

6.5.3.7 MBR High Pressure Air System Operation

The MBR system has a dedicated high-pressure air system for operation of the valves in the membrane system. The two air compressors are located in the MBR substation room.

MBR Process Control Screens

The MBR air compressors are controlled through SCADA from the MBR system PLC. The access to these screens is discussed in the following sections.

MBR Process Main Screen

The automatic operation of the MBR process is controlled through the SCADA system on the membrane main screen (**Figure 6.5.3.7-1**). The screen is accessed by clicking on the **MBR button <1>** on the top of the screen. The control screen for the air compressors is accessed through the individual MBR Basin screens. The MBR Basin screen can be accessed by selecting the **basin icon <2>**.

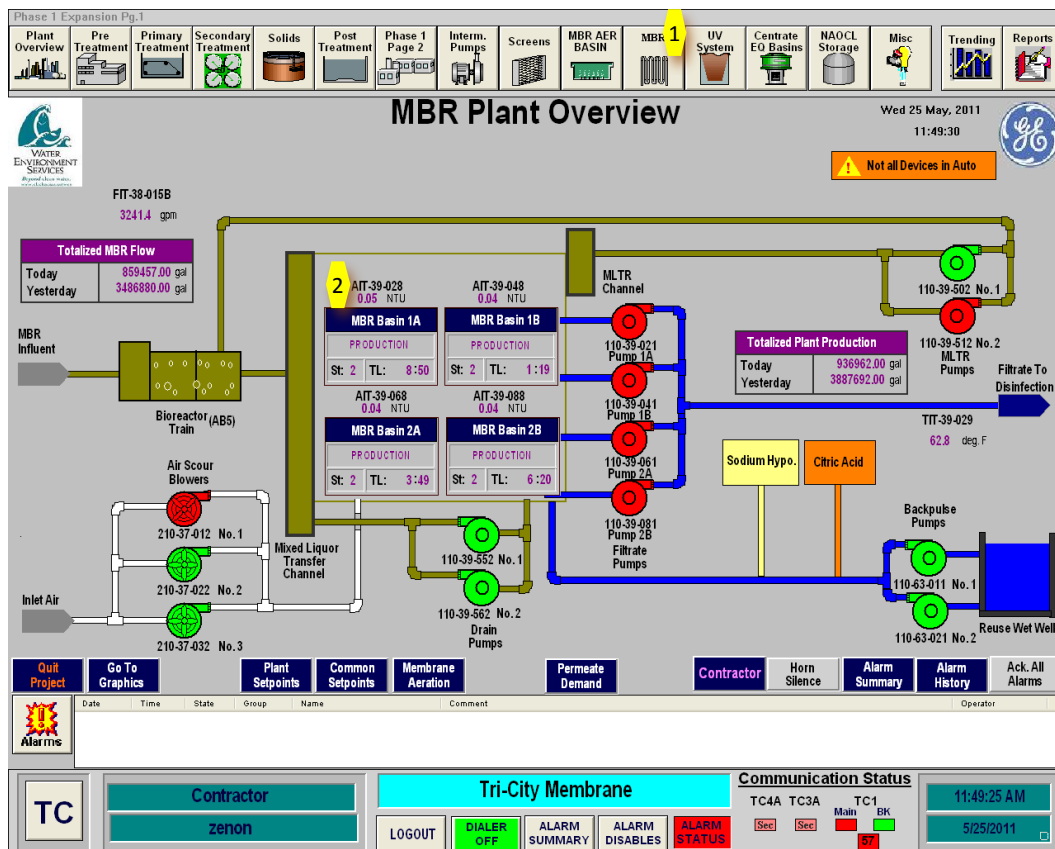


Figure 6.5.3.7-1 – Membrane System Control Panel

The next step is to click on the arrow that is **FROM AIR COMPRESSORS <3>** on the MBR Basin screen as shown in **Figure 6.5.3.7-2**. The air compressor screen (**Figure 6.5.3.7-3**) shows a diagram of the MBR high-pressure air system. The ON/OFF status of the air compressors are shown as red **<4>** if they are on and green if off. The screen has a run hour meter for each air compressor with a reset. The compressors are turned on at their local control panel by pressing the red ON button **<5>** as shown in **Figure 6.5.3.7-4**.

The air driers are also turned on at their local control panels by pressing the red ON button **<6>** as shown in **Figure 6.5.3.7-5**.

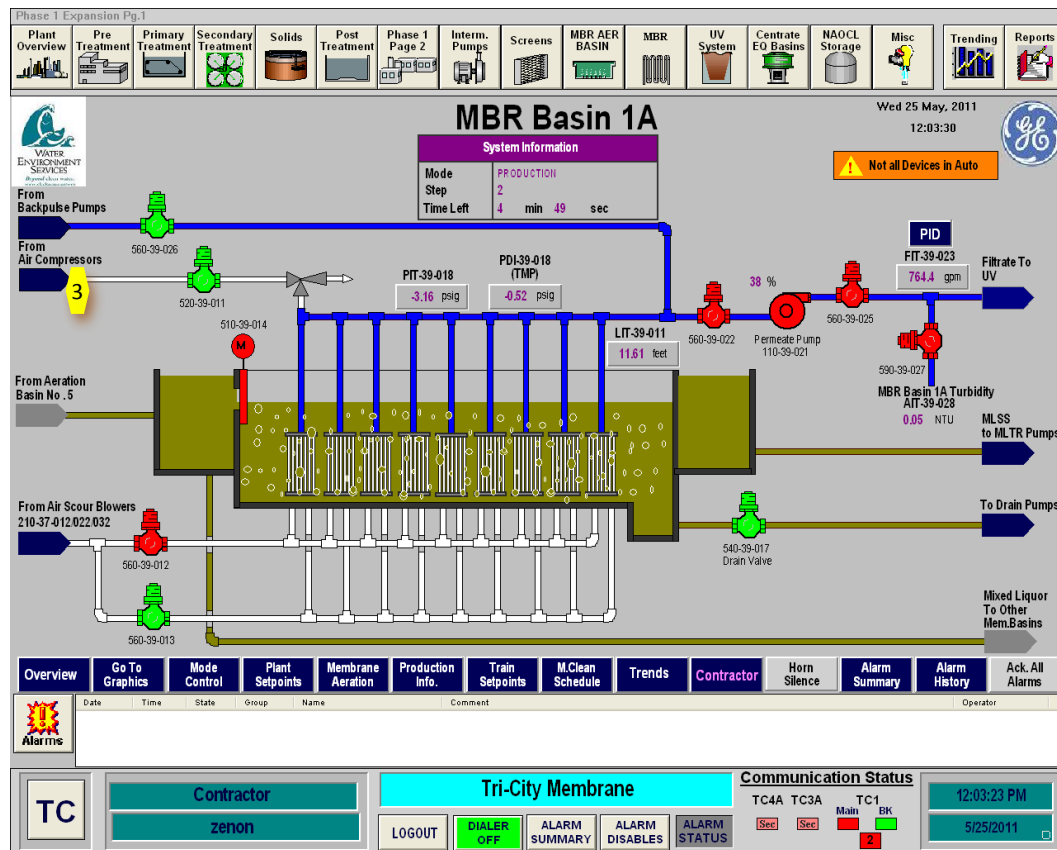


Figure 6.5.3.7-2 – MBR Basin Screen

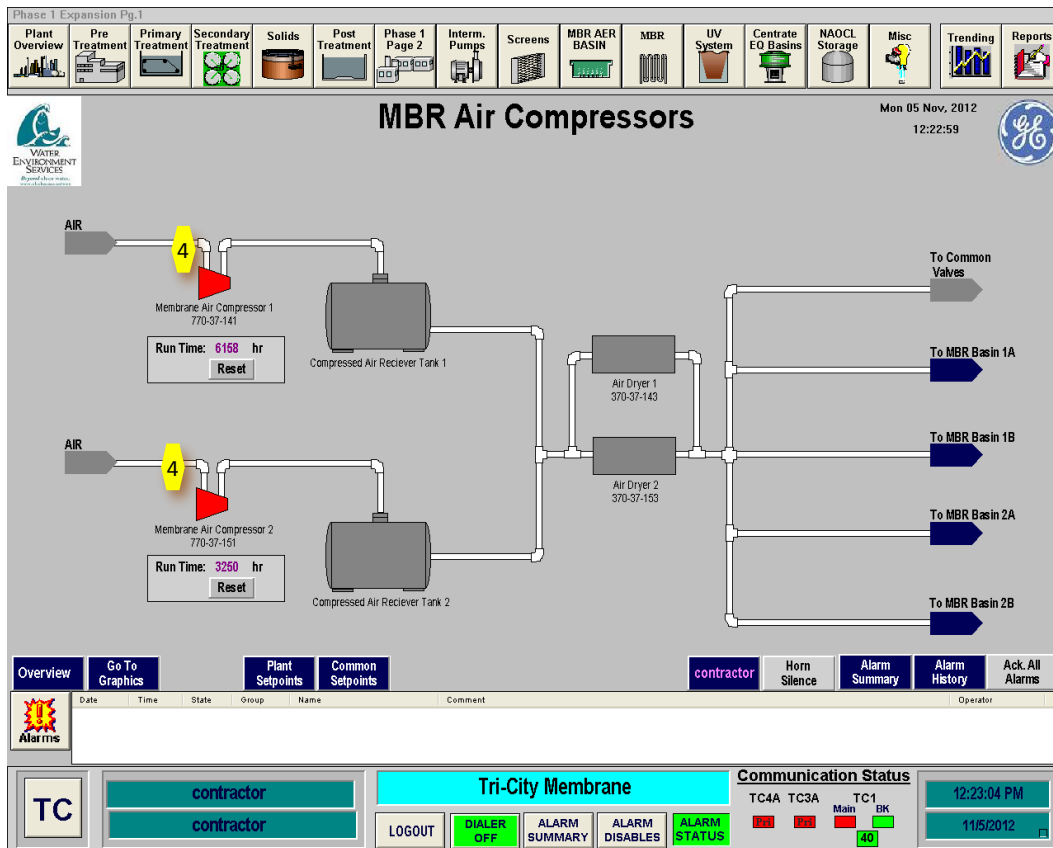


Figure 6.5.3.7-3 – MBR Basin Screen



Figure 6.5.3.7-4 – MBR Air Compressor Local Panel



Figure 6.5.3.7-5 – MBR Air Compressor Drier Local Panel

MBR Air Compressor Startup Sequence

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

Step	Action	Location
	Confirm Equipment is in Off	
1	Turn off Air Compressor at local panel	MBR Substation Room
2	Turn off Air Compressor drier at local panel	MBR Substation Room
	Ready Equipment	
1	Confirm all air valves are in the open position and drier is not being bypassed	MBR Substation Room
1	Confirm air filters are working properly	MBR Substation Room
2	Drain any air from air lines manually	MBR Substation Room
3	Place Air Compressor Drier in ON position at local panel	MBR Substation Room
4	Place Air Compressor in ON position at local panel	MBR Substation Room