

6.4.3.2 Anoxic Mixer Operation

There are three anoxic mixers that provide mixing of the anoxic zones, Zone 1B, 2A and 2B, of the MBR aeration basin. These mixers ensure that the MLSS stays suspended and that the contents of the zone are well mixed to maximize denitrification.

MBR Aeration Basin Control Screen

The anoxic zone mixers are controlled through SCADA from the MBR aeration basin screens. The access to these screens is discussed in the following sections.

Anoxic Mixer Control Screen

The automatic operation of the anoxic mixers is controlled through the SCADA system from the MBR aeration basin main screen (**Figure 6.4.3.2-1**). The screen is accessed by clicking on the **MBR AER Basin button <1>** on the top of the screen. The control screens for each of the anoxic mixers is accessed by selecting the **Anoxic Mixer icon <2>** for the desired mixer. To obtain control through SCADA, the anoxic mixer must be set to AUTO on the MCC panel for the mixer.

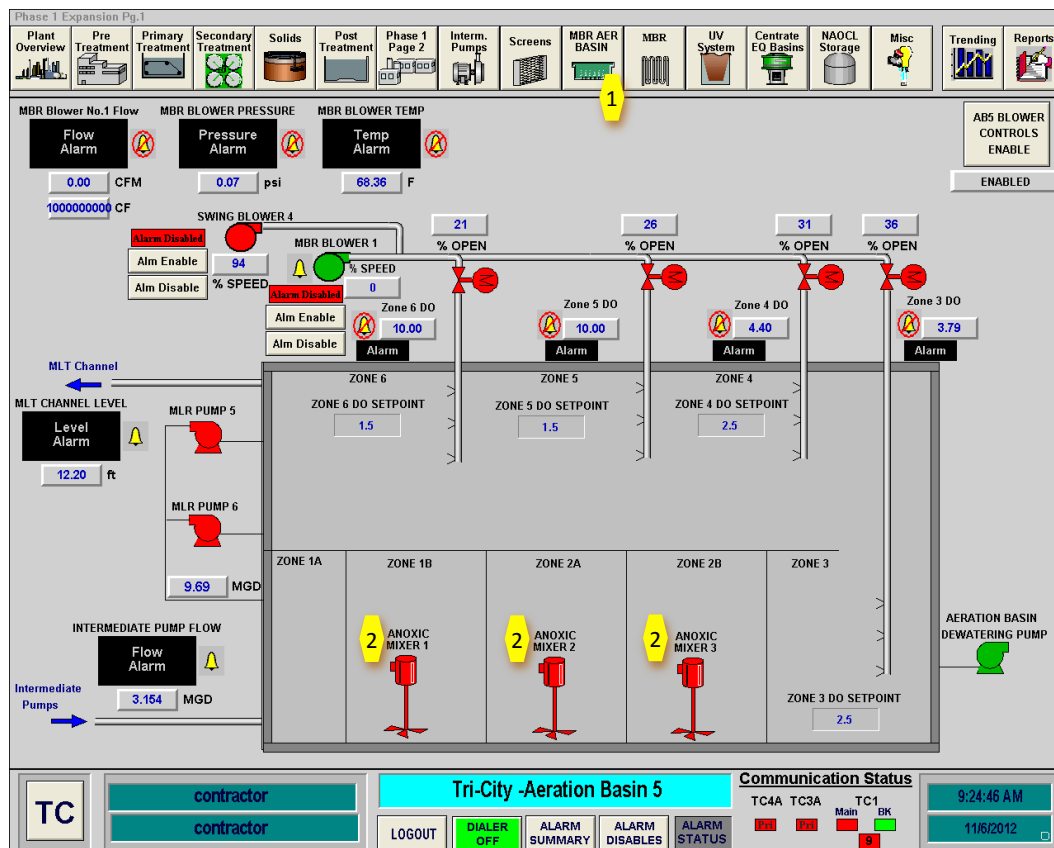


Figure 6.4.3.2-1 – MBR Aeration Basin #5 Main Screen

Anoxic Mixer Controls

The Anoxic Mixer control screen provides for status and control of the anoxic mixers. The Anoxic Mixer popup box as shown in **Figure 6.4.3.2-2** is the same for each of the three mixers. The mixer status must show remote under the mixer icon for the SCADA controls to work. This is done by placing the mixer in AUTO at the mixer's MCC panel.

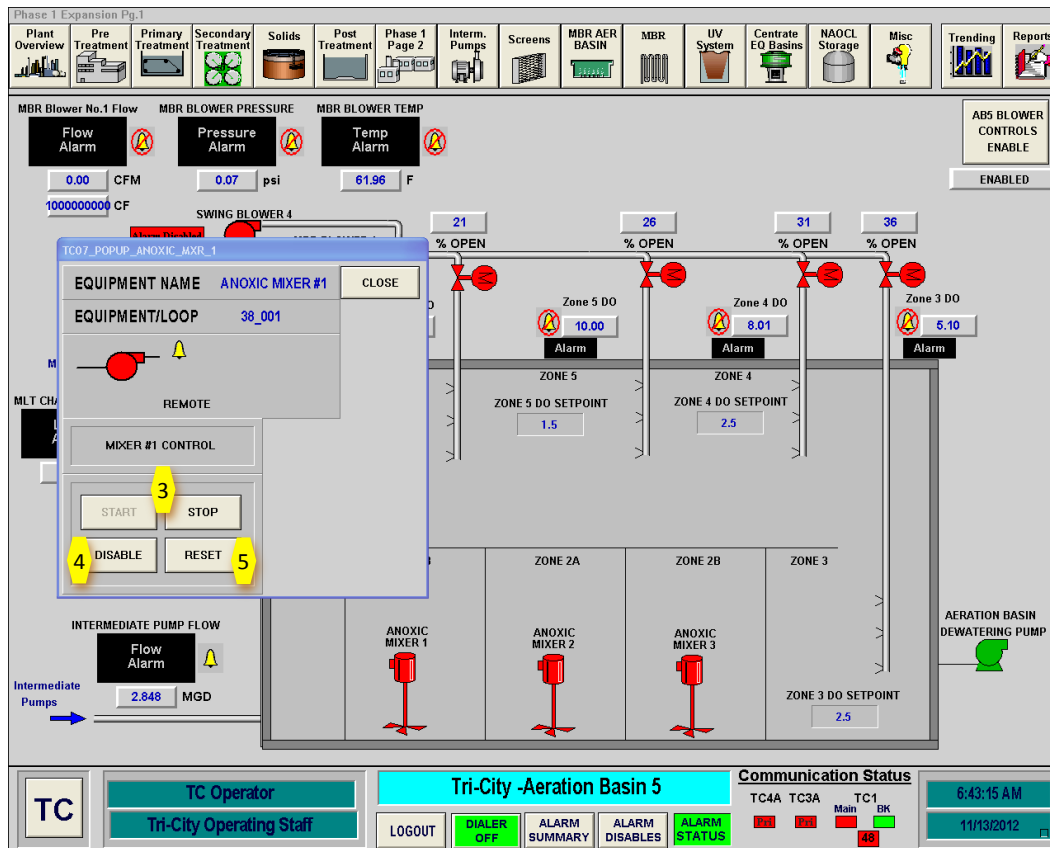


Figure 6.4.3.2-2 – Anoxic Mixer Control Screen

The anoxic mixer is started and stopped by clicking on the START and STOP buttons **<1>**. The mixer icon will be red when the mixer is on and green when off.

The DISABLE button **<4>** will disable the controls and alarms for this mixer. The pump will not operated if it is disabled. The RESET button **<5>** resets a pump failure alarm. In most cases, a pump failure must be cleared at the VFD panel first and then reset using this button.

There is a local emergency stop button and lockout switch located next to the motor and gearbox for each mixer.

Anoxic Mixer Startup Sequence

To start up the anoxic mixer in Automatic Mode, follow the following sequence. This sequence is for a cold startup of the mixers. If the system is operating, confirmation that the equipment is off may not be necessary.

Step	Action	Location
	Confirm Equipment is in Off	
1	Confirm anoxic mixer(s) are OFF	SCADA Main Screen
2	Confirm anoxic mixer(s) are in STOP Position in SCADA	SCADA Main Screen
3	Confirm anoxic mixer(s) are in OFF Position at the MCC Panel	MBR Electrical Room
4	Confirm anoxic mixer(s) breaker is OPEN at the MCC panel	MBR Electrical Room
	Ready Equipment	

1	Close Breaker for the anoxic mixer(s) at the MCC	MBR Electrical Room MCC
2	Place anoxic mixer(s) in AUTO at the MCC Panel	MBR Electrical Room MCC
3	START the anoxic mixer(s) in SCADA on the Anoxic Mixer Popup Control Screen	SCADA Anoxic Mixer Control Screen
4	Mixers will now operate	