

6.2.5 Intermediate Pump Station Alarms

The intermediate pump station alarms include:

1. Intermediate Pump Low Flow Alarm
2. Intermediate Pump LEL Shutdown
3. Intermediate Pump High Temperature Alarm
4. Intermediate Pump VFD Fail
5. Primary Effluent Box Low Level Alarm

Intermediate Pump Low Flow Alarm

Alarm Summary	
Title	Intermediate Pump Flow Alarm Low
Tag Number(s)	17-021-Fail, 17-122-Fail, 17-023-Fail
Location	Fine Screen Control Room
Alarm Location(s)	SCADA, Intermediate Pump Main Screen
Notes	This alarm shows a failure in the intermediate pumps
Last Update	April 4, 2012

Possible Cause	Suggested Response
Power Outage	Reset intermediate pumps at VFD's
Flow Meter Failure	Check MBR Influent flow meter located at influent box of AB#5

Intermediate Pump LEL Shutdown

Alarm Summary	
Title	Intermediate Pump LEL Shutdown
Tag Number(s)	17-021B-YA, 17-022B-YA, 17-023B-YA
Location	Fine Screen Control Room
Alarm Location(s)	SCADA, Intermediate Pump Screen
Notes	This alarm occurs when the LEL sensor in the primary influent box measures an LEL above the alarm shutdown setpoint. This alarm shuts down all intermediate pumps. The alarm is wired directly to the VFD's for each pump so the pumps cannot be operated in either AUTO or MANUAL mode.
Last Update	April 4, 2012

Possible Cause	Suggested Response
Volatile material spill in the plant influent	Clear volatile material from the primary influent box so LEL will go below the alarm setpoint.
LEL Meter Failure	Repair LEL meter

Intermediate Pump High Temperature Alarm

Alarm Summary	
Title	Intermediate Pump Temperature Alarm High
Tag Number(s)	17-021-TAH, 17-122-TAH, 17-023-TAH
Location	Fine Screen Control Room
Alarm Location(s)	SCADA Alarm Screen
Notes	This alarm shows a high temperature is sensed at the VFD

Last Update	April 4, 2012
Possible Cause	Suggested Response
Pump Plugged	Plugged pump causes high amperage at the motor resulting in high motor temperature

Intermediate Pump VFD Failure

Alarm Summary	
Title	Intermediate Pump VFD Failure
Tag Number(s)	17-021A-YA, 17-122A-YA, 17-023A-YA
Location	Fine Screen Control Room
Alarm Location(s)	SCADA Alarm Screen
Notes	This alarm shows a problem with the VFD
Last Update	April 4, 2012
Possible Cause	Suggested Response
Component Failure in VFD	Evaluate condition of VFD
Power Surge	Evaluate status of power or determine if there was a power failure

Primary Effluent Box Low Level Alarm

Alarm Summary	
Title	Primary Effluent Drop Box Level Alarm Low
Tag Number(s)	17-001-LAL
Location	Fine Screen Control Room
Alarm Location(s)	SCADA Intermediate Pump Main Screen SCADA Alarm Screen
Notes	The teardrop float located in the Primary Effluent Drop Box show a low level in the primary effluent channel.
Last Update	April 4, 2012
Possible Cause	Suggested Response
Primary Effluent Channel Gate Closed	Gate was closed causing no flow into primary effluent drop box
Plant Flow Lower Than MBR Flow	Plant flow is lower than setpoint flow to the MBR plant. Change constant flow setpoint or diurnal table setpoints for Intermediate Pump Station flows