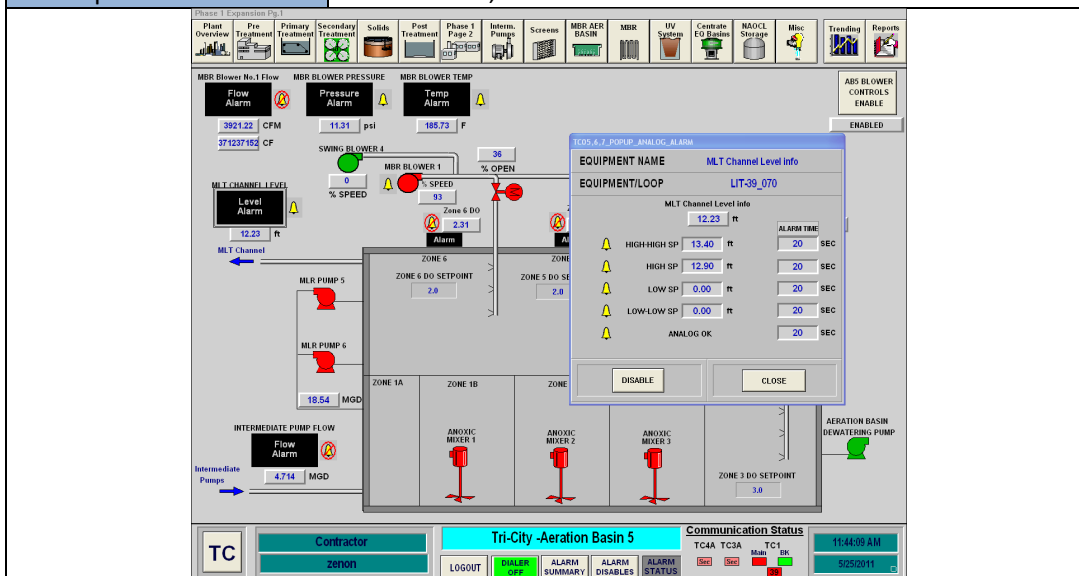
Alarm Summary	
Title	MBR Blower Temp Alarm
Tag Number(s)	
Location	Blower Building
Alarm Location(s)	SCADA, Aeration Basin #5 Main Screen
Notes	This alarm is when the blower has exceeded its maximum setpoint operating temperature. This temperature set-point is set on the MBR Blower #1 control screen at the blower
Last Update	November 2, 2012



Possible Cause	Suggested Response
Blower Heat Exchanger Failure	Check the operation of the blower heat exchanger

## MLT Channel Level Alarm

Alarm Summary	
Title	MLT Channel Level Alarm
Tag Number(s)	
Location	MBR Building
Alarm Location(s)	SCADA, Aeration Basin #5 Main Screen
Notes	The MLT Channel Level alarm is located in the channel feeding the MBR basins.
Last Update	November 2, 2012

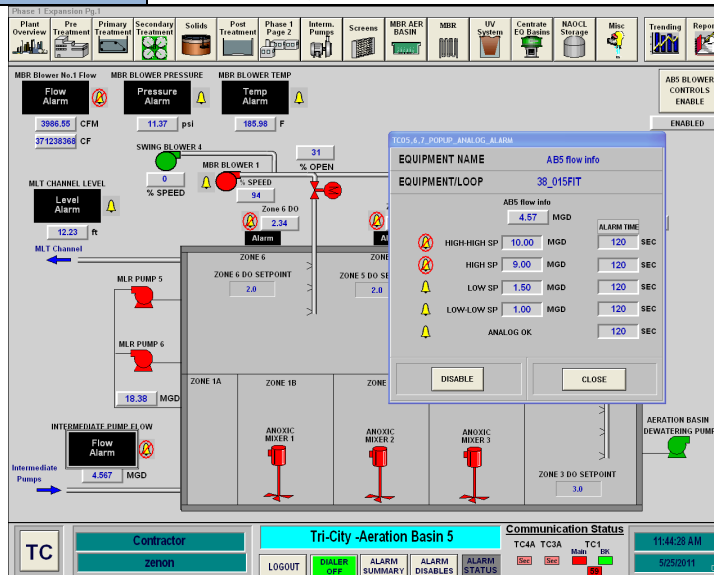


Possible Cause	Suggested Response
MLTR Pump Failure	The MLTR pumps return flow to AB#5. If these pumps do not keep up the level in the MBR basins will increase. Check MLTR pump controls.

Filtrate Pump Failure	The MBR Filtrate pumps pump flow from the MBR basins. If the filtrate pumps are not pumping an adequate flow rate, the level in the MBR basins will increase. Check the filtrate pump controls.
Not Enough MBR Basins On Line	Each MBR basin has a maximum flow rate. Confirm there are enough MBR basins in operation for the flow that is being treated.

## Intermediate Pump Flow Alarm

Alarm Summary	
Title	Intermediate Pump Flow Alarm
Tag Number(s)	
Location	Intermediate Pump Station, MBR AB#5
Alarm Location(s)	SCADA, Aeration Basin #5 Main Screen
Notes	The MBR flow is measured at the inlet box to MBR AB#5. Flow set-points are set on the MBR AB#5 screen. A low flow or high flow situation will alarm.
Last Update	November 2, 2012



Possible Cause	Suggested Response
No Flow to MBR System	Check if intermediate pumps have failed. Check MBR AB Flow Meter to determine if it is operating correctly.
Low Flow to MBR System	This will mean that the intermediate pumps are not pumping the desired flow rate. Check intermediate pump operation.
High Flow to MBR System	Check AB#5 flow meter. Check intermediate pump operation.

## Zone #3, Zone #4, Zone #5 or Zone #6 DO Alarm

Alarm Summary	
Title	Zone "x" DO Alarm
Tag Number(s)	
Location	MBR Aeration Basin #5
Alarm Location(s)	SCADA, Aeration Basin #5 Main Screen
Notes	A maximum and minimum DO set-point is set for each zone.
Last Update	November 2, 2012
Possible Cause	Suggested Response
Low DO – Air Control Valve	Not enough air is being provided to the zone. Check valve opening and valve controls on MBR Blower Master Panel in MBR Electrical Room.
Low DO – MBR Blower Control	Not enough air is being provided to the zone. Check that the MBR blower is functioning properly on the MBR Blower Master Panel in MBR Electrical Room.
High DO – Air Control Valve	Too much air is being provided to the zone. Check valve opening and valve controls on MBR Blower Master Panel in MBR Electrical Room. If valve is being controlled properly and is at the minimum opening, there is nothing that can be done.
High DO – MBR Blower Control	Too much air is being provided to the zone. Check that the MBR blower is functioning properly on the MBR Blower Master Panel in MBR Electrical Room. If valve is being controlled properly and is at the minimum speed, there is nothing that can be done.