

# R.C. HARRIS WATER FILTRATION PLANT

## FILTRATION & BACKWASH - Process Control Narrative

Version	Date	Notes
1.0	August 2001	Draft 1 – Issued for Review.
2.0	October 2001	Draft 2 – Issued for Review.
3.0	November 2001	Process Narrative Issue For Tender
4.0	September 2004	Process Narrative Issued for As Built
5.0	January 2008	Added UPS Monitoring
6.0	March 2012	Updated for Scope of Legacy Alarms Improvement Project: <ul style="list-style-type: none"> <li>Updated I/O Descriptions</li> <li>Added Description of Chlorine Analyzers Control/Reference Selection</li> <li>Updated Analog Alarms Set Points Tables</li> <li>Updated Alarm Lists in the Appendix</li> </ul>
7.0	May 2015	Modified Filters for SLC Replacement Logic
8.0	February 2017	Updated Chlorine and Liquid Chemical Sections to Reflect Removal of SLC's
9.0	March 2017	Corrosion Control Section Added
10.0	July 2017	Updated Formatting to Create Master Package with RMF PCN
11.0	March 2025	Added section 9.2 C2.8 Power Supply Failure
11.1	June 2025	Updated section 9.2 C2.8 Power Supply and UPS Failure

### List of Tables

[TABLE 1: FILTRATION & BACKWASH PROCESS EQUIPMENT](#)

[TABLE 2: FILTRATION & BACKWASH CONTROL INSTRUMENTS](#)

[TABLE 3: FILTRATION & BACKWASH CONTROL MODES & HIERARCHY](#)

[TABLE 4: FILTRATION & BACKWASH RPU I/O LIST](#)

[TABLE 5: FILTRATION & BACKWASH MASTER RATE CONTROL CORRECTION PRELIMINARY LOOKUP TABLE](#)

[TABLE 6: FILTRATION & BACKWASH FAULT RESPONSE](#)

[TABLE 7: FILTRATION & BACKWASH SOFTWARE INTERLOCKS](#)

[TABLE 8: FILTRATION & BACKWASH HARDWIRED INTERLOCKS](#)

[TABLE 9: FILTRATION & BACKWASH POWER FAILURE FAULT RESPONSE](#)

[TABLE 10: FILTRATION & BACKWASH PROCESS SET POINTS](#)

[TABLE 11: FILTRATION & BACKWASH ANALOG ALARMS](#)

### List of Figures

[FIGURE 1: FILTRATION & BACKWASH PROCESS SCHEMATIC](#)

### List of Equations

[EQUATION 1: INDIVIDUAL FILTER FLOWRATE SET POINT](#)

## List of Acronyms

<b>ACP</b>	Area Control Panel
<b>AI</b>	Analog Input
<b>AO</b>	Analog Output
<b>CA</b>	Computer Auto
<b>CBP</b>	Central Back-Up Panel
<b>CM</b>	Computer Manual
<b>CT</b>	Concentration & Time
<b>DI</b>	Digital Input
<b>DO</b>	Digital Output
<b>EBCT</b>	Empty Bed Contact Time
<b>FHA</b>	R.C. Harris Filtration Plant
<b>GAC</b>	Granular Activated Carbon
<b>HMI</b>	Human Machine Interface
<b>I/O</b>	Input/Output
<b>LA</b>	Local Auto
<b>LCP</b>	Local Control Panel
<b>LM</b>	Local Manual
<b>MCC</b>	Motor Control Center
<b>NTU</b>	Nephelometric Turbidity Units

<b>PCN</b>	Process Control Narrative
<b>PCS</b>	Process Control Systems
<b>PID</b>	Proportional, Integrative, Derivative
<b>P&amp;ID</b>	Process & Instrumentation Diagram
<b>PLC</b>	Programmable Logic Controller
<b>PV</b>	Process Variable
<b>PVC</b>	Polyvinyl Chloride
<b>RMF</b>	Residue Management Facility
<b>RPM</b>	Revolutions Per Minute
<b>RPU</b>	Remote Processing Unit
<b>RW</b>	Raw Water
<b>SBS</b>	Sodium Bisulphite
<b>SCADA</b>	Supervisory Control and Data Acquisition
<b>SLC</b>	Single Loop Controller
<b>SP</b>	Set Point
<b>SV</b>	Set-Point Variable
<b>TOO</b>	Transmission Operations Optimizer
<b>VFD</b>	Variable Frequency Drive

## 9. FILTRATION & BACKWASH

### 9.1 PROCESS DESCRIPTION

#### A. Process Overview

- Reference P&ID Drawing(s) 2F-P&ID-I-1201

- 2F-P&ID-I-1301
- 2F-P&ID-I-1302
- 2F-P&ID-I-1303
- 2F-P&ID-I-1304
- 2F-P&ID-I-1305
- 2F-P&ID-I-1306
- 2F-P&ID-I-1307
- 2F-P&ID-I-1308
- 2F-P&ID-I-1309
- 2F-P&ID-I-1310
- 2F-P&ID-I-1311
- 2F-P&ID-I-1312
- 2F-P&ID-I-1313
- 2F-P&ID-I-1314
- 2F-P&ID-I-1315
- 2F-P&ID-I-1316
- 2F-P&ID-I-1317
- 2F-P&ID-I-1318
- 2F-P&ID-I-1319
- 2F-P&ID-I-1320
- 2F-P&ID-I-1321
- 2F-P&ID-I-1322
- 2F-P&ID-I-1323
- 2F-P&ID-I-1324
- 2F-P&ID-I-1325
- 2F-P&ID-I-1326
- 2F-P&ID-I-1327
- 2F-P&ID-I-1328
- 2F-P&ID-I-1329
- 2F-P&ID-I-1330
- 2F-P&ID-I-1331
- 2F-P&ID-I-1332
- 2F-P&ID-I-1333
- 2F-P&ID-I-1334
- 2F-P&ID-I-1335
- 2F-P&ID-I-1336
- 2F-P&ID-I-1337
- 2F-P&ID-I-1338
- 2F-P&ID-I-1339
- 2F-P&ID-I-1340
- 2F-P&ID-I-1401
- 2F-P&ID-I-1402
- 2F-P&ID-I-8501
- 2F-P&ID-I-8502

The filtration process consists of the filter system and the backwash system. The filter system is comprised of 40 dual media (GAC/sand) filters fed from the East and West common settled water conduit. Each filter has the following equipment:

- Filter rate control valve
- Venturi flow meter on effluent line
- Turbidimeter on effluent line
- Filter inlet gate
- Filter drain gate
- Filter head loss monitor
- Filter backwash valve
- Surface sweep valve
- Level switches

The backwash system includes the following equipment:

- 3 Backwash pumps
- 1 Venturi flow meter

- 2 Backwash water holding tanks
- 2 Backwash header valves
- 2 Backwash flow meters

Filtration occurs directly after the sedimentation process and prior to discharge to the plant reservoir via the filtered water conduits.

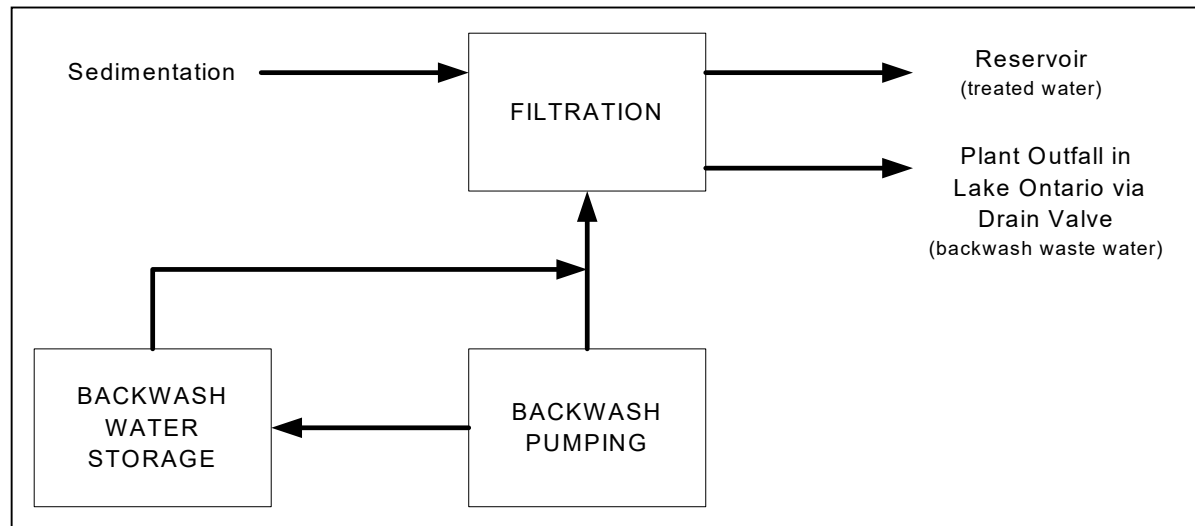


Figure 1: Filtration & Backwash Process Schematic

## B. Objectives

The purpose of the filtration process at the R.C. Harris Water Filtration Plant is to remove particles from pre-treated water that have not been removed by the sedimentation process.

The quality objectives of the filter system are to consistently achieve the City of Toronto's filter effluent turbidity targets and to maximize particulate removal through this process. Filtration acts as the main removal barrier to water borne pathogens in the overall treatment process.

The objectives of the backwash system are to efficiently and effectively remove particulate matter that has been trapped in the filter during filtration, while minimizing media, sand and GAC loss and minimizing process waste production.

## C. Process Control Strategy

At any given time, individual filters are:

- In-service
- Out-of-service – available for production
- Out-of-service – not available for production
- Backwashing (including filters queued for backwash)

The process control strategy for filtering is designed to evenly distribute the required plant filter flow among all in-service filters by maintaining a constant settled water conduit level or a constant master filtration rate.

At any time, a filter will be taken out of service and placed in the backwash queue if any of the following parameters are exceeded:

- Filter runtime of 96 hours
- Terminal head loss of 1.50 m

- Filter effluent turbidity > operator adjustable action level (0.15 NTU)
- Idle time exceeds 24 hours.

#### **D. Influent Sources**

The Filtration & Backwash System is fed by three (3) influent streams:

- Settled water from the Settled Water Conduits
- Potable water for backwashing
- Potable water for surface sweeps

#### **E. Effluent Destinations**

The Filtration & Backwash System feeds two (2) effluent destination:

- Filtered water to the plant Reservoir via the Filtered Water Conduits
- Backwash water to the Decant Tank(s) via the Diversion Chamber in the RMF

#### **F. Process Equipment & Control Devices**

The following table outlines the process equipment associated with the Filtration & Backwash System. Note that tags are only given for Filter #1 for brevity. All filters contain similar equipment.

*Table 1: Filtration & Backwash Process Equipment*

Tag No	Equipment Description	Device Operation	Control Objectives
FHA-FLT-F-0101	Filter #1	Filters Water	None
FHA-FLT-V-0101	Filter Rate Control Valve	Modulates to control effluent flow from the filter.	To evenly distribute the plant flow to each in-service filter based on the Master Filter Rate, which is the raw water divided by the number of filters in service. Hardware Interlocked with Surface Sweep Valves and Filter Backwash Valves to close when the latter are open, and on UPS fault.
FHA-FLT-G-0101	Filter Inlet Gate	Opens/closes in response to control signals to control water flow into Filter	Act as a part of service mode control.
FHA-FLT-G-0102	Filter Drain Gate	Opens/closes in response to control signals to allow backwash wastewater to flow from the filter.	Act as a part of service mode control.
FHA-FLT-V-0102	Filter Backwash Valve	Opens/closes in response to control signals to control backwash flowrate.	To maintain the desired backwash flow rate. Hardwired interlock with Filter Rate Control Valves to close when the latter is open.
FHA-FLT-V-0103	Surface Sweep Valve	Opens/closes in response to control signals to control flow to surface sweeps.	On/Off control of the surface wash function. Hardware Interlocked with Filter Rate Control Valves to close when the latter is open.
FHA-BW-T-0101	Wash Water Tank #1	Stores water for backwashing	None
FHA-BW-T-0201	Wash Water Tank #2	Stores water for backwashing	None

Tag No	Equipment Description	Device Operation	Control Objectives
FHA-BW-V-0105	West Washwater header Valve	Opens/closes in response to control signals to control flow of washwater	Maintain desired flow during a backwash cycle
FHA-BW-V-0205	East Washwater header Valve		
FHA-BW-P-0501 FHA-BW-P-0601 FHA-BW-P-0701	Backwash Pump(s)	Pumps water to Wash Water Tanks	Maintain water level in Wash Water Tanks sufficient for backwash requirements.
FHA-BW-P-0503 FHA-BW-P-0603 FHA-BW-P-0703	Backwash Pump Discharge Valve	Opens/closes in response to control signals to isolate pump	Interlocked with pump control
FHA-BW-V-0001 FHA-BW-V-0002	Backwash Pump Inlet Isolation Valve	Opens/closes manually to isolate common pump header	Manually operated
FHA-BW-V-0501 FHA-BW-V-0601 FHA-BW-V-0701	Backwash Pump Suction valve	Opens/closes manually to isolate inlet to respective Backwash Pump	Manually operated
FHA-BW-V-0502 FHA-BW-V-0602 FHA-BW-V-0702	Backwash Pump Check Valve	Prevents backflow through respective Backwash pump	None

The following table outlines the control instruments associated with the Filtration & Backwash System:

Table 2: Filtration & Backwash Control Instruments

Tag No	Instrument Description	Device Operation	Control Objectives
FHA-FLT-LIT-0101	West Settled Water Conduit Level Transmitter	Continuously monitors water level in the West Settled Water Conduit	To match total filtration rate to low lift production, or total plant flow before backwashing. Compared to the West and East Settled Water Conduit set-point via PID controller to generate Master Filter Rate.
FHA-FLT-LIT-0201	East Settled Water Conduit Level Transmitter	Continuously monitors water level in the East Settled Water Conduit	
FHA-FLT-LSHL-0101	Filter Water Level Switch	Continuously monitor water level in the filter	Interlocked with filter rate control valve to take filter out-of-service if contact made
FHA-FLT-AIT-0101	Filter Effluent Turbidimeter	Continuously monitors effluent turbidity of a given filter	Signal a backwash when set point is exceeded
FHA-FLT-FIT-0101	Filter Effluent Venturi Flowmeter	Continuously monitors effluent flow from a given filter	To evenly distribute the plant flow to each in-service filter based on the Master Filter Rate divided by the number of filters in service. Compared to individual filter flow set-point via PID loop to modulate filter effluent control valve.
FHA-FLT-PDIT-0101	Filter Head Loss Transmitter	Continuously monitors head loss through a given filter	Signal a backwash when set point is exceeded
FHA-BW-FIT-0001	Wash Water Venturi Flowmeter	Monitors flow from Backwash Pumps	Trending/tracking of flow
FHA-BW-FIT-0101	West backwash Flowmeter	Monitors flow of wash water to west filters	Maintain desired flow during backwash cycles

Tag No	Instrument Description	Device Operation	Control Objectives
FHA-FLT-LIT-0101	West Settled Water Conduit Level Transmitter	Continuously monitors water level in the West Settled Water Conduit	To match total filtration rate to low lift production, or total plant flow before backwashing. Compared to the West and East Settled Water Conduit set-point via PID controller to generate Master Filter Rate.
FHA-FLT-LIT-0201	East Settled Water Conduit Level Transmitter	Continuously monitors water level in the East Settled Water Conduit	
FHA-BW-FIT-0201	East Backwash Flowmeter	Monitors flow of wash water to east filters	

## 9.2 CONTROL SYSTEM DESCRIPTION

### A. Control Modes & Hierarchy

#### A.1 Hierarchal Overview

For the Filtration & Backwashing Process, 4 levels of control exist. However, depending upon the extent of complexity, some equipment may have fewer levels of control.

- Level 1: Field Device Control
- Level 2: Local / Area Control
- Level 3: RPU Control
- Level 4: SCADA Control

Level 1: A selection switch Local/Remote (L/R) is provided at the field device. By selecting L at the device, operation is disabled from any higher level. By selecting R, the device control is passed on to the next higher level.

Level 2: A selection switch Computer/Local (C/L) is provided at this level on the Local/Area Control Panel. By selecting L at this level the device is operable from the panel and operation from any higher level is disabled. By selecting C, the control is passed on to the next higher level and commands from SCADA are in effect.

Level 3: This level consists of the RPU for the process and all automated control and monitoring functionality is at this level.

Level 4: This level consists of the Supervisory Control and Data Acquisition (SCADA) work stations. These work stations are networked and placed at various locations throughout the facility. The SCADA system provides the following functionality and includes the database necessary for its support:

- Level 2 Computer / Local status
- Manual/Auto mode command
- Manual/Auto mode status

There are a total of 13 PLC's associated with the filtration process. There is a PLC dedicated to every set of four filters (1, 2, 3 & 4 / 5, 6, 7 & 8, etc.) that controls the automatic backwashing aspects of the filtration process. There is a totalizer PLC associated with totalizing values to be used for process on the other PLCs. There is a CBP PLC dedicated to calculating the master flow set point based on the current settled water conduit level. The filter 17-20 PLC is designated as the master PLC and is backed up by the filter 21-24 PLC in case of failure. The master PLC handles backwash queuing and automatic filter start-up/shut-down operation. There is one master CBP PLC working with two Indicator/Controllers to control the master filter rates based on the raw water flow and the settled water conduit levels. The master CBP PLC will automatically calculate the flow rates and send that information to the Master Filter PLCs via the SCADA network. In the case that the Master CBP PLC is not operational, the

Indicator/Controllers can be used to manually enter a flow signal to be sent out to all of the east or west filter PLCs. This flow would require manual calculations to be done by operations. Additionally the backwash pumping system has a PLC of its own. The system can be operated manually or automatically in SCADA mode.

The backwash pumps and associated discharge valves both have Local/Remote switches. In Local, this equipment can be operated locally and manually. In Remote, control of this equipment is passed up to a higher level of control.

## **A.2 Process Control Modes**

The Control Modes for the Filtration & Backwash Process are as follows:

Local Manual (LM): This mode is available at Level 1 and 2.

- Level 1:
- H/O/A switch on the LCP/actuator for a given valve is set to H
  - L/R switch on the ACP for a given backwash pump is set to L
  - L/R switch on the LCP/actuator for a given backwash discharge valve is set to L

It is recommended that operation in FIELD/MANUAL only be used in emergency situations as its inherent limitations in overall monitoring makes operating awkward and possibly unsafe. A maintenance test can also be performed with a push-button from the switchgear when withdrawn in the test position. Control circuitry is applied and main power disconnected. All interlocks are bypassed.

The Suction Valve must be opened and Discharge Valve must be closed for a Backwash Pump start command. Automatic start and stop of the backwash pumps can only be achieved with the hardwired emergency backup washwater tank level transmitters.

Filter valves are opened/closed manually by the operator at the device. Backwash pumps are started/stopped locally. There is an interlock on the backwash pump start command that opens the respective discharge valve. However, the discharge valve can be manually adjusted locally if necessary.

- Level 2:
- H/O/A switch on the LCPs/actuators for all filter valves are set to A
  - ACP/PLC switch on the PLC panel is set to ACP

Filter valves are opened/closed manually at the ACP. The filter rate valve is controlled via the Indicator/Controller by inputting the desired valve position. Backwash sequencing cannot be achieved automatically in this mode.

To operate the backwash pumps in this mode:

- H/O/A switches on the LCP for all the backwash pumps are set to A
- L/R switch on the ACP is set to L

Automatic start and stop of the backwash pumps can only be achieved with the hardwired emergency backup washwater tank level transmitters.

Computer Manual (CM): This mode is available at Level 4. SCADA manual control is typically available at the area operator workstation and central operator station.

- H/O/A switches on the LCPs/actuators for all filter valves is set to A
- ACP/PLC switch on the PLC panel is set to PLC
- SCADA/MANUAL is selected at an HMI

The filtration control mode for each of the filters to be operated in this mode must be selected as SCADA/MANUAL at the SCADA view node. Filter valves are opened/closed manually at the SCADA HMI. The filter rate valve is



controlled via the SCADA HMI by inputting the desired valve position (in per cent). Backwash sequencing cannot be achieved automatically in this mode.

To operate the backwash pumps in this mode:

- L/R switch on the ACP is set to R
- L/A switch on the CBP can be either L or A

Automatic start and stop of the backwash pumps can only be achieved with the CBP L/A Switch in Auto or by the hardwired emergency washwater tank level transmitters.

Computer Auto (CA): This mode is available at Level 4. The devices are set to automatic mode at area operator workstation or the central operator station.

#### SCADA/AUTO:

- H/O/A switch on the LCPs/actuators for all filter valves is set to A
- ACP/PLC switch on the PLC panel is set to PLC
- L/R switch on the ACP for a given backwash discharge valve is set to R
- Filter has flow >25 L/s and SCADA HMI indicates "Filtering"
- SCADA/AUTO is selected at an HMI

The filtration control mode for each of the filters to be operated in this mode must be selected as SCADA/AUTO at the SCADA HMI. In other words, it is possible to operate some filters in another mode, while operating the majority in SCADA/AUTO. Filter valves are opened/closed automatically by the PLC. The filter rate valve is controlled automatically based on an operator entered flow set point on the SCADA HMI. A flow set point is entered in the rate control valve popup to automatically control the rate valve position and maintain the desired flow.

To operate the backwash pumps in this mode:

- L/R switch on the ACP is set to R
- L/A switch on the CBP is set to A

#### SCADA/MASTER:

- H/O/A switch on the LCPs/actuators for all filter valves is set to A
- ACP/PLC switch on the PLC panel is set to PLC
- L/R switch for a given backwash pump is set to R
- L/R switch on the LCP for a given backwash discharge valve is set to R
- SCADA/MASTER is selected at an HMI

In SCADA/MASTER mode, the "START" button on the Filter Control popup may be pressed if the Filter is "IDLE" or "OUT OF SERVICE". The Filter will be considered "FILTERING" once a filter flow rate of 25 L/s or greater has been achieved. The filtration control mode for each of the filters to be operated in this mode must be selected as SCADA/MASTER at the SCADA view node. In other words, it is possible to operate some filters in another mode, while operating the majority in SCADA/MASTER. Filter valves are opened/closed automatically by the PLC. The filter rate valve is controlled automatically based on the Master Flow Rate set point received from the Master PLC.

To operate the backwash pumps in this mode:

- L/R switch on the ACP is set to R
- L/A switch on the CBP is set to A

All of the backwash pumps to be operated in this mode must be set to Computer-Auto to automatically start and stop based on operator wash water tank set points. The pumps will start in a staggered fashion (20 seconds apart).

#### CBP/LOCAL:

To operate the backwash pumps in this mode:

- L/R switch on the ACP is set to R
- L/A switch on the CBP is set to L

Pumps in this mode are started with a spring return switch.

The following table identifies the control modes and their hierarchy level for the equipment in the Filtration & Backwash Process:

*Table 3: Filtration & Backwash Control Modes & Hierarchy*

Equipment Description / Tag No	Level 1 (LM)	Level 2 (LM)	RPU Level 3	SCADA Level 4 (CM/CA)
Master Filter Rate Control Valve(s) #1 - 4 FHA-FLT-V-0101 FHA-FLT-V-0201 FHA-FLT-V-0301 FHA-FLT-V-0401	L/R at Valve	None	RPU-1721	Status monitoring and control
Master Filter Rate Control Valve(s) #5 - 8 FHA-FLT-V-0501 FHA-FLT-V-0601 FHA-FLT-V-0701 FHA-FLT-V-0801	L/R at Valve	None	RPU-1722	Status monitoring and control
Master Filter Rate Control Valve(s) #9 - 12 FHA-FLT-V-0901 FHA-FLT-V-1001 FHA-FLT-V-1101 FHA-FLT-V-1201	L/R at Valve	None	RPU-1723	Status monitoring and control
Master Filter Rate Control Valve(s) #13 - 16 FHA-FLT-V-1301 FHA-FLT-V-1401 FHA-FLT-V-1501 FHA-FLT-V-1601	L/R at Valve	None	RPU-1724	Status monitoring and control
Master Filter Rate Control Valve(s) #17 - 20 FHA-FLT-V-1701 FHA-FLT-V-1801 FHA-FLT-V-1901 FHA-FLT-V-2001	L/R at Valve	None	RPU-1822	Status monitoring and control
Master Filter Rate Control Valve(s) #21 - 24 FHA-FLT-V-2101 FHA-FLT-V-2201 FHA-FLT-V-2301 FHA-FLT-V-2401	L/R at Valve	None	RPU-1823	Status monitoring and control

Equipment Description / Tag No	Level 1 (LM)	Level 2 (LM)	RPU Level 3	SCADA Level 4 (CM/CA)
Master Filter Rate Control Valve(s) #25 - 28 FHA-FLT-V-2501 FHA-FLT-V-2601 FHA-FLT-V-2701 FHA-FLT-V-2801	L/R at Valve	None	RPU-1621	Status monitoring and control
Master Filter Rate Control Valve(s) #29 - 32 FHA-FLT-V-2901 FHA-FLT-V-3001 FHA-FLT-V-3101 FHA-FLT-V-3201	L/R at Valve	None	RPU-1622	Status monitoring and control
Master Filter Rate Control Valve(s) #33 - 36 FHA-FLT-V-3301 FHA-FLT-V-3401 FHA-FLT-V-3501 FHA-FLT-V-3601	L/R at Valve	None	RPU-1623	Status monitoring and control
Master Filter Rate Control Valve(s) #37 - 40 FHA-FLT-V-3701 FHA-FLT-V-3801 FHA-FLT-V-3901 FHA-FLT-V-4001	L/R at Valve	None	RPU-1624	Status monitoring and control
Filter Inlet Gate(s) #1 - 4 FHA-FLT-G-0101 FHA-FLT-G-0201 FHA-FLT-G-0301 FHA-FLT-G-0401	L/R at Gate	Respective Filter Console	RPU-1721	Status monitoring and control
Filter Inlet Gate(s) #5 - 8 FHA-FLT-G-0501 FHA-FLT-G-0601 FHA-FLT-G-0701 FHA-FLT-G-0801	L/R at Gate	Respective Filter Console	RPU-1722	Status monitoring and control
Filter Inlet Gate(s) #9 - 12 FHA-FLT-G-0901 FHA-FLT-G-1001 FHA-FLT-G-1101 FHA-FLT-G-1201	L/R at Gate	Respective Filter Console	RPU-1723	Status monitoring and control
Filter Inlet Gate(s) #13 - 16 FHA-FLT-G-1301 FHA-FLT-G-1401 FHA-FLT-G-1501 FHA-FLT-G-1601	L/R at Gate	Respective Filter Console	RPU-1724	Status monitoring and control
Filter Inlet Gate(s) #17 - 20 FHA-FLT-G-1701 FHA-FLT-G-1801 FHA-FLT-G-1901 FHA-FLT-G-2001	L/R at Gate	Respective Filter Console	RPU-1822	Status monitoring and control

Equipment Description / Tag No	Level 1 (LM)	Level 2 (LM)	RPU Level 3	SCADA Level 4 (CM/CA)
Filter Inlet Gate(s) #21 - 24 FHA-FLT-G-2101 FHA-FLT-G-2201 FHA-FLT-G-2301 FHA-FLT-G-2401	L/R at Gate	Respective Filter Console	RPU-1823	Status monitoring and control
Filter Inlet Gate(s) #25 - 28 FHA-FLT-G-2501 FHA-FLT-G-2601 FHA-FLT-G-2701 FHA-FLT-G-2801	L/R at Gate	Respective Filter Console	RPU-1621	Status monitoring and control
Filter Inlet Gate(s) #29 - 32 FHA-FLT-G-2901 FHA-FLT-G-3001 FHA-FLT-G-3101 FHA-FLT-G-3201	L/R at Gate	Respective Filter Console	RPU-1622	Status monitoring and control
Filter Inlet Gate(s) #33 - 36 FHA-FLT-G-3301 FHA-FLT-G-3401 FHA-FLT-G-3501 FHA-FLT-G-3601	L/R at Gate	Respective Filter Console	RPU-1623	Status monitoring and control
Filter Inlet Gate(s) #37 - 40 FHA-FLT-G-3701 FHA-FLT-G-3801 FHA-FLT-G-3901 FHA-FLT-G-4001	L/R at Gate	Respective Filter Console	RPU-1624	Status monitoring and control
Filter Drain Gate(s) #1 - 4 FHA-FLT-G-0102 FHA-FLT-G-0202 FHA-FLT-G-0302 FHA-FLT-G-0402	L/R at Gate	Respective Filter Console	RPU-1721	Status monitoring and control
Filter Drain Gate(s) #5 - 8 FHA-FLT-G-0502 FHA-FLT-G-0602 FHA-FLT-G-0702 FHA-FLT-G-0802	L/R at Gate	Respective Filter Console	RPU-1722	Status monitoring and control
Filter Drain Gate(s) #9 - 12 FHA-FLT-G-0902 FHA-FLT-G-1002 FHA-FLT-G-1102 FHA-FLT-G-1202	L/R at Gate	Respective Filter Console	RPU-1723	Status monitoring and control
Filter Drain Gate(s) #13 - 16 FHA-FLT-G-1302 FHA-FLT-G-1402 FHA-FLT-G-1502 FHA-FLT-G-1602	L/R at Gate	Respective Filter Console	RPU-1724	Status monitoring and control

Equipment Description / Tag No	Level 1 (LM)	Level 2 (LM)	RPU Level 3	SCADA Level 4 (CM/CA)
Filter Drain Gate(s) #17 - 20 FHA-FLT-G-1702 FHA-FLT-G-1802 FHA-FLT-G-1902 FHA-FLT-G-2002	L/R at Gate	Respective Filter Console	RPU-1822	Status monitoring and control
Filter Drain Gate(s) #21 - 24 FHA-FLT-G-2102 FHA-FLT-G-2202 FHA-FLT-G-2302 FHA-FLT-G-2402	L/R at Gate	Respective Filter Console	RPU-1823	Status monitoring and control
Filter Drain Gate(s) #25 - 28 FHA-FLT-G-2502 FHA-FLT-G-2602 FHA-FLT-G-2702 FHA-FLT-G-2802	L/R at Gate	Respective Filter Console	RPU-1621	Status monitoring and control
Filter Drain Gate(s) #29 - 32 FHA-FLT-G-2902 FHA-FLT-G-3002 FHA-FLT-G-3102 FHA-FLT-G-3202	L/R at Gate	Respective Filter Console	RPU-1622	Status monitoring and control
Filter Drain Gate(s) #33 - 36 FHA-FLT-G-3302 FHA-FLT-G-3402 FHA-FLT-G-3502 FHA-FLT-G-3602	L/R at Gate	Respective Filter Console	RPU-1623	Status monitoring and control
Filter Drain Gate(s) #37 - 40 FHA-FLT-G-3702 FHA-FLT-G-3802 FHA-FLT-G-3902 FHA-FLT-G-4002	L/R at Gate	Respective Filter Console	RPU-1624	Status monitoring and control
Backwash Valve(s) #1 - 4 FHA-FLT-V-0102 FHA-FLT-V-0202 FHA-FLT-V-0302 FHA-FLT-V-0402	L/R at Valve	Respective Filter Console	RPU-1721	Status monitoring and control
Backwash Valve(s) #5 - 8 FHA-FLT-V-0502 FHA-FLT-V-0602 FHA-FLT-V-0702 FHA-FLT-V-0802	L/R at Valve	Respective Filter Console	RPU-1722	Status monitoring and control
Backwash Valve(s) #9 - 12 FHA-FLT-V-0902 FHA-FLT-V-1002 FHA-FLT-V-1102 FHA-FLT-V-1202	L/R at Valve	Respective Filter Console	RPU-1723	Status monitoring and control

Equipment Description / Tag No	Level 1 (LM)	Level 2 (LM)	RPU Level 3	SCADA Level 4 (CM/CA)
Backwash Valve(s) #13 - 16 FHA-FLT-V-1302 FHA-FLT-V-1402 FHA-FLT-V-1502 FHA-FLT-V-1602	L/R at Valve	Respective Filter Console	RPU-1724	Status monitoring and control
Backwash Valve(s) #17 - 20 FHA-FLT-V-1702 FHA-FLT-V-1802 FHA-FLT-V-1902 FHA-FLT-V-2002	L/R at Valve	Respective Filter Console	RPU-1822	Status monitoring and control
Backwash Valve(s) #21 - 24 FHA-FLT-V-2102 FHA-FLT-V-2202 FHA-FLT-V-2302 FHA-FLT-V-2402	L/R at Valve	Respective Filter Console	RPU-1823	Status monitoring and control
Backwash Valve(s) #25 - 28 FHA-FLT-V-2502 FHA-FLT-V-2602 FHA-FLT-V-2702 FHA-FLT-V-2802	L/R at Valve	Respective Filter Console	RPU-1621	Status monitoring and control
Backwash Valve(s) #29 - 32 FHA-FLT-V-2902 FHA-FLT-V-3002 FHA-FLT-V-3102 FHA-FLT-V-3202	L/R at Valve	Respective Filter Console	RPU-1622	Status monitoring and control
Backwash Valve(s) #33 - 36 FHA-FLT-V-3302 FHA-FLT-V-3402 FHA-FLT-V-3502 FHA-FLT-V-3602	L/R at Valve	Respective Filter Console	RPU-1623	Status monitoring and control
Backwash Valve(s) #37 - 40 FHA-FLT-V-3702 FHA-FLT-V-3802 FHA-FLT-V-3902 FHA-FLT-V-4002	L/R at Valve	Respective Filter Console	RPU-1624	Status monitoring and control
Surface Sweep Valve(s) #1 - 4 FHA-FLT-V-0103 FHA-FLT-V-0203 FHA-FLT-V-0303 FHA-FLT-V-0403	O/C	Respective Filter Console	RPU-1721	Status monitoring and control
Surface Sweep Valve(s) #5 - 8 FHA-FLT-V-0503 FHA-FLT-V-0603 FHA-FLT-V-0703 FHA-FLT-V-0803	O/C	Respective Filter Console	RPU-1722	Status monitoring and control

Equipment Description / Tag No	Level 1 (LM)	Level 2 (LM)	RPU Level 3	SCADA Level 4 (CM/CA)
Surface Sweep Valve(s) #9 - 12 FHA-FLT-V-0903 FHA-FLT-V-1003 FHA-FLT-V-1103 FHA-FLT-V-1203	O/C	Respective Filter Console	RPU-1723	Status monitoring and control
Surface Sweep Valve(s) #13 - 16 FHA-FLT-V-1303 FHA-FLT-V-1403 FHA-FLT-V-1503 FHA-FLT-V-1603	O/C	Respective Filter Console	RPU-1724	Status monitoring and control
Surface Sweep Valve(s) #17 - 20 FHA-FLT-V-1703 FHA-FLT-V-1803 FHA-FLT-V-1903 FHA-FLT-V-2003	O/C	Respective Filter Console	RPU-1822	Status monitoring and control
Surface Sweep Valve(s) #21 - 24 FHA-FLT-V-2103 FHA-FLT-V-2203 FHA-FLT-V-2303 FHA-FLT-V-2403	O/C	Respective Filter Console	RPU-1823	Status monitoring and control
Surface Sweep Valve(s) #25 - 28 FHA-FLT-V-2503 FHA-FLT-V-2603 FHA-FLT-V-2703 FHA-FLT-V-2803	O/C	Respective Filter Console	RPU-1621	Status monitoring and control
Surface Sweep Valve(s) #29 - 32 FHA-FLT-V-2903 FHA-FLT-V-3003 FHA-FLT-V-3103 FHA-FLT-V-3203	O/C	Respective Filter Console	RPU-1622	Status monitoring and control
Surface Sweep Valve(s) #33 - 36 FHA-FLT-V-3303 FHA-FLT-V-3403 FHA-FLT-V-3503 FHA-FLT-V-3603	O/C	Respective Filter Console	RPU-1623	Status monitoring and control
Surface Sweep Valve(s) #37 - 40 FHA-FLT-V-3703 FHA-FLT-V-3803 FHA-FLT-V-3903 FHA-FLT-V-4003	O/C	Respective Filter Console	RPU-1624	Status monitoring and control
Washwater Header Valve(s) FHA-BW-V-0105 FHA-BW-V-0205	L/R at Valve	None	RPU-1223	Status monitoring and control
Backwash Pump(s) FHA-BW-P-0501 FHA-BW-P-0601 FHA-BW-P-0701	None	L/M/R at control panel in MCC	RPU-1223	Status monitoring and control

Equipment Description / Tag No	Level 1 (LM)	Level 2 (LM)	RPU Level 3	SCADA Level 4 (CM/CA)
Backwash Pump Discharge Valve(s) FHA-BW-V-0503 FHA-BW-V-0603 FHA-BW-V-0703	L/R at Valve	None	RPU-1223	Status monitoring and control
Backwash Pump Suction Valve(s) FHA-BW-V-0501 FHA-BW-V-0601 FHA-BW-V-070	O/C	None	RPU-1223	Status monitoring
Backwash Pump Inlet Isolation valve(s) FHA-BW-V-0001 FHA-BW-V-0002	O/C	None	RPU-1223	Status monitoring

## B. RPU Input / Output Signal List

Table 4: Filtration & Backwash RPU I/O List

I/O Tag No	Description	Type	RPU
FHA-FLT-ZIT-0101-ZI	FILTER #1 RATE CONT VLV POSITION	AI	1721
FHA-FLT-AIT-0101-AI	FILTER #1 TURBIDITY	AI	1721
FHA-FLT-ZIT-0201-ZI	FILTER #2 RATE CONT VLV POSITION	AI	1721
FHA-FLT-AIT-0201-AI	FILTER #2 TURBIDITY	AI	1721
FHA-FLT-ZIT-0301-ZI	FILTER #3 RATE CONT VLV POSITION	AI	1721
FHA-FLT-AIT-0301-AI	FILTER #3 TURBIDITY	AI	1721
FHA-FLT-ZIT-0401-ZI	FILTER #4 RATE CONT VLV POSITION	AI	1721
FHA-FLT-AIT-0401-AI	FILTER #4 TURBIDITY	AI	1721
FHA-SED-AIT-0101-AI	SEW TRB ANALYZER - WEST	AI	1721
FHA-DCL-AIT-0002B-AI	POST-SO2 CLR RESID#2B	AI	1721
FHA-DCL-AIT-0001-AI	PRE-SO2 CHLORINE RESID	AI	1721
FHA-DCL-AIT-0002A-AI	POST-SO2 CLR RESID#2A	AI	1721
FHA-TRW-AIT-0001-AI	TRW TOT CLR ANALYZER	AI	1721
FHA-TRW-AIT-0002-AI	TRW TRB ANALYZER	AI	1721
FHA-TRW-AIT-0003-AI	FLUORIDE ANALYZER	AI	1721
FHA-FLT-FIT-0101-FI	FILTER #1 FLOW	AI	1721
FHA-FLT-PDIT-0101-PDI	FILTER #1 HEAD LOSS	AI	1721
FHA-FLT-FIT-0201-FI	FILTER #2 FLOW	AI	1721
FHA-FLT-PDIT-0201-PDI	FILTER #2 HEAD LOSS	AI	1721
FHA-FLT-FIT-0301-FI	FILTER #3 FLOW	AI	1721
FHA-FLT-PDIT-0301-PDI	FILTER #3 HEAD LOSS	AI	1721
FHA-FLT-FIT-0401-FI	FILTER #4 FLOW	AI	1721
FHA-FLT-PDIT-0401-PDI	FILTER #4 HEAD LOSS	AI	1721
FCL-FLT-RPU-1823-FIC-C	MASTER FLOW RATE SETPOINT INPUT EAST	AO	1721
FHA-FLT-V-0101-ZC	FILTER #1 RATE CONTROL VALVE POSITION SETPOINT	AO	1721
FHA-FLT-V-0201-ZC	FILTER #2 RATE CONTROL VALVE POSITION SETPOINT	AO	1721
FHA-FLT-V-0301-ZC	FILTER #3 RATE CONTROL VALVE POSITION SETPOINT	AO	1721
FHA-FLT-V-0401-ZC	FILTER #4 RATE CONTROL VALVE POSITION SETPOINT	AO	1721
FHA-SPC-UPS-1721-EA	FILTERS 1-4 PLC UPS - POWER FAILURE	DI	1721
FHA-SPC-UPS-1721-EAL	FILTERS 1-4 PLC UPS - LOW BATTERY	DI	1721
FHA-SPC-UPS-1721-XA	FILTERS 1-4 PLC UPS - UPS FAILURE	DI	1721



I/O Tag No	Description	Type	RPU
FHA-SPC-RPU-1721-TAH	FILTER #1-4 PANEL SMOKE/HEAT ALARM	DI	1721
FHA-FLT-G-0101-YN	FILTER #1 INLET GATE COMPUTER MODE	DI	1721
FHA-FLT-G-0101-YA	FILTER #1 INLET GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1721
FHA-FLT-G-0101-ZH	FILTER #1 INLET GATE OPENED	DI	1721
FHA-FLT-G-0101-ZL	FILTER #1 INLET GATE CLOSED	DI	1721
vFHA-FLT-G-0102-YN	FILTER #1 DRAIN GATE COMPUTER MODE	DI	1721
FHA-FLT-G-0102-YA	FILTER #1 DRAIN GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1721
FHA-FLT-G-0102-ZH	FILTER #1 DRAIN GATE OPENED	DI	1721
FHA-FLT-G-0102-ZL	FILTER #1 DRAIN GATE CLOSED	DI	1721
FHA-FLT-V-0101-YN	FILTER #1 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1721
FHA-FLT-V-0101-YA	FILTER #1 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1721
FHA-FLT-V-0101-ZH	FILTER #1 EFFLUENT RATE CONTROL VALVE OPENED	DI	1721
FHA-FLT-V-0101-ZL	FILTER #1 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1721
FHA-FLT-V-0102-YN	FILTER #1 BACKWASH VALVE COMPUTER MODE	DI	1721
FHA-FLT-V-0102-YA	FILTER #1 BACKWASH VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1721
FHA-FLT-V-0102-ZH	FILTER #1 BACKWASH VALVE OPENED	DI	1721
FHA-FLT-V-0102-ZL	FILTER #1 BACKWASH VALVE CLOSED	DI	1721
FHA-FLT-V-0103-YN	FILTER #1 SURFACE SWEEP VALVE COMPUTER MODE	DI	1721
FHA-FLT-V-0103-YA	FILTER #1 SURFACE SWEEP VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1721
FHA-FLT-V-0103-ZH	FILTER #1 SURFACE SWEEP VALVE OPENED	DI	1721
FHA-FLT-V-0103-ZL	FILTER #1 SURFACE SWEEP VALVE CLOSED	DI	1721
FHA-FLT-G-0201-YN	FILTER #2 INLET GATE COMPUTER MODE	DI	1721
FHA-FLT-G-0201-YA	FILTER #2 INLET GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1721
FHA-FLT-G-0201-ZH	FILTER #2 INLET GATE OPENED	DI	1721
FHA-FLT-G-0201-ZL	FILTER #2 INLET GATE CLOSED	DI	1721
FHA-FLT-G-0202-YN	FILTER #2 DRAIN GATE COMPUTER MODE	DI	1721
FHA-FLT-G-0202-YA	FILTER #2 DRAIN GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1721
FHA-FLT-G-0202-ZH	FILTER #2 DRAIN GATE OPENED	DI	1721
FHA-FLT-G-0202-ZL	FILTER #2 DRAIN GATE CLOSED	DI	1721
FHA-FLT-V-0201-YN	FILTER #2 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1721
FHA-FLT-V-0201-YA	FILTER #2 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1721
FHA-FLT-V-0201-ZH	FILTER #2 EFFLUENT RATE CONTROL VALVE OPENED	DI	1721
FHA-FLT-V-0201-ZL	FILTER #2 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1721
FHA-FLT-V-0202-YN	FILTER #2 BACKWASH VALVE COMPUTER MODE	DI	1721
FHA-FLT-V-0202-YA	FILTER #2 BACKWASH VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1721
FHA-FLT-V-0202-ZH	FILTER #2 BACKWASH VALVE OPENED	DI	1721
FHA-FLT-V-0202-ZL	FILTER #2 BACKWASH VALVE CLOSED	DI	1721

I/O Tag No	Description	Type	RPU
FHA-FLT-V-0203-YN	FILTER #2 SURFACE SWEEP VALVE COMPUTER MODE	DI	1721
FHA-FLT-V-0203-YA	FILTER #2 SURFACE SWEEP VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1721
FHA-FLT-V-0203-ZH	FILTER #2 SURFACE SWEEP VALVE OPENED	DI	1721
FHA-FLT-V-0203-ZL	FILTER #2 SURFACE SWEEP VALVE CLOSED	DI	1721
FHA-FLT-G-0301-YN	FILTER #3 INLET GATE COMPUTER MODE	DI	1721
FHA-FLT-G-0301-YA	FILTER #3 INLET GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1721
FHA-FLT-G-0301-ZH	FILTER #3 INLET GATE OPENED	DI	1721
FHA-FLT-G-0301-ZL	FILTER #3 INLET GATE CLOSED	DI	1721
FHA-FLT-G-0302-YN	FILTER #3 DRAIN GATE COMPUTER MODE	DI	1721
FHA-FLT-G-0302-YA	FILTER #3 DRAIN GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1721
FHA-FLT-G-0302-ZH	FILTER #3 DRAIN GATE OPENED	DI	1721
FHA-FLT-G-0302-ZL	FILTER #3 DRAIN GATE CLOSED	DI	1721
FHA-FLT-V-0301-YN	FILTER #3 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1721
FHA-FLT-V-0301-YA	FILTER #3 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1721
FHA-FLT-V-0301-ZH	FILTER #3 EFFLUENT RATE CONTROL VALVE OPENED	DI	1721
FHA-FLT-V-0301-ZL	FILTER #3 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1721
FHA-FLT-V-0302-YN	FILTER #3 BACKWASH VALVE COMPUTER MODE	DI	1721
FHA-FLT-V-0302-YA	FILTER #3 BACKWASH VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1721
FHA-FLT-V-0302-ZH	FILTER #3 BACKWASH VALVE OPENED	DI	1721
FHA-FLT-V-0302-ZL	FILTER #3 BACKWASH VALVE CLOSED	DI	1721
FHA-FLT-V-0303-YN	FILTER #3 SURFACE SWEEP VALVE COMPUTER MODE	DI	1721
FHA-FLT-V-0303-YA	FILTER #3 SURFACE SWEEP VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1721
FHA-FLT-V-0303-ZH	FILTER #3 SURFACE SWEEP VALVE OPENED	DI	1721
FHA-FLT-V-0303-ZL	FILTER #3 SURFACE SWEEP VALVE CLOSED	DI	1721
FHA-FLT-G-0401-YN	FILTER #4 INLET GATE COMPUTER MODE	DI	1721
FHA-FLT-G-0401-YA	FILTER #4 INLET GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1721
FHA-FLT-G-0401-ZH	FILTER #4 INLET GATE OPENED	DI	1721
FHA-FLT-G-0401-ZL	FILTER #4 INLET GATE CLOSED	DI	1721
FHA-FLT-G-0402-YN	FILTER #4 DRAIN GATE COMPUTER MODE	DI	1721
FHA-FLT-G-0402-YA	FILTER #4 DRAIN GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1721
FHA-FLT-G-0402-ZH	FILTER #4 DRAIN GATE OPENED	DI	1721
FHA-FLT-G-0402-ZL	FILTER #4 DRAIN GATE CLOSED	DI	1721
FHA-FLT-V-0401-YN	FILTER #4 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1721
FHA-FLT-V-0401-YA	FILTER #4 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1721
FHA-FLT-V-0401-ZH	FILTER #4 EFFLUENT RATE CONTROL VALVE OPENED	DI	1721
FHA-FLT-V-0401-ZL	FILTER #4 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1721
FHA-FLT-V-0402-YN	FILTER #4 BACKWASH VALVE COMPUTER MODE	DI	1721

I/O Tag No	Description	Type	RPU
FHA-FLT-V-0402-YA	FILTER #4 BACKWASH VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1721
FHA-FLT-V-0402-ZH	FILTER #4 BACKWASH VALVE OPENED	DI	1721
FHA-FLT-V-0402-ZL	FILTER #4 BACKWASH VALVE CLOSED	DI	1721
FHA-FLT-V-0403-YN	FILTER #4 SURFACE SWEEP VALVE COMPUTER MODE	DI	1721
FHA-FLT-V-0403-YA	FILTER #4 SURFACE SWEEP VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1721
FHA-FLT-V-0403-ZH	FILTER #4 SURFACE SWEEP VALVE OPENED	DI	1721
FHA-FLT-V-0403-ZL	FILTER #4 SURFACE SWEEP VALVE CLOSED	DI	1721
FHA-FLT-HS-0101-ZL	FILTER #1 VALVE ACP ENABLE/DISABLE SWITCH	DI	1721
FHA-FLT-HS-0201-ZL	FILTER #2 VALVE ACP ENABLE/DISABLE SWITCH	DI	1721
FHA-FLT-HS-0301-ZL	FILTER #3 VALVE ACP ENABLE/DISABLE SWITCH	DI	1721
FHA-FLT-HS-0401-ZL	FILTER #4 VALVE ACP ENABLE/DISABLE SWITCH	DI	1721
FHA-FLT-AIT-0101-YA	FILTER #1 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1721
FHA-FLT-AIT-0201-YA	FILTER #2 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1721
FHA-FLT-AIT-0301-YA	FILTER #3 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1721
FHA-FLT-AIT-0401-YA	FILTER #4 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1721
FHA-FLT-LSHL-0101-LAH	FILTER #1 HI LEVEL SWITCH	DI	1721
FHA-FLT-LSHL-0101-LAL	FILTER #1 LO LEVEL SWITCH	DI	1721
FHA-FLT-LSHL-0201-LAH	FILTER #2 HI LEVEL SWITCH	DI	1721
FHA-FLT-LSHL-0201-LAL	FILTER #2 LO LEVEL SWITCH	DI	1721
FHA-FLT-LSHL-0301-LAH	FILTER #3 HI LEVEL SWITCH	DI	1721
FHA-FLT-LSHL-0301-LAL	FILTER #3 LO LEVEL SWITCH	DI	1721
FHA-FLT-LSHL-0401-LAH	FILTER #4 HI LEVEL SWITCH	DI	1721
FHA-FLT-LSHL-0401-LAL	FILTER #4 LO LEVEL SWITCH	DI	1721
FHA-SED-P-0101-YN	SEW SAMPLE PUMP - WEST COMPUTER MODE	DI	1721
FHA-SED-P-0101-MN	SEW SAMPLE PUMP - WEST RUNNING	DI	1721
FHA-SED-V-0102-YN	SEW SMP PUMP SUCT VLV-W COMPUTER MODE	DI	1721
FHA-SED-V-0102-YA	SEW SMP PUMP SUCT VLV-W NOT AVAILABLE MAIN/CONTROL POWER FAIL	DI	1721
FHA-SED-V-0102-ZH	SEW SMP PUMP SUCT VLV-W OPENED	DI	1721
FHA-SED-V-0102-ZL	SEW SMP PUMP SUCT VLV-W CLOSED	DI	1721
FHA-SED-V-0109-YN	SEW SMP PUMP TRB VLV-W COMPUTER MODE	DI	1721
FHA-SED-V-0109-YA	SEW SMP PUMP TRB VLV-W NOT AVAILABLE MAIN/CONTROL POWER FAIL	DI	1721
FHA-SED-V-0109-ZH	SEW SMP PUMP TRB VLV-W OPENED	DI	1721
FHA-SED-V-0109-ZL	SEW SMP PUMP TRB VLV-W CLOSED	DI	1721
FHA-SED-V-0110-YN	SEW SUCT FLUSH VLV-W COMPUTER MODE	DI	1721
FHA-SED-V-0110-YA	SEW SUCT FLUSH VLV-W NOT AVAILABLE MAIN/CONTROL POWER FAIL	DI	1721
FHA-SED-V-0110-ZH	SEW SUCT FLUSH VLV-W OPENED	DI	1721
FHA-SED-V-0110-ZL	SEW SUCT FLUSH VLV-W CLOSED	DI	1721
FHA-SED-V-0111-YN	SEW DISCH FLUSH VLV-W COMPUTER MODE	DI	1721

I/O Tag No	Description	Type	RPV
FHA-SED-V-0111-YA	SEW DISCH FLUSH VLV-W NOT AVAILABLE MAIN/CONTROL POWER FAIL	DI	1721
FHA-SED-V-0111-ZH	SEW DISCH FLUSH VLV-W OPENED	DI	1721
FHA-SED-V-0111-ZL	SEW DISCH FLUSH VLV-W CLOSED	DI	1721
FHA-SED-FSL-0101-FAL	SEW SMP PUMP-WEST FLOW LOW ALARM	DI	1721
FHA-SED-FSL-0102-FAL	SEW TRB ANALYZER-WEST FLOW LOW ALARM	DI	1721
FHA-SED-AIT-0101-YA	SEW TRB ANALYZER - WEST INSTRUMENT FAULT	DI	1721
FHA-DCL-V-0013-YN	BFR-SO2 SMP DRAIN VLV COMPUTER MODE	DI	1721
FHA-DCL-V-0013-YA	BFR-SO2 SMP DRAIN VLV NOT AVAILABLE MAIN/CONTROL POWER FAIL	DI	1721
FHA-DCL-V-0013-ZH	BFR-SO2 SMP DRAIN VLV OPENED	DI	1721
FHA-DCL-V-0013-ZL	BFR-SO2 SMP DRAIN VLV CLOSED	DI	1721
FHA-DCL-V-0014-YN	BFR-SO2 SMP FLUSH VLV COMPUTER MODE	DI	1721
FHA-DCL-V-0014-YA	BFR-SO2 SMP FLUSH VLV NOT AVAILABLE MAIN/CONTROL POWER FAIL	DI	1721
FHA-DCL-V-0014-ZH	BFR-SO2 SMP FLUSH VLV OPENED	DI	1721
FHA-DCL-V-0014-ZL	BFR-SO2 SMP FLUSH VLV CLOSED	DI	1721
FHA-DCL-V-0015-YN	BFR-SO2 TRB INLET VLV COMPUTER MODE	DI	1721
FHA-DCL-V-0015-YA	BFR-SO2 TRB INLET VLV NOT AVAILABLE MAIN/CONTROL POWER FAIL	DI	1721
FHA-DCL-V-0015-ZH	BFR-SO2 TRB INLET VLV OPENED	DI	1721
FHA-DCL-V-0015-ZL	BFR-SO2 TRB INLET VLV CLOSED	DI	1721
FHA-DCL-V-0016-YN	BFR-SO2 LAB SAMPLE VLV COMPUTER MODE	DI	1721
FHA-DCL-V-0016-YA	BFR-SO2 LAB SAMPLE VLV NOT AVAILABLE MAIN/CONTROL POWER FAIL	DI	1721
FHA-DCL-V-0016-ZH	BFR-SO2 LAB SAMPLE VLV OPENED	DI	1721
FHA-DCL-V-0016-ZL	BFR-SO2 LAB SAMPLE VLV CLOSED	DI	1721
FHA-DCL-P-0001A-YN	BFR-SO2 SMP PUMP P-0001A COMPUTER MODE	DI	1721
FHA-DCL-P-0001A-MN	BFR-SO2 SMP PUMP P-0001A RUNNING	DI	1721
FHA-DCL-P-0001B-YN	BFR-SO2 SMP PUMP P-0001B COMPUTER MODE	DI	1721
FHA-DCL-P-0001B-MN	BFR-SO2 SMP PUMP P-0001B RUNNING	DI	1721
FHA-DCL-AIT-0001-YA	BFR-SO2 CLR RESID ANALYZER INSTRUMENT FAULT	DI	1721
FHA-DCL-FSL-0001A-FAL	BFR-SO2 SMP PUMP P-0001A FLOW LOW ALARM	DI	1721
FHA-DCL-FSL-0001B-FAL	BFR-SO2 SMP PUMP P-0001B FLOW LOW ALARM	DI	1721
FHA-DCL-FSL-0002-FAL	BFR-SO2 CLR RESID ANALYZER FLOW LOW ALARM	DI	1721
FHA-DCL-V-0026-YN	AFT-SO2 SMP FLUSH VLV COMPUTER MODE	DI	1721
FHA-DCL-V-0026-YA	AFT-SO2 SMP FLUSH VLV NOT AVAILABLE MAIN/CONTROL POWER FAIL	DI	1721
FHA-DCL-V-0026-ZH	AFT-SO2 SMP FLUSH VLV OPENED	DI	1721
FHA-DCL-V-0026-ZL	AFT-SO2 SMP FLUSH VLV CLOSED	DI	1721
FHA-DCL-V-0027-YN	AFT-SO2 SMP DRAIN VLV COMPUTER MODE	DI	1721
FHA-DCL-V-0027-YA	AFT-SO2 SMP DRAIN VLV NOT AVAILABLE MAIN/CONTROL POWER FAIL	DI	1721
FHA-DCL-V-0027-ZH	AFT-SO2 SMP DRAIN VLV OPENED	DI	1721
FHA-DCL-V-0027-ZL	AFT-SO2 SMP DRAIN VLV CLOSED	DI	1721
FHA-DCL-V-0028-YN	AFT-SO2 ANALYZER ISLN VLV COMPUTER MODE	DI	1721
FHA-DCL-V-0028-YA	AFT-SO2 ANALYZER ISLN VLV NOT AVAILABLE MAIN/CONTROL POWER FAIL	DI	1721

I/O Tag No	Description	Type	RPU
FHA-DCL-V-0028-ZH	AFT-SO2 ANALYZER ISLN VLV OPENED	DI	1721
FHA-DCL-V-0028-ZL	AFT-SO2 ANALYZER ISLN VLV CLOSED	DI	1721
FHA-DCL-V-0030-YN	AFT-SO2 LAB SAMPLE VLV COMPUTER MODE	DI	1721
FHA-DCL-V-0030-YA	AFT-SO2 LAB SAMPLE VLV NOT AVAILABLE MAIN/CONTROL POWER FAIL	DI	1721
FHA-DCL-V-0030-ZH	AFT-SO2 LAB SAMPLE VLV OPENED	DI	1721
FHA-DCL-V-0030-ZL	AFT-SO2 LAB SAMPLE VLV CLOSED	DI	1721
FHA-DCL-P-0002A-YN	AFT-SO2 SMP PUMP P-0002A COMPUTER MODE	DI	1721
FHA-DCL-P-0002A-MN	AFT-SO2 SMP PUMP P-0002A RUNNING	DI	1721
FHA-DCL-P-0002B-YN	AFT-SO2 SMP PUMP P-0002B COMPUTER MODE	DI	1721
FHA-DCL-P-0002B-MN	AFT-SO2 SMP PUMP P-0002B RUNNING	DI	1721
FHA-DCL-FSL-0003A-FAL	AFT-SO2 SMP PUMP P-0002A FLOW LOW ALARM	DI	1721
FHA-DCL-FSL-0003B-FAL	AFT-SO2 SMP PUMP P-0002B FLOW LOW ALARM	DI	1721
FHA-DCL-FSL-0004A-FAL	AFT-SO2 CLR ANALYZER 2A FLOW LOW ALARM	DI	1721
FHA-DCL-FSL-0004B-FAL	AFT-SO2 CLR ANALYZER 2B FLOW LOW ALARM	DI	1721
FHA-DCL-AIT-0002A-YA	AFT-SO2 CLR RESID ANALYZE2A INSTRUMENT FAULT	DI	1721
FHA-DCL-AIT-0002B-YA	AFT-SO2 CLR RESID ANALYZE2B INSTRUMENT FAULT	DI	1721
FHA-TRW-V-0010-YN	TRW LAB ISLN VLV COMPUTER MODE	DI	1721
FHA-TRW-V-0010-YA	TRW LAB ISLN VLV NOT AVAILABLE MAIN/CONTROL POWER FAIL	DI	1721
FHA-TRW-V-0010-ZH	TRW LAB ISLN VLV OPENED	DI	1721
FHA-TRW-V-0010-ZL	TRW LAB ISLN VLV CLOSED	DI	1721
FHA-TRW-V-0013-YN	ANALYZER ISOLATION VLV COMPUTER MODE	DI	1721
FHA-TRW-V-0013-YA	ANALYZER ISOLATION VLV NOT AVAILABLE MAIN/CONTROL POWER FAIL	DI	1721
FHA-TRW-V-0013-ZH	ANALYZER ISOLATION VLV OPENED	DI	1721
FHA-TRW-V-0013-ZL	ANALYZER ISOLATION VLV CLOSED	DI	1721
FHA-TRW-V-0017-YN	TRW DRAIN VLV COMPUTER MODE	DI	1721
FHA-TRW-V-0017-YA	TRW DRAIN VLV NOT AVAILABLE MAIN/CONTROL POWER FAIL	DI	1721
FHA-TRW-V-0017-ZH	TRW DRAIN VLV OPENED	DI	1721
FHA-TRW-V-0017-ZL	TRW DRAIN VLV CLOSED	DI	1721
FHA-TRW-V-0018-YN	TRW SMP FLUSH VLV COMPUTER MODE	DI	1721
FHA-TRW-V-0018-YA	TRW SMP FLUSH VLV NOT AVAILABLE MAIN/CONTROL POWER FAIL	DI	1721
FHA-TRW-V-0018-ZH	TRW SMP FLUSH VLV OPENED	DI	1721
FHA-TRW-V-0018-ZL	TRW SMP FLUSH VLV CLOSED	DI	1721
FHA-TRW-P-0002A-YN	TRW SMP PUMP P-0002A COMPUTER MODE	DI	1721
FHA-TRW-P-0002A-MN	TRW SMP PUMP P-0002A RUNNING	DI	1721
FHA-TRW-P-0002B-YN	TRW SMP PUMP P-0002B COMPUTER MODE	DI	1721
FHA-TRW-P-0002B-MN	TRW SMP PUMP P-0002B RUNNING	DI	1721
FHA-TRW-FSL-0001A-FAL	TRW SMP PUMP P-0002A FLOW LOW ALARM	DI	1721
FHA-TRW-FSL-0001B-FAL	TRW SMP PUMP P-0002B FLOW LOW ALARM	DI	1721
FHA-TRW-FSL-0002-FAL	CLR ANALYZER OUTLET#1 FLOW LOW ALARM	DI	1721
FHA-TRW-FSL-0003-FAL	TRB ANALYZER OUTLET#1 FLOW LOW ALARM	DI	1721
FHA-TRW-FSL-0004-FAL	FLORIDE ANALYZER FLOW LOW ALARM	DI	1721
FHA-TRW-AIT-0001-YA	TRW TOT CLR ANALYZER INSTRUMENT FAULT	DI	1721

I/O Tag No	Description	Type	RPU
FHA-TRW-AIT-0002-YA	TRW TRB ANALYZER INSTRUMENT FAULT	DI	1721
FHA-TRW-AIT-0003-YA	FLUORIDE ANALYZER INSTRUMENT FAULT	DI	1721
FHA-FLT-G-0101-VH	FILTER #1 INLET GATE OPEN	DO	1721
FHA-FLT-G-0101-VL	FILTER #1 INLET GATE CLOSE	DO	1721
FHA-FLT-G-0102-VH	FILTER #1 DRAIN GATE OPEN	DO	1721
FHA-FLT-G-0102-VL	FILTER #1 DRAIN GATE CLOSE	DO	1721
FHA-FLT-V-0102-VH	FILTER #1 BACKWASH VALVE OPEN	DO	1721
FHA-FLT-V-0102-VL	FILTER #1 BACKWASH VALVE CLOSE	DO	1721
FHA-FLT-V-0103-VH	FILTER #1 SURFACE SWEEP VALVE OPEN	DO	1721
FHA-FLT-V-0103-VL	FILTER #1 SURFACE SWEEP VALVE CLOSE	DO	1721
FHA-FLT-G-0201-VH	FILTER #2 INLET GATE OPEN	DO	1721
FHA-FLT-G-0201-VL	FILTER #2 INLET GATE CLOSE	DO	1721
FHA-FLT-G-0202-VH	FILTER #2 DRAIN GATE OPEN	DO	1721
FHA-FLT-G-0202-VL	FILTER #2 DRAIN GATE CLOSE	DO	1721
FHA-FLT-V-0202-VH	FILTER #2 BACKWASH VALVE OPEN	DO	1721
FHA-FLT-V-0202-VL	FILTER #2 BACKWASH VALVE CLOSE	DO	1721
FHA-FLT-V-0203-VH	FILTER #2 SURFACE SWEEP VALVE OPEN	DO	1721
FHA-FLT-V-0203-VL	FILTER #2 SURFACE SWEEP VALVE CLOSE	DO	1721
FHA-FLT-G-0301-VH	FILTER #3 INLET GATE OPEN	DO	1721
FHA-FLT-G-0301-VL	FILTER #3 INLET GATE CLOSE	DO	1721
FHA-FLT-G-0302-VH	FILTER #3 DRAIN GATE OPEN	DO	1721
FHA-FLT-G-0302-VL	FILTER #3 DRAIN GATE CLOSE	DO	1721
FHA-FLT-V-0302-VH	FILTER #3 BACKWASH VALVE OPEN	DO	1721
FHA-FLT-V-0302-VL	FILTER #3 BACKWASH VALVE CLOSE	DO	1721
FHA-FLT-V-0303-VH	FILTER #3 SURFACE SWEEP VALVE OPEN	DO	1721
FHA-FLT-V-0303-VL	FILTER #3 SURFACE SWEEP VALVE CLOSE	DO	1721
FHA-FLT-G-0401-VH	FILTER #4 INLET GATE OPEN	DO	1721
FHA-FLT-G-0401-VL	FILTER #4 INLET GATE CLOSE	DO	1721
FHA-FLT-G-0402-VH	FILTER #4 DRAIN GATE OPEN	DO	1721
FHA-FLT-G-0402-VL	FILTER #4 DRAIN GATE CLOSE	DO	1721
FHA-FLT-V-0402-VH	FILTER #4 BACKWASH VALVE OPEN	DO	1721
FHA-FLT-V-0402-VL	FILTER #4 BACKWASH VALVE CLOSE	DO	1721
FHA-FLT-V-0403-VH	FILTER #4 SURFACE SWEEP VALVE OPEN	DO	1721
FHA-FLT-V-0403-VL	FILTER #4 SURFACE SWEEP VALVE CLOSE	DO	1721
FHA-SED-V-0102-VH	SEW SMP PUMP SUCT VLV-W OPEN	DO	1721
FHA-SED-V-0102-VL	SEW SMP PUMP SUCT VLV-W CLOSE	DO	1721
FHA-SED-V-0109-VH	SEW SMP PUMP TRB VLV-W OPEN	DO	1721
FHA-SED-V-0109-VL	SEW SMP PUMP TRB VLV-W CLOSE	DO	1721
FHA-SED-V-0110-VH	SEW SUCT FLUSH VLV-W OPEN	DO	1721
FHA-SED-V-0110-VL	SEW SUCT FLUSH VLV-W CLOSE	DO	1721
FHA-SED-V-0111-VH	SEW DISCH FLUSH VLV-W OPEN	DO	1721
FHA-SED-V-0111-VL	SEW DISCH FLUSH VLV-W CLOSE	DO	1721
FHA-SED-P-0101-MH	SEW SAMPLE PUMP - WEST START COMMAND	DO	1721
FHA-SED-P-0101-MB	SEW SAMPLE PUMP - WEST STOP COMMAND	DO	1721
FHA-DCL-V-0013-VH	BFR-SO2 SMP DRAIN VLV OPEN	DO	1721
FHA-DCL-V-0013-VL	BFR-SO2 SMP DRAIN VLV CLOSE	DO	1721
FHA-DCL-V-0014-VH	BFR-SO2 SMP FLUSH VLV OPEN	DO	1721

I/O Tag No	Description	Type	RPU
FHA-DCL-V-0014-VL	BFR-SO2 SMP FLUSH VLV CLOSE	DO	1721
FHA-DCL-V-0015-VH	BFR-SO2 TRB INLET VLV OPEN	DO	1721
FHA-DCL-V-0015-VL	BFR-SO2 TRB INLET VLV CLOSE	DO	1721
FHA-DCL-V-0016-VH	BFR-SO2 LAB SAMPLE VLV OPEN	DO	1721
FHA-DCL-V-0016-VL	BFR-SO2 LAB SAMPLE VLV CLOSE	DO	1721
FHA-DCL-P-0001A-MH	BFR-SO2 SMP PUMP P-0001A START COMMAND	DO	1721
FHA-DCL-P-0001A-MB	BFR-SO2 SMP PUMP P-0001A STOP COMMAND	DO	1721
FHA-DCL-P-0001B-MH	BFR-SO2 SMP PUMP P-0001B START COMMAND	DO	1721
FHA-DCL-P-0001B-MB	BFR-SO2 SMP PUMP P-0001B STOP COMMAND	DO	1721
FHA-DCL-V-0026-VH	AFT-SO2 SMP FLUSH VLV OPEN	DO	1721
FHA-DCL-V-0026-VL	AFT-SO2 SMP FLUSH VLV CLOSE	DO	1721
FHA-DCL-V-0027-VH	AFT-SO2 SMP DRAIN VLV OPEN	DO	1721
FHA-DCL-V-0027-VL	AFT-SO2 SMP DRAIN VLV CLOSE	DO	1721
FHA-DCL-V-0028-VH	AFT-SO2 ANALYZER ISLN VLV OPEN	DO	1721
FHA-DCL-V-0028-VL	AFT-SO2 ANALYZER ISLN VLV CLOSE	DO	1721
FHA-DCL-V-0030-VH	AFT-SO2 LAB SAMPLE VLV OPEN	DO	1721
FHA-DCL-V-0030-VL	AFT-SO2 LAB SAMPLE VLV CLOSE	DO	1721
FHA-DCL-P-0002A-MH	AFT-SO2 SMP PUMP P-0002A START COMMAND	DO	1721
FHA-DCL-P-0002A-MB	AFT-SO2 SMP PUMP P-0002A STOP COMMAND	DO	1721
FHA-DCL-P-0002B-MH	AFT-SO2 SMP PUMP P-0002B START COMMAND	DO	1721
FHA-DCL-P-0002B-MB	AFT-SO2 SMP PUMP P-0002B STOP COMMAND	DO	1721
FHA-TRW-V-0009A-VH	PUMP P-0002A DISCH VLV OPEN	DO	1721
FHA-TRW-V-0009A-VL	PUMP P-0002A DISCH VLV CLOSE	DO	1721
FHA-TRW-V-0010-VH	PUMP P-0002B LAB VLV OPEN	DO	1721
FHA-TRW-V-0010-VL	PUMP P-0002B LAB VLV CLOSE	DO	1721
FHA-TRW-V-0013-VH	ANALYZER ISOLATION VLV OPEN	DO	1721
FHA-TRW-V-0013-VL	ANALYZER ISOLATION VLV CLOSE	DO	1721
FHA-TRW-V-0017-VH	TRW DRAIN VLV OPEN	DO	1721
FHA-TRW-V-0017-VL	TRW DRAIN VLV CLOSE	DO	1721
FHA-TRW-V-0018-VH	TRW SMP FLUSH VLV OPEN	DO	1721
FHA-TRW-V-0018-VL	TRW SMP FLUSH VLV CLOSE	DO	1721
FHA-TRW-P-0002A-MH	TRW SMP PUMP P-0002A START COMMAND	DO	1721
FHA-TRW-P-0002A-MB	TRW SMP PUMP P-0002A STOP COMMAND	DO	1721
FHA-TRW-P-0002B-MH	TRW SMP PUMP P-0002B START COMMAND	DO	1721
FHA-TRW-P-0002B-MB	TRW SMP PUMP P-0002B STOP COMMAND	DO	1721
FHA-DCL-AIT-0002A-DUTY	AFT-SO2 CLR RESID ANALYZER 2A-2B CONTROL/REFERENCE SELECTION	AI	1721
FHA-FLT-ZIT-0501-ZI	FILTER #5 RATE CONT VLV POSITION	AI	1722
FHA-FLT-AIT-0501-AI	FILTER #5 TURBIDITY	AI	1722
FHA-FLT-ZIT-0601-ZI	FILTER #6 RATE CONT VLV POSITION	AI	1722
FHA-FLT-AIT-0601-AI	FILTER #6 TURBIDITY	AI	1722
FHA-FLT-ZIT-0701-ZI	FILTER #7 RATE CONT VLV POSITION	AI	1722
FHA-FLT-AIT-0701-AI	FILTER #7 TURBIDITY	AI	1722
FHA-FLT-ZIT-0801-ZI	FILTER #8 RATE CONT VLV POSITION	AI	1722
FHA-FLT-AIT-0801-AI	FILTER #8 TURBIDITY	AI	1722
FHA-FLT-FIT-0501-FT	FILTER #5 FLOW	AI	1722
FHA-FLT-PDIT-0501-PDI	FILTER #5 HEAD LOSS	AI	1722

I/O Tag No	Description	Type	RPU
FHA-FLT-FIT-0601-FT	FILTER #6 FLOW	AI	1722
FHA-FLT-PDIT-0601-PDI	FILTER #6 HEAD LOSS	AI	1722
FHA-FLT-FIT-0701-FT	FILTER #7 FLOW	AI	1722
FHA-FLT-PDIT-0701-PDI	FILTER #7 HEAD LOSS	AI	1722
FHA-FLT-FIT-0801-FT	FILTER #8 FLOW	AI	1722
FHA-FLT-PDIT-0801-PDI	FILTER #8 HEAD LOSS	AI	1722
FCL-FLT-RPU-1823-FIC-C	MASTER FLOW RATE SETPOINT INPUT EAST	AO	1722
FHA-FLT-V-0501-ZC	FILTER #5 RATE CONTROL VALVE POSITION SETPOINT	AO	1722
FHA-FLT-V-0601-ZC	FILTER #6 RATE CONTROL VALVE POSITION SETPOINT	AO	1722
FHA-FLT-V-0701-ZC	FILTER #7 RATE CONTROL VALVE POSITION SETPOINT	AO	1722
FHA-FLT-V-0801-ZC	FILTER #8 RATE CONTROL VALVE POSITION SETPOINT	AO	1722
FHA-SPC-UPS-1722-EA	FILTERS 5-8 PLC UPS - POWER FAILURE	DI	1722
FHA-SPC-UPS-1722-EAL	FILTERS 5-8 PLC UPS - LOW BATTERY	DI	1722
FHA-SPC-UPS-1722-XA	FILTERS 5-8 PLC UPS - UPS FAILURE	DI	1722
FHA-SPC-RPU-1722-TAH	FILTER #5-8 PANEL SMOKE/HEAT ALARM	DI	1722
FHA-FLT-G-0501-YN	FILTER #5 INLET GATE COMPUTER MODE	DI	1722
FHA-FLT-G-0501-YA	FILTER #5 INLET GATE NOT AVAILABLE	DI	1722
FHA-FLT-G-0501-ZH	FILTER #5 INLET GATE OPENED	DI	1722
FHA-FLT-G-0501-ZL	FILTER #5 INLET GATE CLOSED	DI	1722
FHA-FLT-G-0502-YN	FILTER #5 DRAIN GATE COMPUTER MODE	DI	1722
FHA-FLT-G-0502-YA	FILTER #5 DRAIN GATE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1722
FHA-FLT-G-0502-ZH	FILTER #5 DRAIN GATE OPENED	DI	1722
FHA-FLT-G-0502-ZL	FILTER #5 DRAIN GATE CLOSED	DI	1722
FHA-FLT-V-0501-YN	FILTER #5 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1722
FHA-FLT-V-0501-YA	FILTER #5 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE	DI	1722
FHA-FLT-V-0501-ZH	FILTER #5 EFFLUENT RATE CONTROL VALVE OPENED	DI	1722
FHA-FLT-V-0501-ZL	FILTER #5 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1722
FHA-FLT-V-0502-YN	FILTER #5 BACKWASH VALVE COMPUTER MODE	DI	1722
FHA-FLT-V-0502-YA	FILTER #5 BACKWASH VALVE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1722
FHA-FLT-V-0502-ZH	FILTER #5 BACKWASH VALVE OPENED	DI	1722
FHA-FLT-V-0502-ZL	FILTER #5 BACKWASH VALVE CLOSED	DI	1722
FHA-FLT-V-0503-YN	FILTER #5 SURFACE SWEEP VALVE COMPUTER MODE	DI	1722
FHA-FLT-V-0503-YA	FILTER #5 SURFACE SWEEP VALVE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1722
FHA-FLT-V-0503-ZH	FILTER #5 SURFACE SWEEP VALVE OPENED	DI	1722
FHA-FLT-V-0503-ZL	FILTER #5 SURFACE SWEEP VALVE CLOSED	DI	1722
FHA-FLT-G-0601-YN	FILTER #6 INLET GATE COMPUTER MODE	DI	1722
FHA-FLT-G-0601-YA	FILTER #6 INLET GATE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1722
FHA-FLT-G-0601-ZH	FILTER #6 INLET GATE OPENED	DI	1722
FHA-FLT-G-0601-ZL	FILTER #6 INLET GATE CLOSED	DI	1722
FHA-FLT-G-0602-YN	FILTER #6 DRAIN GATE COMPUTER MODE	DI	1722



I/O Tag No	Description	Type	RPV
FHA-FLT-G-0602-YA	FILTER #6 DRAIN GATE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1722
FHA-FLT-G-0602-ZH	FILTER #6 DRAIN GATE OPENED	DI	1722
FHA-FLT-G-0602-ZL	FILTER #6 DRAIN GATE CLOSED	DI	1722
FHA-FLT-V-0601-YN	FILTER #6 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1722
FHA-FLT-V-0601-YA	FILTER #6 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1722
FHA-FLT-V-0601-ZH	FILTER #6 EFFLUENT RATE CONTROL VALVE OPENED	DI	1722
FHA-FLT-V-0601-ZL	FILTER #6 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1722
FHA-FLT-V-0602-YN	FILTER #6 BACKWASH VALVE COMPUTER MODE	DI	1722
FHA-FLT-V-0602-YA	FILTER #6 BACKWASH VALVE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1722
FHA-FLT-V-0602-ZH	FILTER #6 BACKWASH VALVE OPENED	DI	1722
FHA-FLT-V-0602-ZL	FILTER #6 BACKWASH VALVE CLOSED	DI	1722
FHA-FLT-V-0603-YN	FILTER #6 SURFACE SWEEP VALVE COMPUTER MODE	DI	1722
FHA-FLT-V-0603-YA	FILTER #6 SURFACE SWEEP VALVE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1722
FHA-FLT-V-0603-ZH	FILTER #6 SURFACE SWEEP VALVE OPENED	DI	1722
FHA-FLT-V-0603-ZL	FILTER #6 SURFACE SWEEP VALVE CLOSED	DI	1722
FHA-FLT-G-0701-YN	FILTER #7 INLET GATE COMPUTER MODE	DI	1722
FHA-FLT-G-0701-YA	FILTER #7 INLET GATE NOT AVAILABLE	DI	1722
FHA-FLT-G-0701-ZH	FILTER #7 INLET GATE OPENED	DI	1722
FHA-FLT-G-0701-ZL	FILTER #7 INLET GATE CLOSED	DI	1722
FHA-FLT-G-0702-YN	FILTER #7 DRAIN GATE COMPUTER MODE	DI	1722
FHA-FLT-G-0702-YA	FILTER #7 DRAIN GATE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1722
FHA-FLT-G-0702-ZH	FILTER #7 DRAIN GATE OPENED	DI	1722
FHA-FLT-G-0702-ZL	FILTER #7 DRAIN GATE CLOSED	DI	1722
FHA-FLT-V-0701-YN	FILTER #7 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1722
FHA-FLT-V-0701-YA	FILTER #7 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1722
FHA-FLT-V-0701-ZH	FILTER #7 EFFLUENT RATE CONTROL VALVE OPENED	DI	1722
FHA-FLT-V-0701-ZL	FILTER #7 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1722
FHA-FLT-V-0702-YN	FILTER #7 BACKWASH VALVE COMPUTER MODE	DI	1722
FHA-FLT-V-0702-YA	FILTER #7 BACKWASH VALVE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1722
FHA-FLT-V-0702-ZH	FILTER #7 BACKWASH VALVE OPENED	DI	1722
FHA-FLT-V-0702-ZL	FILTER #7 BACKWASH VALVE CLOSED	DI	1722
FHA-FLT-V-0703-YN	FILTER #7 SURFACE SWEEP VALVE COMPUTER MODE	DI	1722
FHA-FLT-V-0703-YA	FILTER #7 SURFACE SWEEP VALVE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1722
FHA-FLT-V-0703-ZH	FILTER #7 SURFACE SWEEP VALVE OPENED	DI	1722
FHA-FLT-V-0703-ZL	FILTER #7 SURFACE SWEEP VALVE CLOSED	DI	1722
FHA-FLT-G-0801-YN	FILTER #8 INLET GATE COMPUTER MODE	DI	1722
FHA-FLT-G-0801-YA	FILTER #8 INLET GATE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1722

I/O Tag No	Description	Type	RPU
FHA-FLT-G-0801-ZH	FILTER #8 INLET GATE OPENED	DI	1722
FHA-FLT-G-0801-ZL	FILTER #8 INLET GATE CLOSED	DI	1722
FHA-FLT-G-0802-YN	FILTER #8 DRAIN GATE COMPUTER MODE	DI	1722
FHA-FLT-G-0802-YA	FILTER #8 DRAIN GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1722
FHA-FLT-G-0802-ZH	FILTER #8 DRAIN GATE OPENED	DI	1722
FHA-FLT-G-0802-ZL	FILTER #8 DRAIN GATE CLOSED	DI	1722
FHA-FLT-V-0801-YN	FILTER #8 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1722
FHA-FLT-V-0801-YA	FILTER #8 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1722
FHA-FLT-V-0801-ZH	FILTER #8 EFFLUENT RATE CONTROL VALVE OPENED	DI	1722
FHA-FLT-V-0801-ZL	FILTER #8 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1722
FHA-FLT-V-0802-YN	FILTER #8 BACKWASH VALVE COMPUTER MODE	DI	1722
FHA-FLT-V-0802-YA	FILTER #8 BACKWASH VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1722
FHA-FLT-V-0802-ZH	FILTER #8 BACKWASH VALVE OPENED	DI	1722
FHA-FLT-V-0802-ZL	FILTER #8 BACKWASH VALVE CLOSED	DI	1722
FHA-FLT-V-0803-YN	FILTER #8 SURFACE SWEEP VALVE COMPUTER MODE	DI	1722
FHA-FLT-V-0803-YA	FILTER #8 SURFACE SWEEP VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1722
FHA-FLT-V-0803-ZH	FILTER #8 SURFACE SWEEP VALVE OPENED	DI	1722
FHA-FLT-V-0803-ZL	FILTER #8 SURFACE SWEEP VALVE CLOSED	DI	1722
FHA-FLT-HS-0501-ZL	FILTER #5 VALVE ACP ENABLE/DISABLE SWITCH	DI	1722
FHA-FLT-HS-0601-ZL	FILTER #6 VALVE ACP ENABLE/DISABLE SWITCH	DI	1722
FHA-FLT-HS-0701-ZL	FILTER #7 VALVE ACP ENABLE/DISABLE SWITCH	DI	1722
FHA-FLT-HS-0801-ZL	FILTER #8 VALVE ACP ENABLE/DISABLE SWITCH	DI	1722
FHA-FLT-AIT-0501-YA	FILTER #5 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1722
FHA-FLT-AIT-0601-YA	FILTER #6 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1722
FHA-FLT-AIT-0701-YA	FILTER #7 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1722
FHA-FLT-AIT-0801-YA	FILTER #8 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1722
FHA-FLT-LSHL-0501-LAH	FILTER #5 HI LEVEL SWITCH	DI	1722
FHA-FLT-LSHL-0501-LAL	FILTER #5 LO LEVEL SWITCH	DI	1722
FHA-FLT-LSHL-0601-LAH	FILTER #6 HI LEVEL SWITCH	DI	1722
FHA-FLT-LSHL-0601-LAL	FILTER #6 LO LEVEL SWITCH	DI	1722
FHA-FLT-LSHL-0701-LAH	FILTER #7 HI LEVEL SWITCH	DI	1722
FHA-FLT-LSHL-0701-LAL	FILTER #7 LO LEVEL SWITCH	DI	1722
FHA-FLT-LSHL-0801-LAH	FILTER #8 HI LEVEL SWITCH	DI	1722
FHA-FLT-LSHL-0801-LAL	FILTER #8 LO LEVEL SWITCH	DI	1722
FHA-FLT-G-0501-VH	FILTER #5 INLET GATE OPEN	DO	1722
FHA-FLT-G-0501-VL	FILTER #5 INLET GATE CLOSE	DO	1722
FHA-FLT-G-0502-VH	FILTER #5 DRAIN GATE OPEN	DO	1722
FHA-FLT-G-0502-VL	FILTER #5 DRAIN GATE CLOSE	DO	1722
FHA-FLT-V-0502-VH	FILTER #5 BACKWASH VALVE OPEN	DO	1722

I/O Tag No	Description	Type	RPU
FHA-FLT-V-0502-VL	FILTER #5 BACKWASH VALVE CLOSE	DO	1722
FHA-FLT-V-0503-VH	FILTER #5 SURFACE SWEEP VALVE OPEN	DO	1722
FHA-FLT-V-0503-VL	FILTER #5 SURFACE SWEEP VALVE CLOSE	DO	1722
FHA-FLT-G-0601-VH	FILTER #6 INLET GATE OPEN	DO	1722
FHA-FLT-G-0601-VL	FILTER #6 INLET GATE CLOSE	DO	1722
FHA-FLT-G-0602-VH	FILTER #6 DRAIN GATE OPEN	DO	1722
FHA-FLT-G-0602-VL	FILTER #6 DRAIN GATE CLOSE	DO	1722
FHA-FLT-V-0602-VH	FILTER #6 BACKWASH VALVE OPEN	DO	1722
FHA-FLT-V-0602-VL	FILTER #6 BACKWASH VALVE CLOSE	DO	1722
FHA-FLT-V-0603-VH	FILTER #6 SURFACE SWEEP VALVE OPEN	DO	1722
FHA-FLT-V-0603-VL	FILTER #6 SURFACE SWEEP VALVE CLOSE	DO	1722
FHA-FLT-G-0701-VH	FILTER #7 INLET GATE OPEN	DO	1722
FHA-FLT-G-0701-VL	FILTER #7 INLET GATE CLOSE	DO	1722
FHA-FLT-G-0702-VH	FILTER #7 DRAIN GATE OPEN	DO	1722
FHA-FLT-G-0702-VL	FILTER #7 DRAIN GATE CLOSE	DO	1722
FHA-FLT-V-0702-VH	FILTER #7 BACKWASH VALVE OPEN	DO	1722
FHA-FLT-V-0702-VL	FILTER #7 BACKWASH VALVE CLOSE	DO	1722
FHA-FLT-V-0703-VH	FILTER #7 SURFACE SWEEP VALVE OPEN	DO	1722
FHA-FLT-V-0703-VL	FILTER #7 SURFACE SWEEP VALVE CLOSE	DO	1722
FHA-FLT-G-0801-VH	FILTER #8 INLET GATE OPEN	DO	1722
FHA-FLT-G-0801-VL	FILTER #8 INLET GATE CLOSE	DO	1722
FHA-FLT-G-0802-VH	FILTER #8 DRAIN GATE OPEN	DO	1722
FHA-FLT-G-0802-VL	FILTER #8 DRAIN GATE CLOSE	DO	1722
FHA-FLT-V-0802-VH	FILTER #8 BACKWASH VALVE OPEN	DO	1722
FHA-FLT-V-0802-VL	FILTER #8 BACKWASH VALVE CLOSE	DO	1722
FHA-FLT-V-0803-VH	FILTER #8 SURFACE SWEEP VALVE OPEN	DO	1722
FHA-FLT-V-0803-VL	FILTER #8 SURFACE SWEEP VALVE CLOSE	DO	1722
FHA-FLT-ZIT-0901-ZI	FILTER #9 RATE CONT VLV POSITION	AI	1723
FHA-FLT-AIT-0901-AI	FILTER #9 TURBIDITY	AI	1723
FHA-FLT-ZIT-1001-ZI	FILTER #10 RATE CONT VLV POSITION	AI	1723
FHA-FLT-AIT-1001-AI	FILTER #10 TURBIDITY	AI	1723
FHA-FLT-ZIT-1101-ZI	FILTER #11 RATE CONT VLV POSITION	AI	1723
FHA-FLT-AIT-1101-AI	FILTER #11 TURBIDITY	AI	1723
FHA-FLT-ZIT-1201-ZI	FILTER #12 RATE CONT VLV POSITION	AI	1723
FHA-FLT-AIT-1201-AI	FILTER #12 TURBIDITY	AI	1723
FHA-FLT-FIT-0901-FT	FILTER #9 FLOW	AI	1723
FHA-FLT-PDIT-0901-PDI	FILTER #9 HEAD LOSS	AI	1723
FHA-FLT-FIT-1001-FT	FILTER #10 FLOW	AI	1723
FHA-FLT-PDIT-1001-PDI	FILTER #10 HEAD LOSS	AI	1723
FHA-FLT-FIT-1101-FT	FILTER #11 FLOW	AI	1723
FHA-FLT-PDIT-1101-PDI	FILTER #11 HEAD LOSS	AI	1723
FHA-FLT-FIT-1201-FT	FILTER #12 FLOW	AI	1723
FHA-FLT-PDIT-1201-PDI	FILTER #12 HEAD LOSS	AI	1723
FCL-FLT-RPU-1823-FIC-C	MASTER FLOW RATE SETPOINT INPUT EAST	AO	1723
FHA-FLT-V-0901-ZC	FILTER #9 RATE CONTROL VALVE POSITION SETPOINT	AO	1723
FHA-FLT-V-1001-ZC	FILTER #10 RATE CONTROL VALVE POSITION SETPOINT	AO	1723

I/O Tag No	Description	Type	RPU
FHA-FLT-V-1101-ZC	FILTER #11 RATE CONTROL VALVE POSITION SETPOINT	AO	1723
FHA-FLT-V-1201-ZC	FILTER #12 RATE CONTROL VALVE POSITION SETPOINT	AO	1723
FHA-SPC-UPS-1723-EA	FILTERS 9-12 PLC UPS - POWER FAILURE	DI	1723
FHA-SPC-UPS-1723-EAL	FILTERS 9-12 PLC UPS - LOW BATTERY	DI	1723
FHA-SPC-UPS-1723-XA	FILTERS 9-12 PLC UPS - UPS FAILURE	DI	1723
FHA-SPC-RPU-1723-TAH	FILTER #9-12 PANEL SMOKE/HEAT ALARM	DI	1723
FHA-FLT-G-0901-YN	FILTER #9 INLET GATE COMPUTER MODE	DI	1723
FHA-FLT-G-0901-YA	FILTER #9 INLET GATE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1723
FHA-FLT-G-0901-ZH	FILTER #9 INLET GATE OPENED	DI	1723
FHA-FLT-G-0901-ZL	FILTER #9 INLET GATE CLOSED	DI	1723
FHA-FLT-G-0902-YN	FILTER #9 DRAIN GATE COMPUTER MODE	DI	1723
FHA-FLT-G-0902-YA	FILTER #9 DRAIN GATE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1723
FHA-FLT-G-0902-ZH	FILTER #9 DRAIN GATE OPENED	DI	1723
FHA-FLT-G-0902-ZL	FILTER #9 DRAIN GATE CLOSED	DI	1723
FHA-FLT-V-0901-YN	FILTER #9 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1723
FHA-FLT-V-0901-YA	FILTER #9 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1723
FHA-FLT-V-0901-ZH	FILTER #9 EFFLUENT RATE CONTROL VALVE OPENED	DI	1723
FHA-FLT-V-0901-ZL	FILTER #9 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1723
FHA-FLT-V-0902-YN	FILTER #9 BACKWASH VALVE COMPUTER MODE	DI	1723
FHA-FLT-V-0902-YA	FILTER #9 BACKWASH VALVE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1723
FHA-FLT-V-0902-ZH	FILTER #9 BACKWASH VALVE OPENED	DI	1723
FHA-FLT-V-0902-ZL	FILTER #9 BACKWASH VALVE CLOSED	DI	1723
FHA-FLT-V-0903-YN	FILTER #9 SURFACE SWEEP VALVE COMPUTER MODE	DI	1723
FHA-FLT-V-0903-YA	FILTER #9 SURFACE SWEEP VALVE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1723
FHA-FLT-V-0903-ZH	FILTER #9 SURFACE SWEEP VALVE OPENED	DI	1723
FHA-FLT-V-0903-ZL	FILTER #9 SURFACE SWEEP VALVE CLOSED	DI	1723
FHA-FLT-G-1001-YN	FILTER #10 INLET GATE COMPUTER MODE	DI	1723
FHA-FLT-G-1001-YA	FILTER #10 INLET GATE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1723
FHA-FLT-G-1001-ZH	FILTER #10 INLET GATE OPENED	DI	1723
FHA-FLT-G-1001-ZL	FILTER #10 INLET GATE CLOSED	DI	1723
FHA-FLT-G-1002-YN	FILTER #10 DRAIN GATE COMPUTER MODE	DI	1723
FHA-FLT-G-1002-YA	FILTER #10 DRAIN GATE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1723
FHA-FLT-G-1002-ZH	FILTER #10 DRAIN GATE OPENED	DI	1723
FHA-FLT-G-1002-ZL	FILTER #10 DRAIN GATE CLOSED	DI	1723
FHA-FLT-V-1001-YN	FILTER #10 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1723
FHA-FLT-V-1001-YA	FILTER #10 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1723

I/O Tag No	Description	Type	RPU
FHA-FLT-V-1001-ZH	FILTER #10 EFFLUENT RATE CONTROL VALVE OPENED	DI	1723
FHA-FLT-V-1001-ZL	FILTER #10 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1723
FHA-FLT-V-1002-YN	FILTER #10 BACKWASH VALVE COMPUTER MODE	DI	1723
FHA-FLT-V-1002-YA	FILTER #10 BACKWASH VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1723
FHA-FLT-V-1002-ZH	FILTER #10 BACKWASH VALVE OPENED	DI	1723
FHA-FLT-V-1002-ZL	FILTER #10 BACKWASH VALVE CLOSED	DI	1723
FHA-FLT-V-1003-YN	FILTER #10 SURFACE SWEEP VALVE COMPUTER MODE	DI	1723
FHA-FLT-V-1003-YA	FILTER #10 SURFACE SWEEP VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1723
FHA-FLT-V-1003-ZH	FILTER #10 SURFACE SWEEP VALVE OPENED	DI	1723
FHA-FLT-V-1003-ZL	FILTER #10 SURFACE SWEEP VALVE CLOSED	DI	1723
FHA-FLT-G-1101-YN	FILTER #11 INLET GATE COMPUTER MODE	DI	1723
FHA-FLT-G-1101-YA	FILTER #11 INLET GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1723
FHA-FLT-G-1101-ZH	FILTER #11 INLET GATE OPENED	DI	1723
FHA-FLT-G-1101-ZL	FILTER #11 INLET GATE CLOSED	DI	1723
FHA-FLT-G-1102-YN	FILTER #11 DRAIN GATE COMPUTER MODE	DI	1723
FHA-FLT-G-1102-YA	FILTER #11 DRAIN GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1723
FHA-FLT-G-1102-ZH	FILTER #11 DRAIN GATE OPENED	DI	1723
FHA-FLT-G-1102-ZL	FILTER #11 DRAIN GATE CLOSED	DI	1723
FHA-FLT-V-1101-YN	FILTER #11 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1723
FHA-FLT-V-1101-YA	FILTER #11 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1723
FHA-FLT-V-1101-ZH	FILTER #11 EFFLUENT RATE CONTROL VALVE OPENED	DI	1723
FHA-FLT-V-1101-ZL	FILTER #11 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1723
FHA-FLT-V-1102-YN	FILTER #11 BACKWASH VALVE COMPUTER MODE	DI	1723
FHA-FLT-V-1102-YA	FILTER #11 BACKWASH VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1723
FHA-FLT-V-1102-ZH	FILTER #11 BACKWASH VALVE OPENED	DI	1723
FHA-FLT-V-1102-ZL	FILTER #11 BACKWASH VALVE CLOSED	DI	1723
FHA-FLT-V-1103-YN	FILTER #11 SURFACE SWEEP VALVE COMPUTER MODE	DI	1723
FHA-FLT-V-1103-YA	FILTER #11 SURFACE SWEEP VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1723
FHA-FLT-V-1103-ZH	FILTER #11 SURFACE SWEEP VALVE OPENED	DI	1723
FHA-FLT-V-1103-ZL	FILTER #11 SURFACE SWEEP VALVE CLOSED	DI	1723
FHA-FLT-G-1201-YN	FILTER #12 INLET GATE COMPUTER MODE	DI	1723
FHA-FLT-G-1201-YA	FILTER #12 INLET GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1723
FHA-FLT-G-1201-ZH	FILTER #12 INLET GATE OPENED	DI	1723
FHA-FLT-G-1201-ZL	FILTER #12 INLET GATE CLOSED	DI	1723
FHA-FLT-G-1202-YN	FILTER #12 DRAIN GATE COMPUTER MODE	DI	1723
FHA-FLT-G-1202-YA	FILTER #12 DRAIN GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1723
FHA-FLT-G-1202-ZH	FILTER #12 DRAIN GATE OPENED	DI	1723
FHA-FLT-G-1202-ZL	FILTER #12 DRAIN GATE CLOSED	DI	1723

I/O Tag No	Description	Type	RPV
FHA-FLT-V-1201-YN	FILTER #12 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1723
FHA-FLT-V-1201-YA	FILTER #12 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1723
FHA-FLT-V-1201-ZH	FILTER #12 EFFLUENT RATE CONTROL VALVE OPENED	DI	1723
FHA-FLT-V-1201-ZL	FILTER #12 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1723
FHA-FLT-V-1202-YN	FILTER #12 BACKWASH VALVE COMPUTER MODE	DI	1723
FHA-FLT-V-1202-YA	FILTER #12 BACKWASH VALVE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1723
FHA-FLT-V-1202-ZH	FILTER #12 BACKWASH VALVE OPENED	DI	1723
FHA-FLT-V-1202-ZL	FILTER #12 BACKWASH VALVE CLOSED	DI	1723
FHA-FLT-V-1203-YN	FILTER #12 SURFACE SWEEP VALVE COMPUTER MODE	DI	1723
FHA-FLT-V-1203-YA	FILTER #12 SURFACE SWEEP VALVE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1723
FHA-FLT-V-1203-ZH	FILTER #12 SURFACE SWEEP VALVE OPENED	DI	1723
FHA-FLT-V-1203-ZL	FILTER #12 SURFACE SWEEP VALVE CLOSED	DI	1723
FHA-FLT-HS-0901-ZL	FILTER #9 VALVE ACP ENABLE/DISABLE SWITCH	DI	1723
FHA-FLT-HS-1001-ZL	FILTER #10 VALVE ACP ENABLE/DISABLE SWITCH	DI	1723
FHA-FLT-HS-1101-ZL	FILTER #11 VALVE ACP ENABLE/DISABLE SWITCH	DI	1723
FHA-FLT-HS-1201-ZL	FILTER #12 VALVE ACP ENABLE/DISABLE SWITCH	DI	1723
FHA-FLT-AIT-0901-YA	FILTER #9 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1723
FHA-FLT-AIT-1001-YA	FILTER #10 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1723
FHA-FLT-AIT-1101-YA	FILTER #11 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1723
FHA-FLT-AIT-1201-YA	FILTER #12 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1723
FHA-FLT-LSHL-0901-LAH	FILTER #9 HI LEVEL SWITCH	DI	1723
FHA-FLT-LSHL-0901-LAL	FILTER #9 LO LEVEL SWITCH	DI	1723
FHA-FLT-LSHL-1001-LAH	FILTER #10 HI LEVEL SWITCH	DI	1723
FHA-FLT-LSHL-1001-LAL	FILTER #10 LO LEVEL SWITCH	DI	1723
FHA-FLT-LSHL-1101-LAH	FILTER #11 HI LEVEL SWITCH	DI	1723
FHA-FLT-LSHL-1101-LAL	FILTER #11 LO LEVEL SWITCH	DI	1723
FHA-FLT-LSHL-1201-LAH	FILTER #12 HI LEVEL SWITCH	DI	1723
FHA-FLT-LSHL-1201-LAL	FILTER #12 LO LEVEL SWITCH	DI	1723
FHA-FLT-G-0901-VH	FILTER #9 INLET GATE OPEN	DO	1723
FHA-FLT-G-0901-VL	FILTER #9 INLET GATE CLOSE	DO	1723
FHA-FLT-G-0902-VH	FILTER #9 DRAIN GATE OPEN	DO	1723
FHA-FLT-G-0902-VL	FILTER #9 DRAIN GATE CLOSE	DO	1723
FHA-FLT-V-0902-VH	FILTER #9 BACKWASH VALVE OPEN	DO	1723
FHA-FLT-V-0902-VL	FILTER #9 BACKWASH VALVE CLOSE	DO	1723
FHA-FLT-V-0903-VH	FILTER #9 SURFACE SWEEP VALVE OPEN	DO	1723
FHA-FLT-V-0903-VL	FILTER #9 SURFACE SWEEP VALVE CLOSE	DO	1723
FHA-FLT-G-1001-VH	FILTER #10 INLET GATE OPEN	DO	1723
FHA-FLT-G-1001-VL	FILTER #10 INLET GATE CLOSE	DO	1723
FHA-FLT-G-1002-VH	FILTER #10 DRAIN GATE OPEN	DO	1723
FHA-FLT-G-1002-VL	FILTER #10 DRAIN GATE CLOSE	DO	1723

I/O Tag No	Description	Type	RPU
FHA-FLT-V-1002-VH	FILTER #10 BACKWASH VALVE OPEN	DO	1723
FHA-FLT-V-1002-VL	FILTER #10 BACKWASH VALVE CLOSE	DO	1723
FHA-FLT-V-1003-VH	FILTER #10 SURFACE SWEEP VALVE OPEN	DO	1723
FHA-FLT-V-1003-VL	FILTER #10 SURFACE SWEEP VALVE CLOSE	DO	1723
FHA-FLT-G-1101-VH	FILTER #11 INLET GATE OPEN	DO	1723
FHA-FLT-G-1101-VL	FILTER #11 INLET GATE CLOSE	DO	1723
FHA-FLT-G-1102-VH	FILTER #11 DRAIN GATE OPEN	DO	1723
FHA-FLT-G-1102-VL	FILTER #11 DRAIN GATE CLOSE	DO	1723
FHA-FLT-V-1102-VH	FILTER #11 BACKWASH VALVE OPEN	DO	1723
FHA-FLT-V-1102-VL	FILTER #11 BACKWASH VALVE CLOSE	DO	1723
FHA-FLT-V-1103-VH	FILTER #11 SURFACE SWEEP VALVE OPEN	DO	1723
FHA-FLT-V-1103-VL	FILTER #11 SURFACE SWEEP VALVE CLOSE	DO	1723
FHA-FLT-G-1201-VH	FILTER #12 INLET GATE OPEN	DO	1723
FHA-FLT-G-1201-VL	FILTER #12 INLET GATE CLOSE	DO	1723
FHA-FLT-G-1202-VH	FILTER #12 DRAIN GATE OPEN	DO	1723
FHA-FLT-G-1202-VL	FILTER #12 DRAIN GATE CLOSE	DO	1723
FHA-FLT-V-1202-VH	FILTER #12 BACKWASH VALVE OPEN	DO	1723
FHA-FLT-V-1202-VL	FILTER #12 BACKWASH VALVE CLOSE	DO	1723
FHA-FLT-V-1203-VH	FILTER #12 SURFACE SWEEP VALVE OPEN	DO	1723
FHA-FLT-V-1203-VL	FILTER #12 SURFACE SWEEP VALVE CLOSE	DO	1723
FHA-FLT-ZIT-1301-ZI	FILTER #13 RATE CONT VLV POSITION	AI	1724
FHA-FLT-AIT-1301-AI	FILTER #13 TURBIDITY	AI	1724
FHA-FLT-ZIT-1401-ZI	FILTER #14 RATE CONT VLV POSITION	AI	1724
FHA-FLT-AIT-1401-AI	FILTER #14 TURBIDITY	AI	1724
FHA-FLT-ZIT-1501-ZI	FILTER #15 RATE CONT VLV POSITION	AI	1724
FHA-FLT-AIT-1501-AI	FILTER #15 TURBIDITY	AI	1724
FHA-FLT-ZIT-1601-ZI	FILTER #16 RATE CONT VLV POSITION	AI	1724
FHA-FLT-AIT-1601-AI	FILTER #16 TURBIDITY	AI	1724
FHA-FLT-AIT-4101-AI	W FILTER TRB ANALYZER	AI	1724
FHA-FLT-AIT-4102-AI	W FLE RESID CLR ANALYZER	AI	1724
FHA-FLT-FIT-1301-FT	FILTER #13 FLOW	AI	1724
FHA-FLT-PDIT-1301-PDI	FILTER #13 HEAD LOSS	AI	1724
FHA-FLT-FIT-1401-FT	FILTER #14 FLOW	AI	1724
FHA-FLT-PDIT-1401-PDI	FILTER #14 HEAD LOSS	AI	1724
FHA-FLT-FIT-1501-FT	FILTER #15 FLOW	AI	1724
FHA-FLT-PDIT-1501-PDI	FILTER #15 HEAD LOSS	AI	1724
FHA-FLT-FIT-1601-FT	FILTER #16 FLOW	AI	1724
FHA-FLT-PDIT-1601-PDI	FILTER #16 HEAD LOSS	AI	1724
FCL-FLT-RPU-1823-FIC-C	MASTER FLOW RATE SETPOINT INPUT EAST	AO	1724
FHA-FLT-V-1301-ZC	FILTER #13 RATE CONTROL VALVE POSITION SETPOINT	AO	1724
FHA-FLT-V-1401-ZC	FILTER #14 RATE CONTROL VALVE POSITION SETPOINT	AO	1724
FHA-FLT-V-1501-ZC	FILTER #15 RATE CONTROL VALVE POSITION SETPOINT	AO	1724
FHA-FLT-V-1601-ZC	FILTER #16 RATE CONTROL VALVE POSITION SETPOINT	AO	1724

I/O Tag No	Description	Type	RPU
FHA-SPC-UPS-1724-EA	FILTERS 13-16 PLC UPS - POWER FAILURE	DI	1724
FHA-SPC-UPS-1724-EAL	FILTERS 13-16 PLC UPS - LOW BATTERY	DI	1724
FHA-SPC-UPS-1724-XA	FILTERS 13-16 PLC UPS - UPS FAILURE	DI	1724
FHA-SPC-RPU-1724-TAH	FILTER #13-16 PANEL SMOKE/HEAT ALARM	DI	1724
FHA-FLT-G-1301-YN	FILTER #13 INLET GATE COMPUTER MODE	DI	1724
FHA-FLT-G-1301-YA	FILTER #13 INLET GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1724
FHA-FLT-G-1301-ZH	FILTER #13 INLET GATE OPENED	DI	1724
FHA-FLT-G-1301-ZL	FILTER #13 INLET GATE CLOSED	DI	1724
FHA-FLT-G-1302-YN	FILTER #13 DRAIN GATE COMPUTER MODE	DI	1724
FHA-FLT-G-1302-YA	FILTER #13 DRAIN GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1724
FHA-FLT-G-1302-ZH	FILTER #13 DRAIN GATE OPENED	DI	1724
FHA-FLT-G-1302-ZL	FILTER #13 DRAIN GATE CLOSED	DI	1724
FHA-FLT-V-1301-YN	FILTER #13 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1724
FHA-FLT-V-1301-YA	FILTER #13 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1724
FHA-FLT-V-1301-ZH	FILTER #13 EFFLUENT RATE CONTROL VALVE OPENED	DI	1724
FHA-FLT-V-1301-ZL	FILTER #13 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1724
FHA-FLT-V-1302-YN	FILTER #13 BACKWASH VALVE COMPUTER MODE	DI	1724
FHA-FLT-V-1302-YA	FILTER #13 BACKWASH VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1724
FHA-FLT-V-1302-ZH	FILTER #13 BACKWASH VALVE OPENED	DI	1724
FHA-FLT-V-1302-ZL	FILTER #13 BACKWASH VALVE CLOSED	DI	1724
FHA-FLT-V-1303-YN	FILTER #13 SURFACE SWEEP VALVE COMPUTER MODE	DI	1724
FHA-FLT-V-1303-YA	FILTER #13 SURFACE SWEEP VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1724
FHA-FLT-V-1303-ZH	FILTER #13 SURFACE SWEEP VALVE OPENED	DI	1724
FHA-FLT-V-1303-ZL	FILTER #13 SURFACE SWEEP VALVE CLOSED	DI	1724
FHA-FLT-G-1401-YN	FILTER #14 INLET GATE COMPUTER MODE	DI	1724
FHA-FLT-G-1401-YA	FILTER #14 INLET GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1724
FHA-FLT-G-1401-ZH	FILTER #14 INLET GATE OPENED	DI	1724
FHA-FLT-G-1401-ZL	FILTER #14 INLET GATE CLOSED	DI	1724
FHA-FLT-G-1402-YN	FILTER #14 DRAIN GATE COMPUTER MODE	DI	1724
FHA-FLT-G-1402-YA	FILTER #14 DRAIN GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1724
FHA-FLT-G-1402-ZH	FILTER #14 DRAIN GATE OPENED	DI	1724
FHA-FLT-G-1402-ZL	FILTER #14 DRAIN GATE CLOSED	DI	1724
FHA-FLT-V-1401-YN	FILTER #14 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1724
FHA-FLT-V-1401-YA	FILTER #14 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1724
FHA-FLT-V-1401-ZH	FILTER #14 EFFLUENT RATE CONTROL VALVE OPENED	DI	1724
FHA-FLT-V-1401-ZL	FILTER #14 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1724
FHA-FLT-V-1402-YN	FILTER #14 BACKWASH VALVE COMPUTER MODE	DI	1724



I/O Tag No	Description	Type	RPU
FHA-FLT-V-1402-YA	FILTER #14 BACKWASH VALVE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1724
FHA-FLT-V-1402-ZH	FILTER #14 BACKWASH VALVE OPENED	DI	1724
FHA-FLT-V-1402-ZL	FILTER #14 BACKWASH VALVE CLOSED	DI	1724
FHA-FLT-V-1403-YN	FILTER #14 SURFACE SWEEP VALVE COMPUTER MODE	DI	1724
FHA-FLT-V-1403-YA	FILTER #14 SURFACE SWEEP VALVE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1724
FHA-FLT-V-1403-ZH	FILTER #14 SURFACE SWEEP VALVE OPENED	DI	1724
FHA-FLT-V-1403-ZL	FILTER #14 SURFACE SWEEP VALVE CLOSED	DI	1724
FHA-FLT-G-1501-YN	FILTER #15 INLET GATE COMPUTER MODE	DI	1724
FHA-FLT-G-1501-YA	FILTER #15 INLET GATE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1724
FHA-FLT-G-1501-ZH	FILTER #15 INLET GATE OPENED	DI	1724
FHA-FLT-G-1501-ZL	FILTER #15 INLET GATE CLOSED	DI	1724
FHA-FLT-G-1502-YN	FILTER #15 DRAIN GATE COMPUTER MODE	DI	1724
FHA-FLT-G-1502-YA	FILTER #15 DRAIN GATE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1724
FHA-FLT-G-1502-ZH	FILTER #15 DRAIN GATE OPENED	DI	1724
FHA-FLT-G-1502-ZL	FILTER #15 DRAIN GATE CLOSED	DI	1724
FHA-FLT-V-1501-YN	FILTER #15 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1724
FHA-FLT-V-1501-YA	FILTER #15 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1724
FHA-FLT-V-1501-ZH	FILTER #15 EFFLUENT RATE CONTROL VALVE OPENED	DI	1724
FHA-FLT-V-1501-ZL	FILTER #15 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1724
FHA-FLT-V-1502-YN	FILTER #15 BACKWASH VALVE COMPUTER MODE	DI	1724
FHA-FLT-V-1502-YA	FILTER #15 BACKWASH VALVE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1724
FHA-FLT-V-1502-ZH	FILTER #15 BACKWASH VALVE OPENED	DI	1724
FHA-FLT-V-1502-ZL	FILTER #15 BACKWASH VALVE CLOSED	DI	1724
FHA-FLT-V-1503-YN	FILTER #15 SURFACE SWEEP VALVE COMPUTER MODE	DI	1724
FHA-FLT-V-1503-YA	FILTER #15 SURFACE SWEEP VALVE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1724
FHA-FLT-V-1503-ZH	FILTER #15 SURFACE SWEEP VALVE OPENED	DI	1724
FHA-FLT-V-1503-ZL	FILTER #15 SURFACE SWEEP VALVE CLOSED	DI	1724
FHA-FLT-G-1601-YN	FILTER #16 INLET GATE COMPUTER MODE	DI	1724
FHA-FLT-G-1601-YA	FILTER #16 INLET GATE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1724
FHA-FLT-G-1601-ZH	FILTER #16 INLET GATE OPENED	DI	1724
FHA-FLT-G-1601-ZL	FILTER #16 INLET GATE CLOSED	DI	1724
FHA-FLT-G-1602-YN	FILTER #16 DRAIN GATE COMPUTER MODE	DI	1724
FHA-FLT-G-1602-YA	FILTER #16 DRAIN GATE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1724
FHA-FLT-G-1602-ZH	FILTER #16 DRAIN GATE OPENED	DI	1724
FHA-FLT-G-1602-ZL	FILTER #16 DRAIN GATE CLOSED	DI	1724
FHA-FLT-V-1601-YN	FILTER #16 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1724

I/O Tag No	Description	Type	RPV
FHA-FLT-V-1601-YA	FILTER #16 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1724
FHA-FLT-V-1601-ZH	FILTER #16 EFFLUENT RATE CONTROL VALVE OPENED	DI	1724
FHA-FLT-V-1601-ZL	FILTER #16 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1724
FHA-FLT-V-1602-YN	FILTER #16 BACKWASH VALVE COMPUTER MODE	DI	1724
FHA-FLT-V-1602-YA	FILTER #16 BACKWASH VALVE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1724
FHA-FLT-V-1602-ZH	FILTER #16 BACKWASH VALVE OPENED	DI	1724
FHA-FLT-V-1602-ZL	FILTER #16 BACKWASH VALVE CLOSED	DI	1724
FHA-FLT-V-1603-YN	FILTER #16 SURFACE SWEEP VALVE COMPUTER MODE	DI	1724
FHA-FLT-V-1603-YA	FILTER #16 SURFACE SWEEP VALVE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1724
FHA-FLT-V-1603-ZH	FILTER #16 SURFACE SWEEP VALVE OPENED	DI	1724
FHA-FLT-V-1603-ZL	FILTER #16 SURFACE SWEEP VALVE CLOSED	DI	1724
FHA-FLT-HS-1301-ZL	FILTER #13 VALVE ACP ENABLE/DISABLE SWITCH	DI	1724
FHA-FLT-HS-1401-ZL	FILTER #14 VALVE ACP ENABLE/DISABLE SWITCH	DI	1724
FHA-FLT-HS-1501-ZL	FILTER #15 VALVE ACP ENABLE/DISABLE SWITCH	DI	1724
FHA-FLT-HS-1601-ZL	FILTER #16 VALVE ACP ENABLE/DISABLE SWITCH	DI	1724
FHA-FLT-AIT-1301-YA	FILTER #13 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1724
FHA-FLT-AIT-1401-YA	FILTER #14 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1724
FHA-FLT-AIT-1501-YA	FILTER #15 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1724
FHA-FLT-AIT-1601-YA	FILTER #16 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1724
FHA-FLT-LSHL-1301-LAH	FILTER #13 HI LEVEL SWITCH	DI	1724
FHA-FLT-LSHL-1301-LAL	FILTER #13 LO LEVEL SWITCH	DI	1724
FHA-FLT-LSHL-1401-LAH	FILTER #14 HI LEVEL SWITCH	DI	1724
FHA-FLT-LSHL-1401-LAL	FILTER #14 LO LEVEL SWITCH	DI	1724
FHA-FLT-LSHL-1501-LAH	FILTER #15 HI LEVEL SWITCH	DI	1724
FHA-FLT-LSHL-1501-LAL	FILTER #15 LO LEVEL SWITCH	DI	1724
FHA-FLT-LSHL-1601-LAH	FILTER #16 HI LEVEL SWITCH	DI	1724
FHA-FLT-LSHL-1601-LAL	FILTER #16 LO LEVEL SWITCH	DI	1724
FHA-FLT-P-4101-YN	W FILTER CMPST SMP PUMP COMPUTER MODE	DI	1724
FHA-FLT-P-4101-MN	W FILTER CMPST SMP PUMP RUNNING	DI	1724
FHA-FLT-FSL-4101-FAL	W FILTER CMPST SMP PUMP FLOW LOW ALARM	DI	1724
FHA-FLT-FSL-4102-FAL	W FILTER TRB ANALYZER FLOW LOW ALARM	DI	1724
FHA-FLT-FSL-4103-FAL	W FLE RESID CLR ANALYZER FLOW LOW ALARM	DI	1724
FHA-FLT-AIT-4101-YA	W FILTER TRB ANALYZER LOSS OF SIGNAL SIGNAL (N/A - DISABLED IN SOFTWARE LOGIC)	DI	1724
FHA-FLT-AIT-4102-YA	W FLE RESID CLR ANALYZER INSTRUMENT FAULT	DI	1724
FHA-FLT-V-4108-YN	WEST ANALYZER ISLN VLV COMPUTER MODE	DI	1724
FHA-FLT-V-4108-YA	WEST ANALYZER ISLN VLV NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1724
FHA-FLT-V-4108-ZH	WEST ANALYZER ISLN VLV OPENED	DI	1724
FHA-FLT-V-4108-ZL	WEST ANALYZER ISLN VLV CLOSED	DI	1724
FHA-FLT-V-4109-YN	WEST BACKFLUSH VLV COMPUTER MODE	DI	1724

I/O Tag No	Description	Type	RPV
FHA-FLT-V-4109-YA	WEST BACKFLUSH VLV NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1724
FHA-FLT-V-4109-ZH	WEST BACKFLUSH VLV OPENED	DI	1724
FHA-FLT-V-4109-ZL	WEST BACKFLUSH VLV CLOSED	DI	1724
FHA-FLT-V-4110-YN	WEST DRAIN VLV COMPUTER MODE	DI	1724
FHA-FLT-V-4110-YA	WEST DRAIN VLV NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1724
FHA-FLT-V-4110-ZH	WEST DRAIN VLV OPENED	DI	1724
FHA-FLT-V-4110-ZL	WEST DRAIN VLV CLOSED	DI	1724
FHA-FLT-V-4106-YN	WEST LAB ISLN VLV COMPUTER MODE	DI	1724
FHA-FLT-V-4106-YA	WEST LAB ISLN VLV NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1724
FHA-FLT-V-4106-ZH	WEST LAB ISLN VLV OPENED	DI	1724
FHA-FLT-V-4106-ZL	WEST LAB ISLN VLV CLOSED	DI	1724
FHA-FLT-V-4111-YN	WEST SUCT FLUSH VLV COMPUTER MODE	DI	1724
FHA-FLT-V-4111-YA	WEST SUCT FLUSH VLV NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1724
FHA-FLT-V-4111-ZH	WEST SUCT FLUSH VLV OPENED	DI	1724
FHA-FLT-V-4111-ZL	WEST SUCT FLUSH VLV CLOSED	DI	1724
FHA-FLT-G-1301-VH	FILTER #13 INLET GATE OPEN	DO	1724
FHA-FLT-G-1301-VL	FILTER #13 INLET GATE CLOSE	DO	1724
FHA-FLT-G-1302-VH	FILTER #13 DRAIN GATE OPEN	DO	1724
FHA-FLT-G-1302-VL	FILTER #13 DRAIN GATE CLOSE	DO	1724
FHA-FLT-V-1302-VH	FILTER #13 BACKWASH VALVE OPEN	DO	1724
FHA-FLT-V-1302-VL	FILTER #13 BACKWASH VALVE CLOSE	DO	1724
FHA-FLT-V-1303-VH	FILTER #13 SURFACE SWEEP VALVE OPEN	DO	1724
FHA-FLT-V-1303-VL	FILTER #13 SURFACE SWEEP VALVE CLOSE	DO	1724
FHA-FLT-G-1401-VH	FILTER #14 INLET GATE OPEN	DO	1724
FHA-FLT-G-1401-VL	FILTER #14 INLET GATE CLOSE	DO	1724
FHA-FLT-G-1402-VH	FILTER #14 DRAIN GATE OPEN	DO	1724
FHA-FLT-G-1402-VL	FILTER #14 DRAIN GATE CLOSE	DO	1724
FHA-FLT-V-1402-VH	FILTER #14 BACKWASH VALVE OPEN	DO	1724
FHA-FLT-V-1402-VL	FILTER #14 BACKWASH VALVE CLOSE	DO	1724
FHA-FLT-V-1403-VH	FILTER #14 SURFACE SWEEP VALVE OPEN	DO	1724
FHA-FLT-V-1403-VL	FILTER #14 SURFACE SWEEP VALVE CLOSE	DO	1724
FHA-FLT-G-1501-VH	FILTER #15 INLET GATE OPEN	DO	1724
FHA-FLT-G-1501-VL	FILTER #15 INLET GATE CLOSE	DO	1724
FHA-FLT-G-1502-VH	FILTER #15 DRAIN GATE OPEN	DO	1724
FHA-FLT-G-1502-VL	FILTER #15 DRAIN GATE CLOSE	DO	1724
FHA-FLT-V-1502-VH	FILTER #15 BACKWASH VALVE OPEN	DO	1724
FHA-FLT-V-1502-VL	FILTER #15 BACKWASH VALVE CLOSE	DO	1724
FHA-FLT-V-1503-VH	FILTER #15 SURFACE SWEEP VALVE OPEN	DO	1724
FHA-FLT-V-1503-VL	FILTER #15 SURFACE SWEEP VALVE CLOSE	DO	1724
FHA-FLT-G-1601-VH	FILTER #16 INLET GATE OPEN	DO	1724
FHA-FLT-G-1601-VL	FILTER #16 INLET GATE CLOSE	DO	1724
FHA-FLT-G-1602-VH	FILTER #16 DRAIN GATE OPEN	DO	1724
FHA-FLT-G-1602-VL	FILTER #16 DRAIN GATE CLOSE	DO	1724

I/O Tag No	Description	Type	RPU
FHA-FLT-V-1602-VH	FILTER #16 BACKWASH VALVE OPEN	DO	1724
FHA-FLT-V-1602-VL	FILTER #16 BACKWASH VALVE CLOSE	DO	1724
FHA-FLT-V-1603-VH	FILTER #16 SURFACE SWEEP VALVE OPEN	DO	1724
FHA-FLT-V-1603-VL	FILTER #16 SURFACE SWEEP VALVE CLOSE	DO	1724
FHA-FLT-P-4101-MH	W FILTER CMPST SMP PUMP START COMMAND	DO	1724
FHA-FLT-P-4101-MB	W FILTER CMPST SMP PUMP STOP COMMAND	DO	1724
FHA-FLT-V-4108-VH	WEST ANALYZER ISLN VLV OPEN	DO	1724
FHA-FLT-V-4108-VL	WEST ANALYZER ISLN VLV CLOSE	DO	1724
FHA-FLT-V-4109-VH	WEST BACKFLUSH VLV OPEN	DO	1724
FHA-FLT-V-4109-VL	WEST BACKFLUSH VLV CLOSE	DO	1724
FHA-FLT-V-4110-VH	WEST DRAIN VLV OPEN	DO	1724
FHA-FLT-V-4110-VL	WEST DRAIN VLV CLOSE	DO	1724
FHA-FLT-V-4106-VH	WEST LAB ISLN VLV OPEN	DO	1724
FHA-FLT-V-4106-VL	WEST LAB ISLN VLV CLOSE	DO	1724
FHA-FLT-V-4111-VH	WEST SUCT FLUSH VLV OPEN	DO	1724
FHA-FLT-V-4111-VL	WEST SUCT FLUSH VLV CLOSE	DO	1724
FHA-FLT-AIT-1701-AI	FILTER #17 TURBIDITY	AI	1822
FHA-FLT-ZIT-1701-ZI	FILTER #17 RATE CONT VLV POSITION	AI	1822
FHA-FLT-AIT-1801-AI	FILTER #18 TURBIDITY	AI	1822
FHA-FLT-ZIT-1801-ZI	FILTER #18 RATE CONT VLV POSITION	AI	1822
FHA-FLT-AIT-1901-AI	FILTER #19 TURBIDITY	AI	1822
FHA-FLT-ZIT-1901-ZI	FILTER #19 RATE CONT VLV POSITION	AI	1822
FHA-FLT-AIT-2001-AI	FILTER #20 TURBIDITY	AI	1822
FHA-FLT-ZIT-2001-ZI	FILTER #20 RATE CONT VLV POSITION	AI	1822
FHA-BW-ZIT-0105-ZI	WEST WW RATE CONT VLV POSITION	AI	1822
FHA-CLB-AIT-0002-AI	FILTER CMPST TRB ANALYZER	AI	1822
FHA-CLB-AIT-0004-AI	AFTER POST CHLOR RESIDUAL #2	AI	1822
FHA-FLT-FIT-0001-FI	WEST FILTERS TOTAL FLOW	AI	1822
FHA-TRW-LIT-0001-LI	RESERVOIR LEVEL	AI	1822
FHA-CLB-AIT-0003-AI	AFTER POST CHLOR RESIDUAL #1	AI	1822
FHA-FLT-FIT-1701-FT	FILTER #17 FLOW	AI	1822
FHA-FLT-PDIT-1701-PDI	FILTER #17 HEAD LOSS	AI	1822
FHA-FLT-FIT-1801-FT	FILTER #18 FLOW	AI	1822
FHA-FLT-PDIT-1801-PDI	FILTER #18 HEAD LOSS	AI	1822
FHA-FLT-FIT-1901-FT	FILTER #19 FLOW	AI	1822
FHA-FLT-PDIT-1901-PDI	FILTER #19 HEAD LOSS	AI	1822
FHA-FLT-FIT-2001-FT	FILTER #20 FLOW	AI	1822
FHA-FLT-PDIT-2001-PDI	FILTER #20 HEAD LOSS	AI	1822
FCL-FLT-RPU-1823-FIC-C	MASTER FLOW RATE SETPOINT INPUT EAST	AO	1822
FHA-FLT-V-1701-ZC	FILTER #17 RATE CONTROL VALVE POSITION SETPOINT	AO	1822
FHA-FLT-V-1801-ZC	FILTER #18 RATE CONTROL VALVE POSITION SETPOINT	AO	1822
FHA-FLT-V-1901-ZC	FILTER #19 RATE CONTROL VALVE POSITION SETPOINT	AO	1822
FHA-FLT-V-2001-ZC	FILTER #20 RATE CONTROL VALVE POSITION SETPOINT	AO	1822

I/O Tag No	Description	Type	RPU
FHA-BW-V-0105-VC	WEST WW CTRL VLV PID{CV}CONTROL VARIABLE-OUTPUT	AO	1822
FHA-SPC-UPS-1822-EA	FILTERS 17-20 PLC UPS - POWER FAILURE	DI	1822
FHA-SPC-UPS-1822-EAL	FILTERS 17-20 PLC UPS - LOW BATTERY	DI	1822
FHA-SPC-UPS-1822-XA	FILTERS 17-20 PLC UPS - UPS FAILURE	DI	1822
FHA-SPC-UPS-1811-EA	WEST FILTRATION COMPUTER UPS - POWER FAILURE	DI	1822
FHA-SPC-UPS-1811-EAL	WEST FILTRATION COMPUTER UPS - LOW BATTERY	DI	1822
FHA-SPC-UPS-1811-XA	WEST FILTRATION COMPUTER UPS - UPS FAILURE	DI	1822
FHA-SPC-RPU-1822-TAH	FILTER #17-20 PANEL SMOKE/HEAT ALARM	DI	1822
FHA-FLT-G-1701-YN	FILTER #17 INLET GATE COMPUTER MODE	DI	1822
FHA-FLT-G-1701-YA	FILTER #17 INLET GATE NOT AVAILABLE-MAIN/CONTROL POWER FAIL	DI	1822
FHA-FLT-G-1701-ZH	FILTER #17 INLET GATE OPENED	DI	1822
FHA-FLT-G-1701-ZL	FILTER #17 INLET GATE CLOSED	DI	1822
FHA-FLT-G-1702-YN	FILTER #17 DRAIN GATE COMPUTER MODE	DI	1822
FHA-FLT-G-1702-YA	FILTER #17 DRAIN GATE NOT AVAILABLE-MAIN/CONTROL POWER FAIL	DI	1822
FHA-FLT-G-1702-ZH	FILTER #17 DRAIN GATE OPENED	DI	1822
FHA-FLT-G-1702-ZL	FILTER #17 DRAIN GATE CLOSED	DI	1822
FHA-FLT-V-1701-YN	FILTER #17 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1822
FHA-FLT-V-1701-YA	FILTER #17 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1822
FHA-FLT-V-1701-ZH	FILTER #17 EFFLUENT RATE CONTROL VALVE OPENED	DI	1822
FHA-FLT-V-1701-ZL	FILTER #17 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1822
FHA-FLT-V-1702-YN	FILTER #17 BACKWASH VALVE COMPUTER MODE	DI	1822
FHA-FLT-V-1702-YA	FILTER #17 BACKWASH VALVE NOT AVAILABLE-MAIN/CONTROL POWER FAIL	DI	1822
FHA-FLT-V-1702-ZH	FILTER #17 BACKWASH VALVE OPENED	DI	1822
FHA-FLT-V-1702-ZL	FILTER #17 BACKWASH VALVE CLOSED	DI	1822
FHA-FLT-V-1703-YN	FILTER #17 SURFACE SWEEP VALVE COMPUTER MODE	DI	1822
FHA-FLT-V-1703-YA	FILTER #17 SURFACE SWEEP VALVE NOT AVAILABLE-MAIN/CONTROL POWER FAIL	DI	1822
FHA-FLT-V-1703-ZH	FILTER #17 SURFACE SWEEP VALVE OPENED	DI	1822
FHA-FLT-V-1703-ZL	FILTER #17 SURFACE SWEEP VALVE CLOSED	DI	1822
FHA-FLT-G-1801-YN	FILTER #18 INLET GATE COMPUTER MODE	DI	1822
FHA-FLT-G-1801-YA	FILTER #18 INLET GATE NOT AVAILABLE-MAIN/CONTROL POWER FAIL	DI	1822
FHA-FLT-G-1801-ZH	FILTER #18 INLET GATE OPENED	DI	1822
FHA-FLT-G-1801-ZL	FILTER #18 INLET GATE CLOSED	DI	1822
FHA-FLT-G-1802-YN	FILTER #18 DRAIN GATE COMPUTER MODE	DI	1822
FHA-FLT-G-1802-YA	FILTER #18 DRAIN GATE NOT AVAILABLE-MAIN/CONTROL POWER FAIL	DI	1822
FHA-FLT-G-1802-ZH	FILTER #18 DRAIN GATE OPENED	DI	1822
FHA-FLT-G-1802-ZL	FILTER #18 DRAIN GATE CLOSED	DI	1822
FHA-FLT-V-1801-YN	FILTER #18 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1822

I/O Tag No	Description	Type	RPV
FHA-FLT-V-1801-YA	FILTER #18 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1822
FHA-FLT-V-1801-ZH	FILTER #18 EFFLUENT RATE CONTROL VALVE OPENED	DI	1822
FHA-FLT-V-1801-ZL	FILTER #18 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1822
FHA-FLT-V-1802-YN	FILTER #18 BACKWASH VALVE COMPUTER MODE	DI	1822
FHA-FLT-V-1802-YA	FILTER #18 BACKWASH VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1822
FHA-FLT-V-1802-ZH	FILTER #18 BACKWASH VALVE OPENED	DI	1822
FHA-FLT-V-1802-ZL	FILTER #18 BACKWASH VALVE CLOSED	DI	1822
FHA-FLT-V-1803-YN	FILTER #18 SURFACE SWEEP VALVE COMPUTER MODE	DI	1822
FHA-FLT-V-1803-YA	FILTER #18 SURFACE SWEEP VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1822
FHA-FLT-V-1803-ZH	FILTER #18 SURFACE SWEEP VALVE OPENED	DI	1822
FHA-FLT-V-1803-ZL	FILTER #18 SURFACE SWEEP VALVE CLOSED	DI	1822
FHA-FLT-G-1901-YN	FILTER #19 INLET GATE COMPUTER MODE	DI	1822
FHA-FLT-G-1901-YA	FILTER #19 INLET GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1822
FHA-FLT-G-1901-ZH	FILTER #19 INLET GATE OPENED	DI	1822
FHA-FLT-G-1901-ZL	FILTER #19 INLET GATE CLOSED	DI	1822
FHA-FLT-G-1902-YN	FILTER #19 DRAIN GATE COMPUTER MODE	DI	1822
FHA-FLT-G-1902-YA	FILTER #19 DRAIN GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1822
FHA-FLT-G-1902-ZH	FILTER #19 DRAIN GATE OPENED	DI	1822
FHA-FLT-G-1902-ZL	FILTER #19 DRAIN GATE CLOSED	DI	1822
FHA-FLT-V-1901-YN	FILTER #19 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1822
FHA-FLT-V-1901-YA	FILTER #19 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1822
FHA-FLT-V-1901-ZH	FILTER #19 EFFLUENT RATE CONTROL VALVE OPENED	DI	1822
FHA-FLT-V-1901-ZL	FILTER #19 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1822
FHA-FLT-V-1902-YN	FILTER #19 BACKWASH VALVE COMPUTER MODE	DI	1822
FHA-FLT-V-1902-YA	FILTER #19 BACKWASH VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1822
FHA-FLT-V-1902-ZH	FILTER #19 BACKWASH VALVE OPENED	DI	1822
FHA-FLT-V-1902-ZL	FILTER #19 BACKWASH VALVE CLOSED	DI	1822
FHA-FLT-V-1903-YN	FILTER #19 SURFACE SWEEP VALVE COMPUTER MODE	DI	1822
FHA-FLT-V-1903-YA	FILTER #19 SURFACE SWEEP VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1822
FHA-FLT-V-1903-ZH	FILTER #19 SURFACE SWEEP VALVE OPENED	DI	1822
FHA-FLT-V-1903-ZL	FILTER #19 SURFACE SWEEP VALVE CLOSED	DI	1822
FHA-FLT-G-2001-YN	FILTER #20 INLET GATE COMPUTER MODE	DI	1822
FHA-FLT-G-2001-YA	FILTER #20 INLET GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1822
FHA-FLT-G-2001-ZH	FILTER #20 INLET GATE OPENED	DI	1822
FHA-FLT-G-2001-ZL	FILTER #20 INLET GATE CLOSED	DI	1822
FHA-FLT-G-2002-YN	FILTER #20 DRAIN GATE COMPUTER MODE	DI	1822
FHA-FLT-G-2002-YA	FILTER #20 DRAIN GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1822

I/O Tag No	Description	Type	RPU
FHA-FLT-G-2002-ZH	FILTER #20 DRAIN GATE OPENED	DI	1822
FHA-FLT-G-2002-ZL	FILTER #20 DRAIN GATE CLOSED	DI	1822
FHA-FLT-V-2001-YN	FILTER #20 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1822
FHA-FLT-V-2001-YA	FILTER #20 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1822
FHA-FLT-V-2001-ZH	FILTER #20 EFFLUENT RATE CONTROL VALVE OPENED	DI	1822
FHA-FLT-V-2001-ZL	FILTER #20 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1822
FHA-FLT-V-2002-YN	FILTER #20 BACKWASH VALVE COMPUTER MODE	DI	1822
FHA-FLT-V-2002-YA	FILTER #20 BACKWASH VALVE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1822
FHA-FLT-V-2002-ZH	FILTER #20 BACKWASH VALVE OPENED	DI	1822
FHA-FLT-V-2002-ZL	FILTER #20 BACKWASH VALVE CLOSED	DI	1822
FHA-FLT-V-2003-YN	FILTER #20 SURFACE SWEEP VALVE COMPUTER MODE	DI	1822
FHA-FLT-V-2003-YA	FILTER #20 SURFACE SWEEP VALVE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1822
FHA-FLT-V-2003-ZH	FILTER #20 SURFACE SWEEP VALVE OPENED	DI	1822
FHA-FLT-V-2003-ZL	FILTER #20 SURFACE SWEEP VALVE CLOSED	DI	1822
FHA-FLT-HS-1701-ZL	FILTER #17 VALVE ACP ENABLE/DISABLE SWITCH	DI	1822
FHA-FLT-HS-1801-ZL	FILTER #18 VALVE ACP ENABLE/DISABLE SWITCH	DI	1822
FHA-FLT-HS-1901-ZL	FILTER #19 VALVE ACP ENABLE/DISABLE SWITCH	DI	1822
FHA-FLT-HS-2001-ZL	FILTER #20 VALVE ACP ENABLE/DISABLE SWITCH	DI	1822
FHA-FLT-AIT-1701-YA	FILTER #17 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1822
FHA-FLT-AIT-1801-YA	FILTER #18 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1822
FHA-FLT-AIT-1901-YA	FILTER #19 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1822
FHA-FLT-AIT-2001-YA	FILTER #20 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1822
FHA-FLT-LSHL-1701-LAH	FILTER #17 HI LEVEL SWITCH	DI	1822
FHA-FLT-LSHL-1701-LAL	FILTER #17 LO LEVEL SWITCH	DI	1822
FHA-FLT-LSHL-1801-LAH	FILTER #18 HI LEVEL SWITCH	DI	1822
FHA-FLT-LSHL-1801-LAL	FILTER #18 LO LEVEL SWITCH	DI	1822
FHA-FLT-LSHL-1901-LAH	FILTER #19 HI LEVEL SWITCH	DI	1822
FHA-FLT-LSHL-1901-LAL	FILTER #19 LO LEVEL SWITCH	DI	1822
FHA-FLT-LSHL-2001-LAH	FILTER #20 HI LEVEL SWITCH	DI	1822
FHA-FLT-LSHL-2001-LAL	FILTER #20 LO LEVEL SWITCH	DI	1822
FHA-BW-V-0105-YN	WEST WW CTRL VLV COMPUTER MODE	DI	1822
FHA-BW-V-0105-YA	WEST WW CTRL VLV NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1822
FHA-BW-V-0105-ZH	WEST WW CTRL VLV OPENED	DI	1822
FHA-BW-V-0105-ZL	WEST WW CTRL VLV CLOSED	DI	1822
FHA-FLT-LIT-0101-YA	WEST SEW CONDUIT LEVEL LOSS OF SIGNAL	DI	1822
FHA-CLB-AIT-0002-YA	FILTER CMPST TRB ANALYZER INSTRUMENT FAULT	DI	1822
FHA-CLB-AIT-0003-YA	AFT POST CLR ANALYZER#1 INSTRUMENT FAULT	DI	1822
FHA-CLB-AIT-0004-YA	AFT POST CLR ANALYZER#2 INSTRUMENT FAULT	DI	1822
FHA-CLB-FSL-0001-FAL	POST CLR SMP PUMP LOW FLOW ALARM	DI	1822

I/O Tag No	Description	Type	RPU
FHA-CLB-FSL-0003-FAL	POST CLR TRB ANALYZER LOW FLOW ALARM	DI	1822
FHA-CLB-FSL-0004-FAL	AFT POST CLR ANALYZER#1 LOW FLOW ALARM	DI	1822
FHA-CLB-FSL-0005-FAL	AFT POST CLR ANALYZER#2 LOW FLOW ALARM	DI	1822
FHA-CLB-P-0001A-YN	AFTER POST SMP PUMP#1A COMPUTER MODE	DI	1822
FHA-CLB-P-0001A-MN	AFTER POST SMP PUMP#1A RUNNING	DI	1822
FHA-CLB-V-0012-YN	SMP PUMP DRAIN VLV COMPUTER MODE	DI	1822
FHA-CLB-V-0012-YA	SMP PUMP DRAIN VLV NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1822
FHA-CLB-V-0012-ZH	SMP PUMP DRAIN VLV OPENED	DI	1822
FHA-CLB-V-0012-ZL	SMP PUMP DRAIN VLV CLOSED	DI	1822
FHA-CLB-V-0013-YN	BACKFLUSH VLV COMPUTER MODE	DI	1822
FHA-CLB-V-0013-YA	BACKFLUSH VLV NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1822
FHA-CLB-V-0013-ZH	BACKFLUSH VLV OPENED	DI	1822
FHA-CLB-V-0013-ZL	BACKFLUSH VLV CLOSED	DI	1822
FHA-CLB-P-0001B-YN	AFTER POST SMP PUMP#1B COMPUTER MODE	DI	1822
FHA-CLB-P-0001B-MN	AFTER POST SMP PUMP#1B RUNNING	DI	1822
FHA-CLB-V-0014-YN	ANALYZER ISLN VLV COMPUTER MODE	DI	1822
FHA-CLB-V-0014-YA	ANALYZER ISLN VLV NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1822
FHA-CLB-V-0014-ZH	ANALYZER ISLN VLV OPENED	DI	1822
FHA-CLB-V-0014-ZL	ANALYZER ISLN VLV CLOSED	DI	1822
FHA-CLB-V-0029-YN	LAB ISOLATION VLV COMPUTER MODE	DI	1822
FHA-CLB-V-0029-YA	LAB ISOLATION VLV NOT AVAILABLE	DI	1822
FHA-CLB-V-0029-ZH	LAB ISOLATION VLV OPENED	DI	1822
FHA-CLB-V-0029-ZL	LAB ISOLATION VLV CLOSED	DI	1822
FHA-FLT-G-1701-VH	FILTER #17 INLET GATE OPEN	DO	1822
FHA-FLT-G-1701-VL	FILTER #17 INLET GATE CLOSE	DO	1822
FHA-FLT-G-1702-VH	FILTER #17 DRAIN GATE OPEN	DO	1822
FHA-FLT-G-1702-VL	FILTER #17 DRAIN GATE CLOSE	DO	1822
FHA-FLT-V-1702-VH	FILTER #17 BACKWASH VALVE OPEN	DO	1822
FHA-FLT-V-1702-VL	FILTER #17 BACKWASH VALVE CLOSE	DO	1822
FHA-FLT-V-1703-VH	FILTER #17 SURFACE SWEEP VALVE OPEN	DO	1822
FHA-FLT-V-1703-VL	FILTER #17 SURFACE SWEEP VALVE CLOSE	DO	1822
FHA-FLT-G-1801-VH	FILTER #18 INLET GATE OPEN	DO	1822
FHA-FLT-G-1801-VL	FILTER #18 INLET GATE CLOSE	DO	1822
FHA-FLT-G-1802-VH	FILTER #18 DRAIN GATE OPEN	DO	1822
FHA-FLT-G-1802-VL	FILTER #18 DRAIN GATE CLOSE	DO	1822
FHA-FLT-V-1802-VH	FILTER #18 BACKWASH VALVE OPEN	DO	1822
FHA-FLT-V-1802-VL	FILTER #18 BACKWASH VALVE CLOSE	DO	1822
FHA-FLT-V-1803-VH	FILTER #18 SURFACE SWEEP VALVE OPEN	DO	1822
FHA-FLT-V-1803-VL	FILTER #18 SURFACE SWEEP VALVE CLOSE	DO	1822
FHA-FLT-G-1901-VH	FILTER #19 INLET GATE OPEN	DO	1822
FHA-FLT-G-1901-VL	FILTER #19 INLET GATE CLOSE	DO	1822
FHA-FLT-G-1902-VH	FILTER #19 DRAIN GATE OPEN	DO	1822
FHA-FLT-G-1902-VL	FILTER #19 DRAIN GATE CLOSE	DO	1822
FHA-FLT-V-1902-VH	FILTER #19 BACKWASH VALVE OPEN	DO	1822



I/O Tag No	Description	Type	RPU
FHA-FLT-V-1902-VL	FILTER #19 BACKWASH VALVE CLOSE	DO	1822
FHA-FLT-V-1903-VH	FILTER #19 SURFACE SWEEP VALVE OPEN	DO	1822
FHA-FLT-V-1903-VL	FILTER #19 SURFACE SWEEP VALVE CLOSE	DO	1822
FHA-FLT-G-2001-VH	FILTER #20 INLET GATE OPEN	DO	1822
FHA-FLT-G-2001-VL	FILTER #20 INLET GATE CLOSE	DO	1822
FHA-FLT-G-2002-VH	FILTER #20 DRAIN GATE OPEN	DO	1822
FHA-FLT-G-2002-VL	FILTER #20 DRAIN GATE CLOSE	DO	1822
FHA-FLT-V-2002-VH	FILTER #20 BACKWASH VALVE OPEN	DO	1822
FHA-FLT-V-2002-VL	FILTER #20 BACKWASH VALVE CLOSE	DO	1822
FHA-FLT-V-2003-VH	FILTER #20 SURFACE SWEEP VALVE OPEN	DO	1822
FHA-FLT-V-2003-VL	FILTER #20 SURFACE SWEEP VALVE CLOSE	DO	1822
FHA-CLB-P-0001A-MH	AFTER POST SMP PUMP#1A START COMMAND	DO	1822
FHA-CLB-P-0001A-MB	AFTER POST SMP PUMP#1A STOP COMMAND	DO	1822
FHA-CLB-P-0001B-MH	AFTER POST SMP PUMP#1B START COMMAND	DO	1822
FHA-CLB-P-0001B-MB	AFTER POST SMP PUMP#1B STOP COMMAND	DO	1822
FHA-CLB-V-0012-VH	SMP PUMP DRAIN VLV OPEN	DO	1822
FHA-CLB-V-0012-VL	SMP PUMP DRAIN VLV CLOSE	DO	1822
FHA-CLB-V-0013-VH	BACKFLUSH VLV OPEN	DO	1822
FHA-CLB-V-0013-VL	BACKFLUSH VLV CLOSE	DO	1822
FHA-CLB-V-0014-VH	ANALYZER ISLN VLV OPEN	DO	1822
FHA-CLB-V-0014-VL	ANALYZER ISLN VLV CLOSE	DO	1822
FHA-CLB-V-0029-VH	LAB ISOLATION VLV OPEN	DO	1822
FHA-CLB-V-0029-VL	LAB ISOLATION VLV CLOSE	DO	1822
FHA-CLB-AIT-0003-DUTY	AFT POST CHLORINE ANALYZER CONTROL/REFERENCE SELECTION	DO	1822
FHA-FLT-ZIT-2101-ZI	FILTER #21 RATE CONT VLV POSITION	AI	1823
FHA-FLT-AIT-2101-AI	FILTER #21 TURBIDITY	AI	1823
FHA-FLT-ZIT-2201-ZI	FILTER #22 RATE CONT VLV POSITION	AI	1823
FHA-FLT-AIT-2201-AI	FILTER #22 TURBIDITY	AI	1823
FHA-FLT-ZIT-2301-ZI	FILTER #23 RATE CONT VLV POSITION	AI	1823
FHA-FLT-AIT-2301-AI	FILTER #23 TURBIDITY	AI	1823
FHA-FLT-ZIT-2401-ZI	FILTER #24 RATE CONT VLV POSITION	AI	1823
FHA-FLT-AIT-2401-AI	FILTER #24 TURBIDITY	AI	1823
FHA-BW-ZIT-0205-ZI	EAST WW RATE CONT VLV POSITION	AI	1823
FHA-FLT-FIT-0002-FI	EAST FILTERS TOTAL FLOW	AI	1823
FHA-FLT-FIT-2101-FT	FILTER #21 FLOW	AI	1823
FHA-FLT-PDIT-2101-PDI	FILTER #21 HEAD LOSS	AI	1823
FHA-FLT-FIT-2201-FT	FILTER #22 FLOW	AI	1823
FHA-FLT-PDIT-2201-PDI	FILTER #22 HEAD LOSS	AI	1823
FHA-FLT-FIT-2301-FT	FILTER #23 FLOW	AI	1823
FHA-FLT-PDIT-2301-PDI	FILTER #23 HEAD LOSS	AI	1823
FHA-FLT-FIT-2401-FT	FILTER #24 FLOW	AI	1823
FHA-FLT-PDIT-2401-PDI	FILTER #24 HEAD LOSS	AI	1823
FCL-FLT-RPU-1823-FIC-C	MASTER FLOW RATE SETPOINT INPUT EAST	AO	1823
FHA-FLT-V-2101-ZC	FILTER #21 RATE CONTROL VALVE POSITION SETPOINT	AO	1823

I/O Tag No	Description	Type	RPU
FHA-FLT-V-2201-ZC	FILTER #22 RATE CONTROL VALVE POSITION SETPOINT	AO	1823
FHA-FLT-V-2301-VC	FILTER #23 RATE CONTROL VALVE POSITION SETPOINT	AO	1823
FHA-FLT-V-2401-VC	FILTER #24 RATE CONTROL VALVE POSITION SETPOINT	AO	1823
FHA-BW-V-0205-VC	EAST WW CTRL VLV PID{CV}CONTROL VARIABLE-OUTPUT	AO	1823
FHA-SPC-UPS-1823-EA	FILTERS 21-24 PLC UPS - POWER FAILURE	DI	1823
FHA-SPC-UPS-1823-EAL	FILTERS 21-24 PLC UPS - LOW BATTERY	DI	1823
FHA-SPC-UPS-1823-XA	FILTERS 21-24 PLC UPS - UPS FAILURE	DI	1823
FHA-SPC-RPU-1823-TAH	FILTER #21-24 PANEL SMOKE/HEAT ALARM	DI	1823
FHA-FLT-G-2101-YN	FILTER #21 INLET GATE COMPUTER MODE	DI	1823
FHA-FLT-G-2101-YA	FILTER #21 INLET GATE NOT AVAILABLE-MAIN/CONTROL POWER FAIL	DI	1823
FHA-FLT-G-2101-ZH	FILTER #21 INLET GATE OPENED	DI	1823
FHA-FLT-G-2101-ZL	FILTER #21 INLET GATE CLOSED	DI	1823
FHA-FLT-G-2102-YN	FILTER #21 DRAIN GATE COMPUTER MODE	DI	1823
FHA-FLT-G-2102-YA	FILTER #21 DRAIN GATE NOT AVAILABLE-MAIN/CONTROL POWER FAIL	DI	1823
FHA-FLT-G-2102-ZH	FILTER #21 DRAIN GATE OPENED	DI	1823
FHA-FLT-G-2102-ZL	FILTER #21 DRAIN GATE CLOSED	DI	1823
FHA-FLT-V-2101-YN	FILTER #21 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1823
FHA-FLT-V-2101-YA	FILTER #21 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1823
FHA-FLT-V-2101-ZH	FILTER #21 EFFLUENT RATE CONTROL VALVE OPENED	DI	1823
FHA-FLT-V-2101-ZL	FILTER #21 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1823
FHA-FLT-V-2102-YN	FILTER #21 BACKWASH VALVE COMPUTER MODE	DI	1823
FHA-FLT-V-2102-YA	FILTER #21 BACKWASH VALVE NOT AVAILABLE-MAIN/CONTROL POWER FAIL	DI	1823
FHA-FLT-V-2102-ZH	FILTER #21 BACKWASH VALVE OPENED	DI	1823
FHA-FLT-V-2102-ZL	FILTER #21 BACKWASH VALVE CLOSED	DI	1823
FHA-FLT-V-2103-YN	FILTER #21 SURFACE SWEEP VALVE COMPUTER MODE	DI	1823
FHA-FLT-V-2103-YA	FILTER #21 SURFACE SWEEP VALVE NOT AVAILABLE-MAIN/CONTROL POWER FAIL	DI	1823
FHA-FLT-V-2103-ZH	FILTER #21 SURFACE SWEEP VALVE OPENED	DI	1823
FHA-FLT-V-2103-ZL	FILTER #21 SURFACE SWEEP VALVE CLOSED	DI	1823
FHA-FLT-G-2201-YN	FILTER #22 INLET GATE COMPUTER MODE	DI	1823
FHA-FLT-G-2201-YA	FILTER #22 INLET GATE NOT AVAILABLE-MAIN/CONTROL POWER FAIL	DI	1823
FHA-FLT-G-2201-ZH	FILTER #22 INLET GATE OPENED	DI	1823
FHA-FLT-G-2201-ZL	FILTER #22 INLET GATE CLOSED	DI	1823
FHA-FLT-G-2202-YN	FILTER #22 DRAIN GATE COMPUTER MODE	DI	1823
FHA-FLT-G-2202-YA	FILTER #22 DRAIN GATE NOT AVAILABLE-MAIN/CONTROL POWER FAIL	DI	1823
FHA-FLT-G-2202-ZH	FILTER #22 DRAIN GATE OPENED	DI	1823
FHA-FLT-G-2202-ZL	FILTER #22 DRAIN GATE CLOSED	DI	1823

I/O Tag No	Description	Type	RPV
FHA-FLT-V-2201-YN	FILTER #22 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1823
FHA-FLT-V-2201-YA	FILTER #22 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1823
FHA-FLT-V-2201-ZH	FILTER #22 EFFLUENT RATE CONTROL VALVE OPENED	DI	1823
FHA-FLT-V-2201-ZL	FILTER #22 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1823
FHA-FLT-V-2202-YN	FILTER #22 BACKWASH VALVE COMPUTER MODE	DI	1823
FHA-FLT-V-2202-YA	FILTER #22 BACKWASH VALVE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1823
FHA-FLT-V-2202-ZH	FILTER #22 BACKWASH VALVE OPENED	DI	1823
FHA-FLT-V-2202-ZL	FILTER #22 BACKWASH VALVE CLOSED	DI	1823
FHA-FLT-V-2203-YN	FILTER #22 SURFACE SWEEP VALVE COMPUTER MODE	DI	1823
FHA-FLT-V-2203-YA	FILTER #22 SURFACE SWEEP VALVE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1823
FHA-FLT-V-2203-ZH	FILTER #22 SURFACE SWEEP VALVE OPENED	DI	1823
FHA-FLT-V-2203-ZL	FILTER #22 SURFACE SWEEP VALVE CLOSED	DI	1823
FHA-FLT-G-2301-YN	FILTER #23 INLET GATE COMPUTER MODE	DI	1823
FHA-FLT-G-2301-YA	FILTER #23 INLET GATE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1823
FHA-FLT-G-2301-ZH	FILTER #23 INLET GATE OPENED	DI	1823
FHA-FLT-G-2301-ZL	FILTER #23 INLET GATE CLOSED	DI	1823
FHA-FLT-G-2302-YN	FILTER #23 DRAIN GATE COMPUTER MODE	DI	1823
FHA-FLT-G-2302-YA	FILTER #23 DRAIN GATE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1823
FHA-FLT-G-2302-ZH	FILTER #23 DRAIN GATE OPENED	DI	1823
FHA-FLT-G-2302-ZL	FILTER #23 DRAIN GATE CLOSED	DI	1823
FHA-FLT-V-2301-YN	FILTER #23 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1823
FHA-FLT-V-2301-YA	FILTER #23 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1823
FHA-FLT-V-2301-ZH	FILTER #23 EFFLUENT RATE CONTROL VALVE OPENED	DI	1823
FHA-FLT-V-2301-ZL	FILTER #23 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1823
FHA-FLT-V-2302-YN	FILTER #23 BACKWASH VALVE COMPUTER MODE	DI	1823
FHA-FLT-V-2302-YA	FILTER #23 BACKWASH VALVE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1823
FHA-FLT-V-2302-ZH	FILTER #23 BACKWASH VALVE OPENED	DI	1823
FHA-FLT-V-2302-ZL	FILTER #23 BACKWASH VALVE CLOSED	DI	1823
FHA-FLT-V-2303-YN	FILTER #23 SURFACE SWEEP VALVE COMPUTER MODE	DI	1823
FHA-FLT-V-2303-YA	FILTER #23 SURFACE SWEEP VALVE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1823
FHA-FLT-V-2303-ZH	FILTER #23 SURFACE SWEEP VALVE OPENED	DI	1823
FHA-FLT-V-2303-ZL	FILTER #23 SURFACE SWEEP VALVE CLOSED	DI	1823
FHA-FLT-G-2401-YN	FILTER #24 INLET GATE COMPUTER MODE	DI	1823
FHA-FLT-G-2401-YA	FILTER #24 INLET GATE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1823
FHA-FLT-G-2401-ZH	FILTER #24 INLET GATE OPENED	DI	1823
FHA-FLT-G-2401-ZL	FILTER #24 INLET GATE CLOSED	DI	1823
FHA-FLT-G-2402-YN	FILTER #24 DRAIN GATE COMPUTER MODE	DI	1823

I/O Tag No	Description	Type	RPU
FHA-FLT-G-2402-YA	FILTER #24 DRAIN GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1823
FHA-FLT-G-2402-ZH	FILTER #24 DRAIN GATE OPENED	DI	1823
FHA-FLT-G-2402-ZL	FILTER #24 DRAIN GATE CLOSED	DI	1823
FHA-FLT-V-2401-YN	FILTER #24 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1823
FHA-FLT-V-2401-YA	FILTER #24 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1823
FHA-FLT-V-2401-ZH	FILTER #24 EFFLUENT RATE CONTROL VALVE OPENED	DI	1823
FHA-FLT-V-2401-ZL	FILTER #24 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1823
FHA-FLT-V-2402-YN	FILTER #24 BACKWASH VALVE COMPUTER MODE	DI	1823
FHA-FLT-V-2402-YA	FILTER #24 BACKWASH VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1823
FHA-FLT-V-2402-ZH	FILTER #24 BACKWASH VALVE OPENED	DI	1823
FHA-FLT-V-2402-ZL	FILTER #24 BACKWASH VALVE CLOSED	DI	1823
FHA-FLT-V-2403-YN	FILTER #24 SURFACE SWEEP VALVE COMPUTER MODE	DI	1823
FHA-FLT-V-2403-YA	FILTER #24 SURFACE SWEEP VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1823
FHA-FLT-V-2403-ZH	FILTER #24 SURFACE SWEEP VALVE OPENED	DI	1823
FHA-FLT-V-2403-ZL	FILTER #24 SURFACE SWEEP VALVE CLOSED	DI	1823
FHA-FLT-HS-2101-ZL	FILTER #21 VALVE ACP ENABLE/DISABLE SWITCH	DI	1823
FHA-FLT-HS-2201-ZL	FILTER #22 VALVE ACP ENABLE/DISABLE SWITCH	DI	1823
FHA-FLT-HS-2301-ZL	FILTER #23 VALVE ACP ENABLE/DISABLE SWITCH	DI	1823
FHA-FLT-HS-2401-ZL	FILTER #24 VALVE ACP ENABLE/DISABLE SWITCH	DI	1823
FHA-FLT-AIT-2101-YA	FILTER #21 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1823
FHA-FLT-AIT-2201-YA	FILTER #22 EFFLUENT TURBIDITY INSTRUMENT FAULT	DI	1823
FHA-FLT-AIT-2301-YA	FILTER #23 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1823
FHA-FLT-AIT-2401-YA	FILTER #24 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1823
FHA-FLT-LSHL-2101-LAH	FILTER #21 HI LEVEL SWITCH	DI	1823
FHA-FLT-LSHL-2101-LAL	FILTER #21 LO LEVEL SWITCH	DI	1823
FHA-FLT-LSHL-2201-LAH	FILTER #22 HI LEVEL SWITCH	DI	1823
FHA-FLT-LSHL-2201-LAL	FILTER #22 LO LEVEL SWITCH	DI	1823
FHA-FLT-LSHL-2301-LAH	FILTER #23 HI LEVEL SWITCH	DI	1823
FHA-FLT-LSHL-2301-LAL	FILTER #23 LO LEVEL SWITCH	DI	1823
FHA-FLT-LSHL-2401-LAH	FILTER #24 HI LEVEL SWITCH	DI	1823
FHA-FLT-LSHL-2401-LAL	FILTER #24 LO LEVEL SWITCH	DI	1823
FHA-BW-V-0205-YN	EAST WW CTRL VLV COMPUTER MODE	DI	1823
FHA-BW-V-0205-YA	EAST WW CTRL VLV NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1823
FHA-BW-V-0205-ZH	EAST WW CTRL VLV OPENED	DI	1823
FHA-BW-V-0205-ZL	EAST WW CTRL VLV CLOSED	DI	1823
FHA-FLT-LIT-0201-YA	EAST SEW CONDUIT LEVEL LOSS OF SIGNAL	DI	1823
FHA-FLT-V-2109-ZH	FILTER #21 EFFLUENT G VALVE OPENED	DI	1823
FHA-FLT-V-2109-ZL	FILTER #21 EFFLUENT G VALVE CLOSED	DI	1823
FHA-FLT-V-2209-ZH	FILTER #22 EFFLUENT G VALVE OPENED	DI	1823

I/O Tag No	Description	Type	RPU
FHA-FLT-V-2209-ZL	FILTER #22 EFFLUENT G VALVE CLOSED	DI	1823
FHA-FLT-V-2309-ZH	FILTER #23 EFFLUENT G VALVE OPENED	DI	1823
FHA-FLT-V-2309-ZL	FILTER #23 EFFLUENT G VALVE CLOSED	DI	1823
FHA-FLT-V-2409-ZH	FILTER #24 EFFLUENT G VALVE OPENED	DI	1823
FHA-FLT-V-2409-ZL	FILTER #24 EFFLUENT G VALVE CLOSED	DI	1823
FHA-FLT-G-2101-VH	FILTER #21 INLET GATE OPEN	DO	1823
FHA-FLT-G-2101-VL	FILTER #21 INLET GATE CLOSE	DO	1823
FHA-FLT-G-2102-VH	FILTER #21 DRAIN GATE OPEN	DO	1823
FHA-FLT-G-2102-VL	FILTER #21 DRAIN GATE CLOSE	DO	1823
FHA-FLT-V-2102-VH	FILTER #21 BACKWASH VALVE OPEN	DO	1823
FHA-FLT-V-2102-VL	FILTER #21 BACKWASH VALVE CLOSE	DO	1823
FHA-FLT-V-2103-VH	FILTER #21 SURFACE SWEEP VALVE OPEN	DO	1823
FHA-FLT-V-2103-VL	FILTER #21 SURFACE SWEEP VALVE CLOSE	DO	1823
FHA-FLT-G-2201-VH	FILTER #22 INLET GATE OPEN	DO	1823
FHA-FLT-G-2201-VL	FILTER #22 INLET GATE CLOSE	DO	1823
FHA-FLT-G-2202-VH	FILTER #22 DRAIN GATE OPEN	DO	1823
FHA-FLT-G-2202-VL	FILTER #22 DRAIN GATE CLOSE	DO	1823
FHA-FLT-V-2202-VH	FILTER #22 BACKWASH VALVE OPEN	DO	1823
FHA-FLT-V-2202-VL	FILTER #22 BACKWASH VALVE CLOSE	DO	1823
FHA-FLT-V-2203-VH	FILTER #22 SURFACE SWEEP VALVE OPEN	DO	1823
FHA-FLT-V-2203-VL	FILTER #22 SURFACE SWEEP VALVE CLOSE	DO	1823
FHA-FLT-G-2301-VH	FILTER #23 INLET GATE OPEN	DO	1823
FHA-FLT-G-2301-VL	FILTER #23 INLET GATE CLOSE	DO	1823
FHA-FLT-G-2302-VH	FILTER #23 DRAIN GATE OPEN	DO	1823
FHA-FLT-G-2302-VL	FILTER #23 DRAIN GATE CLOSE	DO	1823
FHA-FLT-V-2302-VH	FILTER #23 BACKWASH VALVE OPEN	DO	1823
FHA-FLT-V-2302-VL	FILTER #23 BACKWASH VALVE CLOSE	DO	1823
FHA-FLT-V-2303-VH	FILTER #23 SURFACE SWEEP VALVE OPEN	DO	1823
FHA-FLT-V-2303-VL	FILTER #23 SURFACE SWEEP VALVE CLOSE	DO	1823
FHA-FLT-G-2401-VH	FILTER #24 INLET GATE OPEN	DO	1823
FHA-FLT-G-2401-VL	FILTER #24 INLET GATE CLOSE	DO	1823
FHA-FLT-G-2402-VH	FILTER #24 DRAIN GATE OPEN	DO	1823
FHA-FLT-G-2402-VL	FILTER #24 DRAIN GATE CLOSE	DO	1823
FHA-FLT-V-2402-VH	FILTER #24 BACKWASH VALVE OPEN	DO	1823
FHA-FLT-V-2402-VL	FILTER #24 BACKWASH VALVE CLOSE	DO	1823
FHA-FLT-V-2403-VH	FILTER #24 SURFACE SWEEP VALVE OPEN	DO	1823
FHA-FLT-V-2403-VL	FILTER #24 SURFACE SWEEP VALVE CLOSE	DO	1823
FHA-FLT-ZIT-2501-ZI	FILTER #25 RATE CONT VLV POSITION	AI	1621
FHA-FLT-AIT-2501-AI	FILTER #25 TURBIDITY	AI	1621
FHA-FLT-ZIT-2601-ZI	FILTER #26 RATE CONT VLV POSITION	AI	1621
FHA-FLT-AIT-2601-AI	FILTER #26 TURBIDITY	AI	1621
FHA-FLT-ZIT-2701-ZI	FILTER #27 RATE CONT VLV POSITION	AI	1621
FHA-FLT-AIT-2701-AI	FILTER #27 TURBIDITY	AI	1621
FHA-FLT-ZIT-2801-ZI	FILTER #28 RATE CONT VLV POSITION	AI	1621
FHA-FLT-AIT-2801-AI	FILTER #28 TURBIDITY	AI	1621
FHA-FLT-AIT-4201-AI	E FILTER TRB ANALYZER	AI	1621
FHA-FLT-AIT-4202-AI	E FLE RESID CLR ANALYZER	AI	1621

I/O Tag No	Description	Type	RPU
FHA-FLT-FIT-2501-FT	FILTER #25 FLOW	AI	1621
FHA-FLT-PDIT-2501-PDI	FILTER #25 HEAD LOSS	AI	1621
FHA-FLT-FIT-2601-FT	FILTER #26 FLOW	AI	1621
FHA-FLT-PDIT-2601-PDI	FILTER #26 HEAD LOSS	IA	1621
FHA-FLT-FIT-2701-FT	FILTER #27 FLOW	AI	1621
FHA-FLT-PDIT-2701-PDI	FILTER #27 HEAD LOSS	AI	1621
FHA-FLT-FIT-2801-FT	FILTER #28 FLOW	AI	1621
FHA-FLT-PDIT-2801-PDI	FILTER #28 HEAD LOSS	AI	1621
FCL-FLT-RPU-1823-FIC-C	MASTER FLOW RATE SETPOINT INPUT EAST	AO	1621
FHA-FLT-V-2501-ZC	FILTER #25 RATE CONTROL VALVE POSITION SETPOINT	AO	1621
FHA-FLT-V-2601-ZC	FILTER #26 RATE CONTROL VALVE POSITION SETPOINT	AO	1621
FHA-FLT-V-2701-VC	FILTER #27 RATE CONTROL VALVE POSITION SETPOINT	AO	1621
FHA-FLT-V-2801-VC	FILTER #28 RATE CONTROL VALVE POSITION SETPOINT	AO	1621
FHA-SPC-UPS-1621-EA	FILTERS 25-28 PLC UPS - POWER FAILURE	DI	1621
FHA-SPC-UPS-1621-EAL	FILTERS 25-28 PLC UPS - LOW BATTERY	DI	1621
FHA-SPC-UPS-1621-XA	FILTERS 25-28 PLC UPS - UPS FAILURE	DI	1621
FHA-SPC-UPS-1611-EA	EAST FILTRATION COMPUTER UPS - POWER FAILURE	DI	1621
FHA-SPC-UPS-1611-EAL	EAST FILTRATION COMPUTER UPS - LOW BATTERY	DI	1621
FHA-SPC-UPS-1611-XA	EAST FILTRATION COMPUTER UPS - UPS FAILURE	DI	1621
FHA-SPC-RPU-1621-TAH	FILTER #25-28 PANEL SMOKE/HEAT ALARM	DI	1621
FHA-FLT-G-2501-YN	FILTER #25 INLET GATE COMPUTER MODE	DI	1621
FHA-FLT-G-2501-YA	FILTER #25 INLET GATE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1621
FHA-FLT-G-2501-ZH	FILTER #25 INLET GATE OPENED	DI	1621
FHA-FLT-G-2501-ZL	FILTER #25 INLET GATE CLOSED	DI	1621
FHA-FLT-G-2502-YN	FILTER #25 DRAIN GATE COMPUTER MODE	DI	1621
FHA-FLT-G-2502-YA	FILTER #25 DRAIN GATE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1621
FHA-FLT-G-2502-ZH	FILTER #25 DRAIN GATE OPENED	DI	1621
FHA-FLT-G-2502-ZL	FILTER #25 DRAIN GATE CLOSED	DI	1621
FHA-FLT-V-2501-YN	FILTER #25 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1621
FHA-FLT-V-2501-YA	FILTER #25 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1621
FHA-FLT-V-2501-ZH	FILTER #25 EFFLUENT RATE CONTROL VALVE OPENED	DI	1621
FHA-FLT-V-2501-ZL	FILTER #25 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1621
FHA-FLT-V-2502-YN	FILTER #25 BACKWASH VALVE COMPUTER MODE	DI	1621
FHA-FLT-V-2502-YA	FILTER #25 BACKWASH VALVE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1621
FHA-FLT-V-2502-ZH	FILTER #25 BACKWASH VALVE OPENED	DI	1621
FHA-FLT-V-2502-ZL	FILTER #25 BACKWASH VALVE CLOSED	DI	1621
FHA-FLT-V-2503-YN	FILTER #25 SURFACE SWEEP VALVE COMPUTER MODE	DI	1621
FHA-FLT-V-2503-YA	FILTER #25 SURFACE SWEEP VALVE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1621

I/O Tag No	Description	Type	RPU
FHA-FLT-V-2503-ZH	FILTER #25 SURFACE SWEEP VALVE OPENED	DI	1621
FHA-FLT-V-2503-ZL	FILTER #25 SURFACE SWEEP VALVE CLOSED	DI	1621
FHA-FLT-G-2601-YN	FILTER #26 INLET GATE COMPUTER MODE	DI	1621
FHA-FLT-G-2601-YA	FILTER #26 INLET GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1621
FHA-FLT-G-2601-ZH	FILTER #26 INLET GATE OPENED	DI	1621
FHA-FLT-G-2601-ZL	FILTER #26 INLET GATE CLOSED	DI	1621
FHA-FLT-G-2602-YN	FILTER #26 DRAIN GATE COMPUTER MODE	DI	1621
FHA-FLT-G-2602-YA	FILTER #26 DRAIN GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1621
FHA-FLT-G-2602-ZH	FILTER #26 DRAIN GATE OPENED	DI	1621
FHA-FLT-G-2602-ZL	FILTER #26 DRAIN GATE CLOSED	DI	1621
FHA-FLT-V-2601-YN	FILTER #26 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1621
FHA-FLT-V-2601-YA	FILTER #26 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1621
FHA-FLT-V-2601-ZH	FILTER #26 EFFLUENT RATE CONTROL VALVE OPENED	DI	1621
FHA-FLT-V-2601-ZL	FILTER #26 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1621
FHA-FLT-V-2602-YN	FILTER #26 BACKWASH VALVE COMPUTER MODE	DI	1621
FHA-FLT-V-2602-YA	FILTER #26 BACKWASH VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1621
FHA-FLT-V-2602-ZH	FILTER #26 BACKWASH VALVE OPENED	DI	1621
FHA-FLT-V-2602-ZL	FILTER #26 BACKWASH VALVE CLOSED	DI	1621
FHA-FLT-V-2603-YN	FILTER #26 SURFACE SWEEP VALVE COMPUTER MODE	DI	1621
FHA-FLT-V-2603-YA	FILTER #26 SURFACE SWEEP VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1621
FHA-FLT-V-2603-ZH	FILTER #26 SURFACE SWEEP VALVE OPENED	DI	1621
FHA-FLT-V-2603-ZL	FILTER #26 SURFACE SWEEP VALVE CLOSED	DI	1621
FHA-FLT-G-2701-YN	FILTER #27 INLET GATE COMPUTER MODE	DI	1621
FHA-FLT-G-2701-YA	FILTER #27 INLET GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1621
FHA-FLT-G-2701-ZH	FILTER #27 INLET GATE OPENED	DI	1621
FHA-FLT-G-2701-ZL	FILTER #27 INLET GATE CLOSED	DI	1621
FHA-FLT-G-2702-YN	FILTER #27 DRAIN GATE COMPUTER MODE	DI	1621
FHA-FLT-G-2702-YA	FILTER #27 DRAIN GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1621
FHA-FLT-G-2702-ZH	FILTER #27 DRAIN GATE OPENED	DI	1621
FHA-FLT-G-2702-ZL	FILTER #27 DRAIN GATE CLOSED	DI	1621
FHA-FLT-V-2701-YN	FILTER #27 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1621
FHA-FLT-V-2701-YA	FILTER #27 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1621
FHA-FLT-V-2701-ZH	FILTER #27 EFFLUENT RATE CONTROL VALVE OPENED	DI	1621
FHA-FLT-V-2701-ZL	FILTER #27 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1621
FHA-FLT-V-2702-YN	FILTER #27 BACKWASH VALVE COMPUTER MODE	DI	1621
FHA-FLT-V-2702-YA	FILTER #27 BACKWASH VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1621
FHA-FLT-V-2702-ZH	FILTER #27 BACKWASH VALVE OPENED	DI	1621

I/O Tag No	Description	Type	RPU
FHA-FLT-V-2702-ZL	FILTER #27 BACKWASH VALVE CLOSED	DI	1621
FHA-FLT-V-2703-YN	FILTER #27 SURFACE SWEEP VALVE COMPUTER MODE	DI	1621
FHA-FLT-V-2703-YA	FILTER #27 SURFACE SWEEP VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1621
FHA-FLT-V-2703-ZH	FILTER #27 SURFACE SWEEP VALVE OPENED	DI	1621
FHA-FLT-V-2703-ZL	FILTER #27 SURFACE SWEEP VALVE CLOSED	DI	1621
FHA-FLT-G-2801-YN	FILTER #28 INLET GATE COMPUTER MODE	DI	1621
FHA-FLT-G-2801-YA	FILTER #28 INLET GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1621
FHA-FLT-G-2801-ZH	FILTER #28 INLET GATE OPENED	DI	1621
FHA-FLT-G-2801-ZL	FILTER #28 INLET GATE CLOSED	DI	1621
FHA-FLT-G-2802-YN	FILTER #28 DRAIN GATE COMPUTER MODE	DI	1621
FHA-FLT-G-2802-YA	FILTER #28 DRAIN GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1621
FHA-FLT-G-2802-ZH	FILTER #28 DRAIN GATE OPENED	DI	1621
FHA-FLT-G-2802-ZL	FILTER #28 DRAIN GATE CLOSED	DI	1621
FHA-FLT-V-2801-YN	FILTER #28 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1621
FHA-FLT-V-2801-YA	FILTER #28 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1621
FHA-FLT-V-2801-ZH	FILTER #28 EFFLUENT RATE CONTROL VALVE OPENED	DI	1621
FHA-FLT-V-2801-ZL	FILTER #28 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1621
FHA-FLT-V-2802-YN	FILTER #28 BACKWASH VALVE COMPUTER MODE	DI	1621
FHA-FLT-V-2802-YA	FILTER #28 BACKWASH VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1621
FHA-FLT-V-2802-ZH	FILTER #28 BACKWASH VALVE OPENED	DI	1621
FHA-FLT-V-2802-ZL	FILTER #28 BACKWASH VALVE CLOSED	DI	1621
FHA-FLT-V-2803-YN	FILTER #28 SURFACE SWEEP VALVE COMPUTER MODE	DI	1621
FHA-FLT-V-2803-YA	FILTER #28 SURFACE SWEEP VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1621
FHA-FLT-V-2803-ZH	FILTER #28 SURFACE SWEEP VALVE OPENED	DI	1621
FHA-FLT-V-2803-ZL	FILTER #28 SURFACE SWEEP VALVE CLOSED	DI	1621
FHA-FLT-HS-2501-ZL	FILTER #25 VALVE ACP ENABLE/DISABLE SWITCH	DI	1621
FHA-FLT-HS-2601-ZL	FILTER #26 VALVE ACP ENABLE/DISABLE SWITCH	DI	1621
FHA-FLT-HS-2701-ZL	FILTER #27 VALVE ACP ENABLE/DISABLE SWITCH	DI	1621
FHA-FLT-HS-2801-ZL	FILTER #28 VALVE ACP ENABLE/DISABLE SWITCH	DI	1621
FHA-FLT-AIT-2501-YA	FILTER #25 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1621
FHA-FLT-AIT-2601-YA	FILTER #26 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1621
FHA-FLT-AIT-2701-YA	FILTER #27 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1621
FHA-FLT-AIT-2801-YA	FILTER #28 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1621
FHA-FLT-LSHL-2501-LAH	FILTER #25 HI LEVEL SWITCH	DI	1621
FHA-FLT-LSHL-2501-LAL	FILTER #25 LO LEVEL SWITCH	DI	1621
FHA-FLT-LSHL-2601-LAH	FILTER #26 HI LEVEL SWITCH	DI	1621
FHA-FLT-LSHL-2601-LAL	FILTER #26 LO LEVEL SWITCH	DI	1621



I/O Tag No	Description	Type	RPU
FHA-FLT-LSHL-2701-LAH	FILTER #27 HI LEVEL SWITCH	DI	1621
FHA-FLT-LSHL-2701-LAL	FILTER #27 LO LEVEL SWITCH	DI	1621
FHA-FLT-LSHL-2801-LAH	FILTER #28 HI LEVEL SWITCH	DI	1621
FHA-FLT-LSHL-2801-LAL	FILTER #28 LO LEVEL SWITCH	DI	1621
FHA-FLT-V-2509-ZH	FILTER #25 EFFLUENT G VALVE OPENED	DI	1621
FHA-FLT-V-2509-ZL	FILTER #25 EFFLUENT G VALVE CLOSED	DI	1621
FHA-FLT-V-2609-ZH	FILTER #26 EFFLUENT G VALVE OPENED	DI	1621
FHA-FLT-V-2609-ZL	FILTER #26 EFFLUENT G VALVE CLOSED	DI	1621
FHA-FLT-V-2709-ZH	FILTER #27 EFFLUENT G VALVE OPENED	DI	1621
FHA-FLT-V-2709-ZL	FILTER #27 EFFLUENT G VALVE CLOSED	DI	1621
FHA-FLT-V-2809-ZH	FILTER #28 EFFLUENT G VALVE OPENED	DI	1621
FHA-FLT-V-2809-ZL	FILTER #28 EFFLUENT G VALVE CLOSED	DI	1621
FHA-FLT-AIT-4201-YA	FILTER TRB ANALYZER LOSS OF SIGNAL (N/A – DISABLED IN SOFTWARE LOGIC)	DI	1621
FHA-FLT-AIT-4202-YA	E FLE RESID CLR ANALYZER INSTRUMENT FAULT	DI	1621
FHA-FLT-FSL-4201-FAL	E FILTER CMPST SMP PUMP FLOW LOW ALARM	DI	1621
FHA-FLT-FSL-4202-FAL	E FILTER TRB ANALYZER FLOW LOW ALARM	DI	1621
FHA-FLT-FSL-4203-FAL	E FLE RESID CLR ANALYZER FLOW LOW ALARM	DI	1621
FHA-FLT-P-4201-YN	E FILTER CMPST SMP PUMP COMPUTER MODE	DI	1621
FHA-FLT-P-4201-MN	E FILTER CMPST SMP PUMP RUNNING	DI	1621
FHA-FLT-V-4208-YN	EAST ANALYZER ISLN VALVE COMPUTER MODE	DI	1621
FHA-FLT-V-4208-YA	EAST ANALYZER ISLN VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1621
FHA-FLT-V-4208-ZH	EAST ANALYZER ISLN VALVE OPENED	DI	1621
FHA-FLT-V-4208-ZL	EAST ANALYZER ISLN VALVE CLOSED	DI	1621
FHA-FLT-V-4209-YN	EAST BACKFLUSH VALVE COMPUTER MODE	DI	1621
FHA-FLT-V-4209-YA	EAST BACKFLUSH VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1621
FHA-FLT-V-4209-ZH	EAST BACKFLUSH VALVE OPENED	DI	1621
FHA-FLT-V-4209-ZL	EAST BACKFLUSH VALVE CLOSED	DI	1621
FHA-FLT-V-4210-YN	EAST DRAIN VALVE COMPUTER MODE	DI	1621
FHA-FLT-V-4210-YA	EAST DRAIN VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1621
FHA-FLT-V-4210-ZH	EAST DRAIN VALVE OPENED	DI	1621
FHA-FLT-V-4210-ZL	EAST DRAIN VALVE CLOSED	DI	1621
FHA-FLT-V-4206-YN	EAST LAB ISLN VALVE COMPUTER MODE	DI	1621
FHA-FLT-V-4206-YA	EAST LAB ISLN VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1621
FHA-FLT-V-4206-ZH	EAST LAB ISLN VALVE OPENED	DI	1621
FHA-FLT-V-4206-ZL	EAST LAB ISLN VALVE CLOSED	DI	1621
FHA-FLT-V-4211-YN	EAST SUCT FLUSH VALVE COMPUTER MODE	DI	1621
FHA-FLT-V-4211-YA	EAST SUCT FLUSH VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1621
FHA-FLT-V-4211-ZH	EAST SUCT FLUSH VALVE OPENED	DI	1621
FHA-FLT-V-4211-ZL	EAST SUCT FLUSH VALVE CLOSED	DI	1621
FHA-FLT-G-2501-VH	FILTER #25 INLET GATE OPEN	DO	1621
FHA-FLT-G-2501-VL	FILTER #25 INLET GATE CLOSE	DO	1621

I/O Tag No	Description	Type	RPU
FHA-FLT-G-2502-VH	FILTER #25 DRAIN GATE OPEN	DO	1621
FHA-FLT-G-2502-VL	FILTER #25 DRAIN GATE CLOSE	DO	1621
FHA-FLT-V-2502-VH	FILTER #25 BACKWASH VALVE OPEN	DO	1621
FHA-FLT-V-2502-VL	FILTER #25 BACKWASH VALVE CLOSE	DO	1621
FHA-FLT-V-2503-VH	FILTER #25 SURFACE SWEEP VALVE OPEN	DO	1621
FHA-FLT-V-2503-VL	FILTER #25 SURFACE SWEEP VALVE CLOSE	DO	1621
FHA-FLT-G-2601-VH	FILTER #26 INLET GATE OPEN	DO	1621
FHA-FLT-G-2601-VL	FILTER #26 INLET GATE CLOSE	DO	1621
FHA-FLT-G-2602-VH	FILTER #26 DRAIN GATE OPEN	DO	1621
FHA-FLT-G-2602-VL	FILTER #26 DRAIN GATE CLOSE	DO	1621
FHA-FLT-V-2602-VH	FILTER #26 BACKWASH VALVE OPEN	DO	1621
FHA-FLT-V-2602-VL	FILTER #26 BACKWASH VALVE CLOSE	DO	1621
FHA-FLT-V-2603-VH	FILTER #26 SURFACE SWEEP VALVE OPEN	DO	1621
FHA-FLT-V-2603-VL	FILTER #26 SURFACE SWEEP VALVE CLOSE	DO	1621
FHA-FLT-G-2701-VH	FILTER #27 INLET GATE OPEN	DO	1621
FHA-FLT-G-2701-VL	FILTER #27 INLET GATE CLOSE	DO	1621
FHA-FLT-G-2702-VH	FILTER #27 DRAIN GATE OPEN	DO	1621
FHA-FLT-G-2702-VL	FILTER #27 DRAIN GATE CLOSE	DO	1621
FHA-FLT-V-2702-VH	FILTER #27 BACKWASH VALVE OPEN	DO	1621
FHA-FLT-V-2702-VL	FILTER #27 BACKWASH VALVE CLOSE	DO	1621
FHA-FLT-V-2703-VH	FILTER #27 SURFACE SWEEP VALVE OPEN	DO	1621
FHA-FLT-V-2703-VL	FILTER #27 SURFACE SWEEP VALVE CLOSE	DO	1621
FHA-FLT-G-2801-VH	FILTER #28 INLET GATE OPEN	DO	1621
FHA-FLT-G-2801-VL	FILTER #28 INLET GATE CLOSE	DO	1621
FHA-FLT-G-2802-VH	FILTER #28 DRAIN GATE OPEN	DO	1621
FHA-FLT-G-2802-VL	FILTER #28 DRAIN GATE CLOSE	DO	1621
FHA-FLT-V-2802-VH	FILTER #28 BACKWASH VALVE OPEN	DO	1621
FHA-FLT-V-2802-VL	FILTER #28 BACKWASH VALVE CLOSE	DO	1621
FHA-FLT-V-2803-VH	FILTER #28 SURFACE SWEEP VALVE OPEN	DO	1621
FHA-FLT-V-2803-VL	FILTER #28 SURFACE SWEEP VALVE CLOSE	DO	1621
FHA-FLT-P-4201-MH	E FILTER CMPST SMP PUMP START COMMAND	DO	1621
FHA-FLT-P-4201-MB	E FILTER CMPST SMP PUMP STOP COMMAND	DO	1621
FHA-FLT-V-4208-VH	EAST ANALYZER ISLN VALVE OPEN	DO	1621
FHA-FLT-V-4208-VL	EAST ANALYZER ISLN VALVE CLOSE	DO	1621
FHA-FLT-V-4209-VH	EAST BACKFLUSH VALVE OPEN	DO	1621
FHA-FLT-V-4209-VL	EAST BACKFLUSH VALVE CLOSE	DO	1621
FHA-FLT-V-4210-VH	EAST DRAIN VALVE OPEN	DO	1621
FHA-FLT-V-4210-VL	EAST DRAIN VALVE CLOSE	DO	1621
FHA-FLT-V-4206-VH	EAST LAB ISLN VALVE OPEN	DO	1621
FHA-FLT-V-4206-VL	EAST LAB ISLN VALVE CLOSE	DO	1621
FHA-FLT-V-4211-VH	EAST SUCT FLUSH VALVE OPEN	DO	1621
FHA-FLT-V-4211-VL	EAST SUCT FLUSH VALVE CLOSE	DO	1621
FHA-FLT-ZIT-2901-ZI	FILTER #29 RATE CONT VLV POSITION	AI	1622
FHA-FLT-AIT-2901-AI	FILTER #29 TURBIDITY	AI	1622
FHA-FLT-ZIT-3001-ZI	FILTER #30 RATE CONT VLV POSITION	AI	1622
FHA-FLT-AIT-3001-AI	FILTER #30 TURBIDITY	AI	1622
FHA-FLT-ZIT-3101-ZI	FILTER #31 RATE CONT VLV POSITION	AI	1622

I/O Tag No	Description	Type	RPU
FHA-FLT-AIT-3101-AI	FILTER #31 TURBIDITY	AI	1622
FHA-FLT-ZIT-3201-ZI	FILTER #32 RATE CONT VLV POSITION	AI	1622
FHA-FLT-AIT-3201-AI	FILTER #32 TURBIDITY	AI	1622
FHA-FLT-FIT-2901-FT	FILTER #29 FLOW	AI	1622
FHA-FLT-PDIT-2901-PDI	FILTER #29 HEAD LOSS	AI	1622
FHA-FLT-FIT-3001-FT	FILTER #30 FLOW	AI	1622
FHA-FLT-PDIT-3001-PDI	FILTER #30 HEAD LOSS	AI	1622
FHA-FLT-FIT-3101-FT	FILTER #31 FLOW	AI	1622
FHA-FLT-PDIT-3101-PDI	FILTER #31 HEAD LOSS	AI	1622
FHA-FLT-FIT-3201-FT	FILTER #32 FLOW	AI	1622
FHA-FLT-PDIT-3201-PDI	FILTER #32 HEAD LOSS	AI	1622
FCL-FLT-RPU-1823-FIC-C	MASTER FLOW RATE SETPOINT INPUT EAST	AO	1622
FHA-FLT-V-2901-ZC	FILTER #29 RATE CONTROL VALVE POSITION SETPOINT	AO	1622
FHA-FLT-V-3001-ZC	FILTER #30 RATE CONTROL VALVE POSITION SETPOINT	AO	1622
FHA-FLT-V-3101-VC	FILTER #31 RATE CONTROL VALVE POSITION SETPOINT	AO	1622
FHA-FLT-V-3201-VC	FILTER #32 RATE CONTROL VALVE POSITION SETPOINT	AO	1622
FHA-SPC-UPS-1622-EA	FILTERS 29-32 PLC UPS - POWER FAILURE	DI	1622
FHA-SPC-UPS-1622-EAL	FILTERS 29-32 PLC UPS - LOW BATTERY	DI	1622
FHA-SPC-UPS-1622-XA	FILTERS 29-32 PLC UPS - UPS FAILURE	DI	1622
FHA-SPC-RPU-1622-TAH	FILTER #29-32 PANEL SMOKE/HEAT ALARM	DI	1622
FHA-FLT-G-2901-YN	FILTER #29 INLET GATE COMPUTER MODE	DI	1622
FHA-FLT-G-2901-YA	FILTER #29 INLET GATE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1622
FHA-FLT-G-2901-ZH	FILTER #29 INLET GATE OPENED	DI	1622
FHA-FLT-G-2901-ZL	FILTER #29 INLET GATE CLOSED	DI	1622
FHA-FLT-G-2902-YN	FILTER #29 DRAIN GATE COMPUTER MODE	DI	1622
FHA-FLT-G-2902-YA	FILTER #29 DRAIN GATE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1622
FHA-FLT-G-2902-ZH	FILTER #29 DRAIN GATE OPENED	DI	1622
FHA-FLT-G-2902-ZL	FILTER #29 DRAIN GATE CLOSED	DI	1622
FHA-FLT-V-2901-YN	FILTER #29 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1622
FHA-FLT-V-2901-YA	FILTER #29 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1622
FHA-FLT-V-2901-ZH	FILTER #29 EFFLUENT RATE CONTROL VALVE OPENED	DI	1622
FHA-FLT-V-2901-ZL	FILTER #29 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1622
FHA-FLT-V-2902-YN	FILTER #29 BACKWASH VALVE COMPUTER MODE	DI	1622
FHA-FLT-V-2902-YA	FILTER #29 BACKWASH VALVE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1622
FHA-FLT-V-2902-ZH	FILTER #29 BACKWASH VALVE OPENED	DI	1622
FHA-FLT-V-2902-ZL	FILTER #29 BACKWASH VALVE CLOSED	DI	1622
FHA-FLT-V-2903-YN	FILTER #29 SURFACE SWEEP VALVE COMPUTER MODE	DI	1622
FHA-FLT-V-2903-YA	FILTER #29 SURFACE SWEEP VALVE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1622

I/O Tag No	Description	Type	RPU
FHA-FLT-V-2903-ZH	FILTER #29 SURFACE SWEEP VALVE OPENED	DI	1622
FHA-FLT-V-2903-ZL	FILTER #29 SURFACE SWEEP VALVE CLOSED	DI	1622
FHA-FLT-G-3001-YN	FILTER #30 INLET GATE COMPUTER MODE	DI	1622
FHA-FLT-G-3001-YA	FILTER #30 INLET GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1622
FHA-FLT-G-3001-ZH	FILTER #30 INLET GATE OPENED	DI	1622
FHA-FLT-G-3001-ZL	FILTER #30 INLET GATE CLOSED	DI	1622
FHA-FLT-G-3002-YN	FILTER #30 DRAIN GATE COMPUTER MODE	DI	1622
FHA-FLT-G-3002-YA	FILTER #30 DRAIN GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1622
FHA-FLT-G-3002-ZH	FILTER #30 DRAIN GATE OPENED	DI	1622
FHA-FLT-G-3002-ZL	FILTER #30 DRAIN GATE CLOSED	DI	1622
FHA-FLT-V-3001-YN	FILTER #30 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1622
FHA-FLT-V-3001-YA	FILTER #30 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1622
FHA-FLT-V-3001-ZH	FILTER #30 EFFLUENT RATE CONTROL VALVE OPENED	DI	1622
FHA-FLT-V-3001-ZL	FILTER #30 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1622
FHA-FLT-V-3002-YN	FILTER #30 BACKWASH VALVE COMPUTER MODE	DI	1622
FHA-FLT-V-3002-YA	FILTER #30 BACKWASH VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1622
FHA-FLT-V-3002-ZH	FILTER #30 BACKWASH VALVE OPENED	DI	1622
FHA-FLT-V-3002-ZL	FILTER #30 BACKWASH VALVE CLOSED	DI	1622
FHA-FLT-V-3003-YN	FILTER #30 SURFACE SWEEP VALVE COMPUTER MODE	DI	1622
FHA-FLT-V-3003-YA	FILTER #30 SURFACE SWEEP VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1622
FHA-FLT-V-3003-ZH	FILTER #30 SURFACE SWEEP VALVE OPENED	DI	1622
FHA-FLT-V-3003-ZL	FILTER #30 SURFACE SWEEP VALVE CLOSED	DI	1622
FHA-FLT-G-3101-YN	FILTER #31 INLET GATE COMPUTER MODE	DI	1622
FHA-FLT-G-3101-YA	FILTER #31 INLET GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1622
FHA-FLT-G-3101-ZH	FILTER #31 INLET GATE OPENED	DI	1622
FHA-FLT-G-3101-ZL	FILTER #31 INLET GATE CLOSED	DI	1622
FHA-FLT-G-3102-YN	FILTER #31 DRAIN GATE COMPUTER MODE	DI	1622
FHA-FLT-G-3102-YA	FILTER #31 DRAIN GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1622
FHA-FLT-G-3102-ZH	FILTER #31 DRAIN GATE OPENED	DI	1622
FHA-FLT-G-3102-ZL	FILTER #31 DRAIN GATE CLOSED	DI	1622
FHA-FLT-V-3101-YN	FILTER #31 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1622
FHA-FLT-V-3101-YA	FILTER #31 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1622
FHA-FLT-V-3101-ZH	FILTER #31 EFFLUENT RATE CONTROL VALVE OPENED	DI	1622
FHA-FLT-V-3101-ZL	FILTER #31 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1622
FHA-FLT-V-3102-YN	FILTER #31 BACKWASH VALVE COMPUTER MODE	DI	1622
FHA-FLT-V-3102-YA	FILTER #31 BACKWASH VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1622
FHA-FLT-V-3102-ZH	FILTER #31 BACKWASH VALVE OPENED	DI	1622

I/O Tag No	Description	Type	RPU
FHA-FLT-V-3102-ZL	FILTER #31 BACKWASH VALVE CLOSED	DI	1622
FHA-FLT-V-3103-YN	FILTER #31 SURFACE SWEEP VALVE COMPUTER MODE	DI	1622
FHA-FLT-V-3103-YA	FILTER #31 SURFACE SWEEP VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1622
FHA-FLT-V-3103-ZH	FILTER #31 SURFACE SWEEP VALVE OPENED	DI	1622
FHA-FLT-V-3103-ZL	FILTER #31 SURFACE SWEEP VALVE CLOSED	DI	1622
FHA-FLT-G-3201-YN	FILTER #32 INLET GATE COMPUTER MODE	DI	1622
FHA-FLT-G-3201-YA	FILTER #32 INLET GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1622
FHA-FLT-G-3201-ZH	FILTER #32 INLET GATE OPENED	DI	1622
FHA-FLT-G-3201-ZL	FILTER #32 INLET GATE CLOSED	DI	1622
FHA-FLT-G-3202-YN	FILTER #32 DRAIN GATE COMPUTER MODE	DI	1622
FHA-FLT-G-3202-YA	FILTER #32 DRAIN GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1622
FHA-FLT-G-3202-ZH	FILTER #32 DRAIN GATE OPENED	DI	1622
FHA-FLT-G-3202-ZL	FILTER #32 DRAIN GATE CLOSED	DI	1622
FHA-FLT-V-3201-YN	FILTER #32 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1622
FHA-FLT-V-3201-YA	FILTER #32 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1622
FHA-FLT-V-3201-ZH	FILTER #32 EFFLUENT RATE CONTROL VALVE OPENED	DI	1622
FHA-FLT-V-3201-ZL	FILTER #32 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1622
FHA-FLT-V-3202-YN	FILTER #32 BACKWASH VALVE COMPUTER MODE	DI	1622
FHA-FLT-V-3202-YA	FILTER #32 BACKWASH VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1622
FHA-FLT-V-3202-ZH	FILTER #32 BACKWASH VALVE OPENED	DI	1622
FHA-FLT-V-3202-ZL	FILTER #32 BACKWASH VALVE CLOSED	DI	1622
FHA-FLT-V-3203-YN	FILTER #32 SURFACE SWEEP VALVE COMPUTER MODE	DI	1622
FHA-FLT-V-3203-YA	FILTER #32 SURFACE SWEEP VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1622
FHA-FLT-V-3203-ZH	FILTER #32 SURFACE SWEEP VALVE OPENED	DI	1622
FHA-FLT-V-3203-ZL	FILTER #32 SURFACE SWEEP VALVE CLOSED	DI	1622
FHA-FLT-HS-2901-ZL	FILTER #29 VALVE ACP ENABLE/DISABLE SWITCH	DI	1622
FHA-FLT-HS-3001-ZL	FILTER #30 VALVE ACP ENABLE/DISABLE SWITCH	DI	1622
FHA-FLT-HS-3101-ZL	FILTER #31 VALVE ACP ENABLE/DISABLE SWITCH	DI	1622
FHA-FLT-HS-3201-ZL	FILTER #32 VALVE ACP ENABLE/DISABLE SWITCH	DI	1622
FHA-FLT-AIT-2901-YA	FILTER #29 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1622
FHA-FLT-AIT-3001-YA	FILTER #30 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1622
FHA-FLT-AIT-3101-YA	FILTER #31 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1622
FHA-FLT-AIT-3201-YA	FILTER #32 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1622
FHA-FLT-LSHL-2901-LAH	FILTER #29 HI LEVEL SWITCH	DI	1622
FHA-FLT-LSHL-2901-LAL	FILTER #29 LO LEVEL SWITCH	DI	1622
FHA-FLT-LSHL-3001-LAH	FILTER #30 HI LEVEL SWITCH	DI	1622
FHA-FLT-LSHL-3001-LAL	FILTER #30 LO LEVEL SWITCH	DI	1622

I/O Tag No	Description	Type	RPU
FHA-FLT-LSHL-3101-LAH	FILTER #31 HI LEVEL SWITCH	DI	1622
FHA-FLT-LSHL-3101-LAL	FILTER #31 LO LEVEL SWITCH	DI	1622
FHA-FLT-LSHL-3201-LAH	FILTER #32 HI LEVEL SWITCH	DI	1622
FHA-FLT-LSHL-3201-LAL	FILTER #32 LO LEVEL SWITCH	DI	1622
FHA-FLT-V-2909-ZH	FILTER #29 EFFLUENT G VALVE OPENED	DI	1622
FHA-FLT-V-2909-ZL	FILTER #29 EFFLUENT G VALVE CLOSED	DI	1622
FHA-FLT-V-3009-ZH	FILTER #30 EFFLUENT G VALVE OPENED	DI	1622
FHA-FLT-V-3009-ZL	FILTER #30 EFFLUENT G VALVE CLOSED	DI	1622
FHA-FLT-V-3109-ZH	FILTER #31 EFFLUENT G VALVE OPENED	DI	1622
FHA-FLT-V-3109-ZL	FILTER #31 EFFLUENT G VALVE CLOSED	DI	1622
FHA-FLT-V-3209-ZH	FILTER #32 EFFLUENT G VALVE OPENED	DI	1622
FHA-FLT-V-3209-ZL	FILTER #32 EFFLUENT G VALVE CLOSED	DI	1622
FHA-FLT-G-2901-VH	FILTER #29 INLET GATE OPEN	DO	1622
FHA-FLT-G-2901-VL	FILTER #29 INLET GATE CLOSE	DO	1622
FHA-FLT-G-2902-VH	FILTER #29 DRAIN GATE OPEN	DO	1622
FHA-FLT-G-2902-VL	FILTER #29 DRAIN GATE CLOSE	DO	1622
FHA-FLT-V-2902-VH	FILTER #29 BACKWASH VALVE OPEN	DO	1622
FHA-FLT-V-2902-VL	FILTER #29 BACKWASH VALVE CLOSE	DO	1622
FHA-FLT-V-2903-VH	FILTER #29 SURFACE SWEEP VALVE OPEN	DO	1622
FHA-FLT-V-2903-VL	FILTER #29 SURFACE SWEEP VALVE CLOSE	DO	1622
FHA-FLT-G-3001-VH	FILTER #30 INLET GATE OPEN	DO	1622
FHA-FLT-G-3001-VL	FILTER #30 INLET GATE CLOSE	DO	1622
FHA-FLT-G-3002-VH	FILTER #30 DRAIN GATE OPEN	DO	1622
FHA-FLT-G-3002-VL	FILTER #30 DRAIN GATE CLOSE	DO	1622
FHA-FLT-V-3002-VH	FILTER #30 BACKWASH VALVE OPEN	DO	1622
FHA-FLT-V-3002-VL	FILTER #30 BACKWASH VALVE CLOSE	DO	1622
FHA-FLT-V-3003-VH	FILTER #30 SURFACE SWEEP VALVE OPEN	DO	1622
FHA-FLT-V-3003-VL	FILTER #30 SURFACE SWEEP VALVE CLOSE	DO	1622
FHA-FLT-G-3101-VH	FILTER #31 INLET GATE OPEN	DO	1622
FHA-FLT-G-3101-VL	FILTER #31 INLET GATE CLOSE	DO	1622
FHA-FLT-G-3102-VH	FILTER #31 DRAIN GATE OPEN	DO	1622
FHA-FLT-G-3102-VL	FILTER #31 DRAIN GATE CLOSE	DO	1622
FHA-FLT-V-3102-VH	FILTER #31 BACKWASH VALVE OPEN	DO	1622
FHA-FLT-V-3102-VL	FILTER #31 BACKWASH VALVE CLOSE	DO	1622
FHA-FLT-V-3103-VH	FILTER #31 SURFACE SWEEP VALVE OPEN	DO	1622
FHA-FLT-V-3103-VL	FILTER #31 SURFACE SWEEP VALVE CLOSE	DO	1622
FHA-FLT-G-3201-VH	FILTER #32 INLET GATE OPEN	DO	1622
FHA-FLT-G-3201-VL	FILTER #32 INLET GATE CLOSE	DO	1622
FHA-FLT-G-3202-VH	FILTER #32 DRAIN GATE OPEN	DO	1622
FHA-FLT-G-3202-VL	FILTER #32 DRAIN GATE CLOSE	DO	1622
FHA-FLT-V-3202-VH	FILTER #32 BACKWASH VALVE OPEN	DO	1622
FHA-FLT-V-3202-VL	FILTER #32 BACKWASH VALVE CLOSE	DO	1622
FHA-FLT-V-3203-VH	FILTER #32 SURFACE SWEEP VALVE OPEN	DO	1622
FHA-FLT-V-3203-VL	FILTER #32 SURFACE SWEEP VALVE CLOSE	DO	1622
FHA-FLT-ZIT-3301-ZI	FILTER #33 RATE CONT VLV POSITION	AI	1623
FHA-FLT-AIT-3301-AI	FILTER #33 TURBIDITY	AI	1623
FHA-FLT-ZIT-3401-ZI	FILTER #34 RATE CONT VLV POSITION	AI	1623

I/O Tag No	Description	Type	RPU
FHA-FLT-AIT-3401-AI	FILTER #34 TURBIDITY	AI	1623
FHA-FLT-ZIT-3501-ZI	FILTER #35 RATE CONT VLV POSITION	AI	1623
FHA-FLT-AIT-3501-AI	FILTER #35 TURBIDITY	AI	1623
FHA-FLT-ZIT-3601-ZI	FILTER #36 RATE CONT VLV POSITION	AI	1623
FHA-FLT-AIT-3601-AI	FILTER #36 TURBIDITY	AI	1623
FHA-FLT-FIT-3301-FT	FILTER #33 FLOW	AI	1623
FHA-FLT-PDIT-3301-PDI	FILTER #33 HEAD LOSS	AI	1623
FHA-FLT-FIT-3401-FT	FILTER #34 FLOW	AI	1623
FHA-FLT-PDIT-3401-PDI	FILTER #34 HEAD LOSS	AI	1623
FHA-FLT-FIT-3501-FT	FILTER #35 FLOW	AI	1623
FHA-FLT-PDIT-3501-PDI	FILTER #35 HEAD LOSS	AI	1623
FHA-FLT-FIT-3601-FT	FILTER #36 FLOW	AI	1623
FHA-FLT-PDIT-3601-PDI	FILTER #36 HEAD LOSS	AI	1623
FCL-FLT-RPU-1823-FIC-C	MASTER FLOW RATE SETPOINT INPUT EAST	AO	1623
FHA-FLT-V-3301-ZC	FILTER #33 RATE CONTROL VALVE POSITION SETPOINT	AO	1623
FHA-FLT-V-3401-ZC	FILTER #34 RATE CONTROL VALVE POSITION SETPOINT	AO	1623
FHA-FLT-V-3501-ZC	FILTER #35 RATE CONTROL VALVE POSITION SETPOINT	AO	1623
FHA-FLT-V-3601-ZC	FILTER #36 RATE CONTROL VALVE POSITION SETPOINT	AO	1623
FHA-SPC-UPS-1623-EA	FILTERS 33-36 PLC UPS - POWER FAILURE	DI	1623
FHA-SPC-UPS-1623-EAL	FILTERS 33-36 PLC UPS - LOW BATTERY	DI	1623
FHA-SPC-UPS-1623-XA	FILTERS 33-36 PLC UPS - UPS FAILURE	DI	1623
FHA-SPC-RPU-1623-TAH	FILTER #33-36 PANEL SMOKE/HEAT ALARM	DI	1623
FHA-FLT-G-3301-YN	FILTER #33 INLET GATE COMPUTER MODE	DI	1623
FHA-FLT-G-3301-YA	FILTER #33 INLET GATE NOT AVAILABLE-MAIN/CONTROL POWER FAIL	DI	1623
FHA-FLT-G-3301-ZH	FILTER #33 INLET GATE OPENED	DI	1623
FHA-FLT-G-3301-ZL	FILTER #33 INLET GATE CLOSED	DI	1623
FHA-FLT-G-3302-YN	FILTER #33 DRAIN GATE COMPUTER MODE	DI	1623
FHA-FLT-G-3302-YA	FILTER #33 DRAIN GATE NOT AVAILABLE-MAIN/CONTROL POWER FAIL	DI	1623
FHA-FLT-G-3302-ZH	FILTER #33 DRAIN GATE OPENED	DI	1623
FHA-FLT-G-3302-ZL	FILTER #33 DRAIN GATE CLOSED	DI	1623
FHA-FLT-V-3301-YN	FILTER #33 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1623
FHA-FLT-V-3301-YA	FILTER #33 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1623
FHA-FLT-V-3301-ZH	FILTER #33 EFFLUENT RATE CONTROL VALVE OPENED	DI	1623
FHA-FLT-V-3301-ZL	FILTER #33 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1623
FHA-FLT-V-3302-YN	FILTER #33 BACKWASH VALVE COMPUTER MODE	DI	1623
FHA-FLT-V-3302-YA	FILTER #33 BACKWASH VALVE NOT AVAILABLE-MAIN/CONTROL POWER FAIL	DI	1623
FHA-FLT-V-3302-ZH	FILTER #33 BACKWASH VALVE OPENED	DI	1623
FHA-FLT-V-3302-ZL	FILTER #33 BACKWASH VALVE CLOSED	DI	1623
FHA-FLT-V-3303-YN	FILTER #33 SURFACE SWEEP VALVE COMPUTER MODE	DI	1623

I/O Tag No	Description	Type	RPU
FHA-FLT-V-3303-YA	FILTER #33 SURFACE SWEEP VALVE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1623
FHA-FLT-V-3303-ZH	FILTER #33 SURFACE SWEEP VALVE OPENED	DI	1623
FHA-FLT-V-3303-ZL	FILTER #33 SURFACE SWEEP VALVE CLOSED	DI	1623
FHA-FLT-G-3401-YN	FILTER #34 INLET GATE COMPUTER MODE	DI	1623
FHA-FLT-G-3401-YA	FILTER #34 INLET GATE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1623
FHA-FLT-G-3401-ZH	FILTER #34 INLET GATE OPENED	DI	1623
FHA-FLT-G-3401-ZL	FILTER #34 INLET GATE CLOSED	DI	1623
FHA-FLT-G-3402-YN	FILTER #34 DRAIN GATE COMPUTER MODE	DI	1623
FHA-FLT-G-3402-YA	FILTER #34 DRAIN GATE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1623
FHA-FLT-G-3402-ZH	FILTER #34 DRAIN GATE OPENED	DI	1623
FHA-FLT-G-3402-ZL	FILTER #34 DRAIN GATE CLOSED	DI	1623
FHA-FLT-V-3401-YN	FILTER #34 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1623
FHA-FLT-V-3401-YA	FILTER #34 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1623
FHA-FLT-V-3401-ZH	FILTER #34 EFFLUENT RATE CONTROL VALVE OPENED	DI	1623
FHA-FLT-V-3401-ZL	FILTER #34 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1623
FHA-FLT-V-3402-YN	FILTER #34 BACKWASH VALVE COMPUTER MODE	DI	1623
FHA-FLT-V-3402-YA	FILTER #34 BACKWASH VALVE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1623
FHA-FLT-V-3402-ZH	FILTER #34 BACKWASH VALVE OPENED	DI	1623
FHA-FLT-V-3402-ZL	FILTER #34 BACKWASH VALVE CLOSED	DI	1623
FHA-FLT-V-3403-YN	FILTER #34 SURFACE SWEEP VALVE COMPUTER MODE	DI	1623
FHA-FLT-V-3403-YA	FILTER #34 SURFACE SWEEP VALVE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1623
FHA-FLT-V-3403-ZH	FILTER #34 SURFACE SWEEP VALVE OPENED	DI	1623
FHA-FLT-V-3403-ZL	FILTER #34 SURFACE SWEEP VALVE CLOSED	DI	1623
FHA-FLT-G-3501-YN	FILTER #35 INLET GATE COMPUTER MODE	DI	1623
FHA-FLT-G-3501-YA	FILTER #35 INLET GATE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1623
FHA-FLT-G-3501-ZH	FILTER #35 INLET GATE OPENED	DI	1623
FHA-FLT-G-3501-ZL	FILTER #35 INLET GATE CLOSED	DI	1623
FHA-FLT-G-3502-YN	FILTER #35 DRAIN GATE COMPUTER MODE	DI	1623
FHA-FLT-G-3502-YA	FILTER #35 DRAIN GATE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1623
FHA-FLT-G-3502-ZH	FILTER #35 DRAIN GATE OPENED	DI	1623
FHA-FLT-G-3502-ZL	FILTER #35 DRAIN GATE CLOSED	DI	1623
FHA-FLT-V-3501-YN	FILTER #35 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1623
FHA-FLT-V-3501-YA	FILTER #35 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1623
FHA-FLT-V-3501-ZH	FILTER #35 EFFLUENT RATE CONTROL VALVE OPENED	DI	1623
FHA-FLT-V-3501-ZL	FILTER #35 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1623
FHA-FLT-V-3502-YN	FILTER #35 BACKWASH VALVE COMPUTER MODE	DI	1623



I/O Tag No	Description	Type	RPU
FHA-FLT-V-3502-YA	FILTER #35 BACKWASH VALVE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1623
FHA-FLT-V-3502-ZH	FILTER #35 BACKWASH VALVE OPENED	DI	1623
FHA-FLT-V-3502-ZL	FILTER #35 BACKWASH VALVE CLOSED	DI	1623
FHA-FLT-V-3503-YN	FILTER #35 SURFACE SWEEP VALVE COMPUTER MODE	DI	1623
FHA-FLT-V-3503-YA	FILTER #35 SURFACE SWEEP VALVE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1623
FHA-FLT-V-3503-ZH	FILTER #35 SURFACE SWEEP VALVE OPENED	DI	1623
FHA-FLT-V-3503-ZL	FILTER #35 SURFACE SWEEP VALVE CLOSED	DI	1623
FHA-FLT-G-3601-YN	FILTER #36 INLET GATE COMPUTER MODE	DI	1623
FHA-FLT-G-3601-YA	FILTER #36 INLET GATE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1623
FHA-FLT-G-3601-ZH	FILTER #36 INLET GATE OPENED	DI	1623
FHA-FLT-G-3601-ZL	FILTER #36 INLET GATE CLOSED	DI	1623
FHA-FLT-G-3602-YN	FILTER #36 DRAIN GATE COMPUTER MODE	DI	1623
FHA-FLT-G-3602-YA	FILTER #36 DRAIN GATE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1623
FHA-FLT-G-3602-ZH	FILTER #36 DRAIN GATE OPENED	DI	1623
FHA-FLT-G-3602-ZL	FILTER #36 DRAIN GATE CLOSED	DI	1623
FHA-FLT-V-3601-YN	FILTER #36 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1623
FHA-FLT-V-3601-YA	FILTER #36 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1623
FHA-FLT-V-3601-ZH	FILTER #36 EFFLUENT RATE CONTROL VALVE OPENED	DI	1623
FHA-FLT-V-3601-ZL	FILTER #36 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1623
FHA-FLT-V-3602-YN	FILTER #36 BACKWASH VALVE COMPUTER MODE	DI	1623
FHA-FLT-V-3602-YA	FILTER #36 BACKWASH VALVE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1623
FHA-FLT-V-3602-ZH	FILTER #36 BACKWASH VALVE OPENED	DI	1623
FHA-FLT-V-3602-ZL	FILTER #36 BACKWASH VALVE CLOSED	DI	1623
FHA-FLT-V-3603-YN	FILTER #36 SURFACE SWEEP VALVE COMPUTER MODE	DI	1623
FHA-FLT-V-3603-YA	FILTER #36 SURFACE SWEEP VALVE NOT AVAILABLE-- MAIN/CONTROL POWER FAIL	DI	1623
FHA-FLT-V-3603-ZH	FILTER #36 SURFACE SWEEP VALVE OPENED	DI	1623
FHA-FLT-V-3603-ZL	FILTER #36 SURFACE SWEEP VALVE CLOSED	DI	1623
FHA-FLT-HS-3301-ZL	FILTER #33 VALVE ACP ENABLE/DISABLE SWITCH	DI	1623
FHA-FLT-HS-3401-ZL	FILTER #34 VALVE ACP ENABLE/DISABLE SWITCH	DI	1623
FHA-FLT-HS-3501-ZL	FILTER #35 VALVE ACP ENABLE/DISABLE SWITCH	DI	1623
FHA-FLT-HS-3601-ZL	FILTER #36 VALVE ACP ENABLE/DISABLE SWITCH	DI	1623
FHA-FLT-AIT-3301-YA	FILTER #33 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1623
FHA-FLT-AIT-3401-YA	FILTER #33 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1623
FHA-FLT-AIT-3501-YA	FILTER #35 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1623
FHA-FLT-AIT-3601-YA	FILTER #36 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1623
FHA-FLT-LSHL-3301-LAH	FILTER #33 HI LEVEL SWITCH	DI	1623

I/O Tag No	Description	Type	RPU
FHA-FLT-LSHL-3301-LAL	FILTER #33 LO LEVEL SWITCH	DI	1623
FHA-FLT-LSHL-3401-LAH	FILTER #34 HI LEVEL SWITCH	DI	1623
FHA-FLT-LSHL-3401-LAL	FILTER #34 LO LEVEL SWITCH	DI	1623
FHA-FLT-LSHL-3501-LAH	FILTER #35 HI LEVEL SWITCH	DI	1623
FHA-FLT-LSHL-3501-LAL	FILTER #35 LO LEVEL SWITCH	DI	1623
FHA-FLT-LSHL-3601-LAH	FILTER #36 HI LEVEL SWITCH	DI	1623
FHA-FLT-LSHL-3601-LAL	FILTER #36 LO LEVEL SWITCH	DI	1623
FHA-FLT-V-3309-ZH	FILTER #33 EFFLUENT G VALVE OPENED	DI	1623
FHA-FLT-V-3309-ZL	FILTER #33 EFFLUENT G VALVE CLOSED	DI	1623
FHA-FLT-V-3409-ZH	FILTER #34 EFFLUENT G VALVE OPENED	DI	1623
FHA-FLT-V-3409-ZL	FILTER #34 EFFLUENT G VALVE CLOSED	DI	1623
FHA-FLT-V-3509-ZH	FILTER #35 EFFLUENT G VALVE OPENED	DI	1623
FHA-FLT-V-3509-ZL	FILTER #35 EFFLUENT G VALVE CLOSED	DI	1623
FHA-FLT-V-3609-ZH	FILTER #36 EFFLUENT G VALVE OPENED	DI	1623
FHA-FLT-V-3609-ZL	FILTER #36 EFFLUENT G VALVE CLOSED	DI	1623
FHA-FLT-G-3301-VH	FILTER #33 INLET GATE OPEN	DO	1623
FHA-FLT-G-3301-VL	FILTER #33 INLET GATE CLOSE	DO	1623
FHA-FLT-G-3302-VH	FILTER #33 DRAIN GATE OPEN	DO	1623
FHA-FLT-G-3302-VL	FILTER #33 DRAIN GATE CLOSE	DO	1623
FHA-FLT-V-3302-VH	FILTER #33 BACKWASH VALVE OPEN	DO	1623
FHA-FLT-V-3302-VL	FILTER #33 BACKWASH VALVE CLOSE	DO	1623
FHA-FLT-V-3303-VH	FILTER #33 SURFACE SWEEP VALVE OPEN	DO	1623
FHA-FLT-V-3303-VL	FILTER #33 SURFACE SWEEP VALVE CLOSE	DO	1623
FHA-FLT-G-3401-VH	FILTER #34 INLET GATE OPEN	DO	1623
FHA-FLT-G-3401-VL	FILTER #34 INLET GATE CLOSE	DO	1623
FHA-FLT-G-3402-VH	FILTER #34 DRAIN GATE OPEN	DO	1623
FHA-FLT-G-3402-VL	FILTER #34 DRAIN GATE CLOSE	DO	1623
FHA-FLT-V-3402-VH	FILTER #34 BACKWASH VALVE OPEN	DO	1623
FHA-FLT-V-3402-VL	FILTER #34 BACKWASH VALVE CLOSE	DO	1623
FHA-FLT-V-3403-VH	FILTER #34 SURFACE SWEEP VALVE OPEN	DO	1623
FHA-FLT-V-3403-VL	FILTER #34 SURFACE SWEEP VALVE CLOSE	DO	1623
FHA-FLT-G-3501-VH	FILTER #35 INLET GATE OPEN	DO	1623
FHA-FLT-G-3501-VL	FILTER #35 INLET GATE CLOSE	DO	1623
FHA-FLT-G-3502-VH	FILTER #35 DRAIN GATE OPEN	DO	1623
FHA-FLT-G-3502-VL	FILTER #35 DRAIN GATE CLOSE	DO	1623
FHA-FLT-V-3502-VH	FILTER #35 BACKWASH VALVE OPEN	DO	1623
FHA-FLT-V-3502-VL	FILTER #35 BACKWASH VALVE CLOSE	DO	1623
FHA-FLT-V-3503-VH	FILTER #35 SURFACE SWEEP VALVE OPEN	DO	1623
FHA-FLT-V-3503-VL	FILTER #35 SURFACE SWEEP VALVE CLOSE	DO	1623
FHA-FLT-G-3601-VH	FILTER #36 INLET GATE OPEN	DO	1623
FHA-FLT-G-3601-VL	FILTER #36 INLET GATE CLOSE	DO	1623
FHA-FLT-G-3602-VH	FILTER #36 DRAIN GATE OPEN	DO	1623
FHA-FLT-G-3602-VL	FILTER #36 DRAIN GATE CLOSE	DO	1623
FHA-FLT-V-3602-VH	FILTER #36 BACKWASH VALVE OPEN	DO	1623
FHA-FLT-V-3602-VL	FILTER #36 BACKWASH VALVE CLOSE	DO	1623
FHA-FLT-V-3603-VH	FILTER #36 SURFACE SWEEP VALVE OPEN	DO	1623
FHA-FLT-V-3603-VL	FILTER #36 SURFACE SWEEP VALVE CLOSE	DO	1623

I/O Tag No	Description	Type	RPU
FHA-FLT-ZIT-3701-ZI	FILTER #37 RATE CONT VLV POSITION	AI	1624
FHA-FLT-AIT-3701-AI	FILTER #37 TURBIDITY	AI	1624
FHA-FLT-ZIT-3801-ZI	FILTER #38 RATE CONT VLV POSITION	AI	1624
FHA-FLT-AIT-3801-AI	FILTER #38 TURBIDITY	AI	1624
FHA-FLT-ZIT-3901-ZI	FILTER #39 RATE CONT VLV POSITION	AI	1624
FHA-FLT-AIT-3901-AI	FILTER #39 TURBIDITY	AI	1624
FHA-FLT-ZIT-4001-ZI	FILTER #40 RATE CONT VLV POSITION	AI	1624
FHA-FLT-AIT-4001-AI	FILTER #40 TURBIDITY	AI	1624
FHA-SED-AIT-0201-AI	E SEW TRB ANALYZER	AI	1624
FHA-FLT-FIT-3701-FT	FILTER #37 FLOW	AI	1624
FHA-FLT-PDIT-3701-PDI	FILTER #37 HEAD LOSS	AI	1624
FHA-FLT-FIT-3801-FT	FILTER #38 FLOW	AI	1624
FHA-FLT-PDIT-3801-PDI	FILTER #38 HEAD LOSS	AI	1624
FHA-FLT-FIT-3901-FT	FILTER #39 FLOW	AI	1624
FHA-FLT-PDIT-3901-PDI	FILTER #39 HEAD LOSS	AI	1624
FHA-FLT-FIT-4001-FT	FILTER #40 FLOW	AI	1624
FHA-FLT-PDIT-4001-PDI	FILTER #40 HEAD LOSS	AI	1624
FCL-FLT-RPU-1823-FIC-C	MASTER FLOW RATE SETPOINT INPUT EAST	AO	1624
FHA-FLT-V-3701-ZC	FILTER #37 RATE CONTROL VALVE POSITION SETPOINT	AO	1624
FHA-FLT-V-3801-ZC	FILTER #38 RATE CONTROL VALVE POSITION SETPOINT	AO	1624
FHA-FLT-V-3901-ZC	FILTER #39 RATE CONTROL VALVE POSITION SETPOINT	AO	1624
FHA-FLT-V-4001-ZC	FILTER #40 RATE CONTROL VALVE POSITION SETPOINT	AO	1624
FHA-SPC-UPS-1624-EA	FILTERS 37-40 PLC UPS - POWER FAILURE	DI	1624
FHA-SPC-UPS-1624-EAL	FILTERS 37-40 PLC UPS - LOW BATTERY	DI	1624
FHA-SPC-UPS-1624-XA	FILTERS 37-40 PLC UPS - UPS FAILURE	DI	1624
FHA-SPC-RPU-1624-TAH	FILTER #37-40 PANEL SMOKE/HEAT ALARM	DI	1624
FHA-FLT-G-3701-YN	FILTER #37 INLET GATE COMPUTER MODE	DI	1624
FHA-FLT-G-3701-YA	FILTER #37 INLET GATE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1624
FHA-FLT-G-3701-ZH	FILTER #37 INLET GATE OPENED	DI	1624
FHA-FLT-G-3701-ZL	FILTER #37 INLET GATE CLOSED	DI	1624
FHA-FLT-G-3702-YN	FILTER #37 DRAIN GATE COMPUTER MODE	DI	1624
FHA-FLT-G-3702-YA	FILTER #37 DRAIN GATE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1624
FHA-FLT-G-3702-ZH	FILTER #37 DRAIN GATE OPENED	DI	1624
FHA-FLT-G-3702-ZL	FILTER #37 DRAIN GATE CLOSED	DI	1624
FHA-FLT-V-3701-YN	FILTER #37 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1624
FHA-FLT-V-3701-YA	FILTER #37 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE- MAIN/CONTROL POWER FAIL	DI	1624
FHA-FLT-V-3701-ZH	FILTER #37 EFFLUENT RATE CONTROL VALVE OPENED	DI	1624
FHA-FLT-V-3701-ZL	FILTER #37 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1624
FHA-FLT-V-3702-YN	FILTER #37 BACKWASH VALVE COMPUTER MODE	DI	1624

I/O Tag No	Description	Type	RPU
FHA-FLT-V-3702-YA	FILTER #37 BACKWASH VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1624
FHA-FLT-V-3702-ZH	FILTER #37 BACKWASH VALVE OPENED	DI	1624
FHA-FLT-V-3702-ZL	FILTER #37 BACKWASH VALVE CLOSED	DI	1624
FHA-FLT-V-3703-YN	FILTER #37 SURFACE SWEEP VALVE COMPUTER MODE	DI	1624
FHA-FLT-V-3703-YA	FILTER #37 SURFACE SWEEP VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1624
FHA-FLT-V-3703-ZH	FILTER #37 SURFACE SWEEP VALVE OPENED	DI	1624
FHA-FLT-V-3703-ZL	FILTER #37 SURFACE SWEEP VALVE CLOSED	DI	1624
FHA-FLT-G-3801-YN	FILTER #38 INLET GATE COMPUTER MODE	DI	1624
FHA-FLT-G-3801-YA	FILTER #38 INLET GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1624
FHA-FLT-G-3801-ZH	FILTER #38 INLET GATE OPENED	DI	1624
FHA-FLT-G-3801-ZL	FILTER #38 INLET GATE CLOSED	DI	1624
FHA-FLT-G-3802-YN	FILTER #38 DRAIN GATE COMPUTER MODE	DI	1624
FHA-FLT-G-3802-YA	FILTER #38 DRAIN GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1624
FHA-FLT-G-3802-ZH	FILTER #38 DRAIN GATE OPENED	DI	1624
FHA-FLT-G-3802-ZL	FILTER #38 DRAIN GATE CLOSED	DI	1624
FHA-FLT-V-3801-YN	FILTER #38 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1624
FHA-FLT-V-3801-YA	FILTER #38 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1624
FHA-FLT-V-3801-ZH	FILTER #38 EFFLUENT RATE CONTROL VALVE OPENED	DI	1624
FHA-FLT-V-3801-ZL	FILTER #38 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1624
FHA-FLT-V-3802-YN	FILTER #38 BACKWASH VALVE COMPUTER MODE	DI	1624
FHA-FLT-V-3802-YA	FILTER #38 BACKWASH VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1624
FHA-FLT-V-3802-ZH	FILTER #38 BACKWASH VALVE OPENED	DI	1624
FHA-FLT-V-3802-ZL	FILTER #38 BACKWASH VALVE CLOSED	DI	1624
FHA-FLT-V-3803-YN	FILTER #38 SURFACE SWEEP VALVE COMPUTER MODE	DI	1624
FHA-FLT-V-3803-YA	FILTER #38 SURFACE SWEEP VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1624
FHA-FLT-V-3803-ZH	FILTER #38 SURFACE SWEEP VALVE OPENED	DI	1624
FHA-FLT-V-3803-ZL	FILTER #38 SURFACE SWEEP VALVE CLOSED	DI	1624
FHA-FLT-G-3901-YN	FILTER #39 INLET GATE COMPUTER MODE	DI	1624
FHA-FLT-G-3901-YA	FILTER #39 INLET GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1624
FHA-FLT-G-3901-ZH	FILTER #39 INLET GATE OPENED	DI	1624
FHA-FLT-G-3901-ZL	FILTER #39 INLET GATE CLOSED	DI	1624
FHA-FLT-G-3902-YN	FILTER #39 DRAIN GATE COMPUTER MODE	DI	1624
FHA-FLT-G-3902-YA	FILTER #39 DRAIN GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1624
FHA-FLT-G-3902-ZH	FILTER #39 DRAIN GATE OPENED	DI	1624
FHA-FLT-G-3902-ZL	FILTER #39 DRAIN GATE CLOSED	DI	1624
FHA-FLT-V-3901-YN	FILTER #39 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1624

I/O Tag No	Description	Type	RPV
FHA-FLT-V-3901-YA	FILTER #39 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1624
FHA-FLT-V-3901-ZH	FILTER #39 EFFLUENT RATE CONTROL VALVE OPENED	DI	1624
FHA-FLT-V-3901-ZL	FILTER #39 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1624
FHA-FLT-V-3902-YN	FILTER #39 BACKWASH VALVE COMPUTER MODE	DI	1624
FHA-FLT-V-3902-YA	FILTER #39 BACKWASH VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1624
FHA-FLT-V-3902-ZH	FILTER #39 BACKWASH VALVE OPENED	DI	1624
FHA-FLT-V-3902-ZL	FILTER #39 BACKWASH VALVE CLOSED	DI	1624
FHA-FLT-V-3903-YN	FILTER #39 SURFACE SWEEP VALVE COMPUTER MODE	DI	1624
FHA-FLT-V-3903-YA	FILTER #39 SURFACE SWEEP VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1624
FHA-FLT-V-3903-ZH	FILTER #39 SURFACE SWEEP VALVE OPENED	DI	1624
FHA-FLT-V-3903-ZL	FILTER #39 SURFACE SWEEP VALVE CLOSED	DI	1624
FHA-FLT-G-4001-YN	FILTER #40 INLET GATE COMPUTER MODE	DI	1624
FHA-FLT-G-4001-YA	FILTER #40 INLET GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1624
FHA-FLT-G-4001-ZH	FILTER #40 INLET GATE OPENED	DI	1624
FHA-FLT-G-4001-ZL	FILTER #40 INLET GATE CLOSED	DI	1624
FHA-FLT-G-4002-YN	FILTER #40 DRAIN GATE COMPUTER MODE	DI	1624
FHA-FLT-G-4002-YA	FILTER #40 DRAIN GATE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1624
FHA-FLT-G-4002-ZH	FILTER #40 DRAIN GATE OPENED	DI	1624
FHA-FLT-G-4002-ZL	FILTER #40 DRAIN GATE CLOSED	DI	1624
FHA-FLT-V-4001-YN	FILTER #40 EFFLUENT RATE CONTROL VALVE COMPUTER MODE	DI	1624
FHA-FLT-V-4001-YA	FILTER #40 EFFLUENT RATE CONTROL VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1624
FHA-FLT-V-4001-ZH	FILTER #40 EFFLUENT RATE CONTROL VALVE OPENED	DI	1624
FHA-FLT-V-4001-ZL	FILTER #40 EFFLUENT RATE CONTROL VALVE CLOSED	DI	1624
FHA-FLT-V-4002-YN	FILTER #40 BACKWASH VALVE COMPUTER MODE	DI	1624
FHA-FLT-V-4002-YA	FILTER #40 BACKWASH VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1624
FHA-FLT-V-4002-ZH	FILTER #40 BACKWASH VALVE OPENED	DI	1624
FHA-FLT-V-4002-ZL	FILTER #40 BACKWASH VALVE CLOSED	DI	1624
FHA-FLT-V-4003-YN	FILTER #40 SURFACE SWEEP VALVE COMPUTER MODE	DI	1624
FHA-FLT-V-4003-YA	FILTER #40 SURFACE SWEEP VALVE NOT AVAILABLE– MAIN/CONTROL POWER FAIL	DI	1624
FHA-FLT-V-4003-ZH	FILTER #40 SURFACE SWEEP VALVE OPENED	DI	1624
FHA-FLT-V-4003-ZL	FILTER #40 SURFACE SWEEP VALVE CLOSED	DI	1624
FHA-FLT-HS-3701-ZL	FILTER #37 VALVE ACP ENABLE/DISABLE SWITCH	DI	1624
FHA-FLT-HS-3801-ZL	FILTER #38 VALVE ACP ENABLE/DISABLE SWITCH	DI	1624
FHA-FLT-HS-3901-ZL	FILTER #39 VALVE ACP ENABLE/DISABLE SWITCH	DI	1624
FHA-FLT-HS-4001-ZL	FILTER #40 VALVE ACP ENABLE/DISABLE SWITCH	DI	1624
FHA-FLT-AIT-3701-YA	FILTER #37 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1624
FHA-FLT-AIT-3801-YA	FILTER #38 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1624

I/O Tag No	Description	Type	RPU
FHA-FLT-AIT-3901-YA	FILTER #39 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1624
FHA-FLT-AIT-4001-YA	FILTER #40 EFFLUENT TURBIDITY ANALYZER INSTRUMENT FAULT	DI	1624
FHA-FLT-LSHL-3701-LAH	FILTER #37 HI LEVEL SWITCH	DI	1624
FHA-FLT-LSHL-3701-LAL	FILTER #37 LO LEVEL SWITCH	DI	1624
FHA-FLT-LSHL-3801-LAH	FILTER #38 HI LEVEL SWITCH	DI	1624
FHA-FLT-LSHL-3801-LAL	FILTER #38 LO LEVEL SWITCH	DI	1624
FHA-FLT-LSHL-3901-LAH	FILTER #39 HI LEVEL SWITCH	DI	1624
FHA-FLT-LSHL-3901-LAL	FILTER #39 LO LEVEL SWITCH	DI	1624
FHA-FLT-LSHL-4001-LAH	FILTER #40 HI LEVEL SWITCH	DI	1624
FHA-FLT-LSHL-4001-LAL	FILTER #40 LO LEVEL SWITCH	DI	1624
FHA-SED-P-0201-YN	SEW SAMPLE PUMP - EAST COMPUTER MODE	DI	1624
FHA-SED-P-0201-MN	SEW SAMPLE PUMP - EAST RUNNING	DI	1624
FHA-SED-V-0202-YN	SEW SMP PUMP SUCT VLV-E COMPUTER MODE	DI	1624
FHA-SED-V-0202-YA	SEW SMP PUMP SUCT VLV-E NOT AVAILABLE – MAIN/CONTROL POWER FAIL	DI	1624
FHA-SED-V-0202-ZH	SEW SMP PUMP SUCT VLV-E OPENED	DI	1624
FHA-SED-V-0202-ZL	SEW SMP PUMP SUCT VLV-E CLOSED	DI	1624
FHA-SED-V-0209-YN	SEW SMP PUMP TRB VLV-E COMPUTER MODE	DI	1624
FHA-SED-V-0209-YA	SEW SMP PUMP TRB VLV-E NOT AVAILABLE – MAIN/CONTROL POWER FAIL	DI	1624
FHA-SED-V-0209-ZH	SEW SMP PUMP TRB VLV-E OPENED	DI	1624
FHA-SED-V-0209-ZL	SEW SMP PUMP TRB VLV-E CLOSED	DI	1624
FHA-SED-V-0210-YN	SEW SUCT FLUSH VLV-E COMPUTER MODE	DI	1624
FHA-SED-V-0210-YA	SEW SUCT FLUSH VLV-E NOT AVAILABLE – MAIN/CONTROL POWER FAIL	DI	1624
FHA-SED-V-0210-ZH	SEW SUCT FLUSH VLV-E OPENED	DI	1624
FHA-SED-V-0210-ZL	SEW SUCT FLUSH VLV-E CLOSED	DI	1624
FHA-SED-V-0211-YN	SEW DISCH FLUSH VLV-E COMPUTER MODE	DI	1624
FHA-SED-V-0211-YA	SEW DISCH FLUSH VLV-E NOT AVAILABLE – MAIN/CONTROL POWER FAIL	DI	1624
FHA-SED-V-0211-ZH	SEW DISCH FLUSH VLV-E OPENED	DI	1624
FHA-SED-V-0211-ZL	SEW DISCH FLUSH VLV-E CLOSED	DI	1624
FHA-FLT-V-3709-ZH	FILTER #37 EFFLUENT G VALVE OPENED	DI	1624
FHA-FLT-V-3709-ZL	FILTER #37 EFFLUENT G VALVE CLOSED	DI	1624
FHA-FLT-V-3809-ZH	FILTER #38 EFFLUENT G VALVE OPENED	DI	1624
FHA-FLT-V-3809-ZL	FILTER #38 EFFLUENT G VALVE CLOSED	DI	1624
FHA-FLT-V-3909-ZH	FILTER #39 EFFLUENT G VALVE OPENED	DI	1624
FHA-FLT-V-3909-ZL	FILTER #39 EFFLUENT G VALVE CLOSED	DI	1624
FHA-FLT-V-4009-ZH	FILTER #40 EFFLUENT G VALVE OPENED	DI	1624
FHA-FLT-V-4009-ZL	FILTER #40 EFFLUENT G VALVE CLOSED	DI	1624
FHA-SED-FSL-0201-FAL	E SEW SMP PUMP P-0201 FLOW LOW ALARM	DI	1624
FHA-SED-FSL-0202-FAL	E SEW TRB ANALYZER FLOW LOW ALARM	DI	1624
FHA-SED-AIT-0201-YA	E SEW TRB ANALYZER INSTRUMENT FAULT	DI	1624
FHA-FLT-G-3701-VH	FILTER #37 INLET GATE OPEN	DO	1624
FHA-FLT-G-3701-VL	FILTER #37 INLET GATE CLOSE	DO	1624

I/O Tag No	Description	Type	RPU
FHA-FLT-G-3702-VH	FILTER #37 DRAIN GATE OPEN	DO	1624
FHA-FLT-G-3702-VL	FILTER #37 DRAIN GATE CLOSE	DO	1624
FHA-FLT-V-3702-VH	FILTER #37 BACKWASH VALVE OPEN	DO	1624
FHA-FLT-V-3702-VL	FILTER #37 BACKWASH VALVE CLOSE	DO	1624
FHA-FLT-V-3703-VH	FILTER #37 SURFACE SWEEP VALVE OPEN	DO	1624
FHA-FLT-V-3703-VL	FILTER #37 SURFACE SWEEP VALVE CLOSE	DO	1624
FHA-FLT-G-3801-VH	FILTER #38 INLET GATE OPEN	DO	1624
FHA-FLT-G-3801-VL	FILTER #38 INLET GATE CLOSE	DO	1624
FHA-FLT-G-3802-VH	FILTER #38 DRAIN GATE OPEN	DO	1624
FHA-FLT-G-3802-VL	FILTER #38 DRAIN GATE CLOSE	DO	1624
FHA-FLT-V-3802-VH	FILTER #38 BACKWASH VALVE OPEN	DO	1624
FHA-FLT-V-3802-VL	FILTER #38 BACKWASH VALVE CLOSE	DO	1624
FHA-FLT-V-3803-VH	FILTER #38 SURFACE SWEEP VALVE OPEN	DO	1624
FHA-FLT-V-3803-VL	FILTER #38 SURFACE SWEEP VALVE CLOSE	DO	1624
FHA-FLT-G-3901-VH	FILTER #39 INLET GATE OPEN	DO	1624
FHA-FLT-G-3901-VL	FILTER #39 INLET GATE CLOSE	DO	1624
FHA-FLT-G-3902-VH	FILTER #39 DRAIN GATE OPEN	DO	1624
FHA-FLT-G-3902-VL	FILTER #39 DRAIN GATE CLOSE	DO	1624
FHA-FLT-V-3902-VH	FILTER #39 BACKWASH VALVE OPEN	DO	1624
FHA-FLT-V-3902-VL	FILTER #39 BACKWASH VALVE CLOSE	DO	1624
FHA-FLT-V-3903-VH	FILTER #39 SURFACE SWEEP VALVE OPEN	DO	1624
FHA-FLT-V-3903-VL	FILTER #39 SURFACE SWEEP VALVE CLOSE	DO	1624
FHA-FLT-G-4001-VH	FILTER #40 INLET GATE OPEN	DO	1624
FHA-FLT-G-4001-VL	FILTER #40 INLET GATE CLOSE	DO	1624
FHA-FLT-G-4002-VH	FILTER #40 DRAIN GATE OPEN	DO	1624
FHA-FLT-G-4002-VL	FILTER #40 DRAIN GATE CLOSE	DO	1624
FHA-FLT-V-4002-VH	FILTER #40 BACKWASH VALVE OPEN	DO	1624
FHA-FLT-V-4002-VL	FILTER #40 BACKWASH VALVE CLOSE	DO	1624
FHA-FLT-V-4003-VH	FILTER #40 SURFACE SWEEP VALVE OPEN	DO	1624
FHA-FLT-V-4003-VL	FILTER #40 SURFACE SWEEP VALVE CLOSE	DO	1624
FHA-SED-P-0201-MH	E SEW SMP PUMP P-0201 START COMMAND	DO	1624
FHA-SED-P-0201-MB	E SEW SMP PUMP P-0201 STOP COMMAND	DO	1624
FHA-SED-V-0202-VH	E SEW SUCT FLUSH VLV OPEN	DO	1624
FHA-SED-V-0202-VL	E SEW SUCT FLUSH VLV CLOSE	DO	1624
FHA-SED-V-0209-VH	E SEW ANALYZER ISLN VLV OPEN	DO	1624
FHA-SED-V-0209-VL	E SEW ANALYZER ISLN VLV CLOSE	DO	1624
FHA-SED-V-0210-VH	E SEW LAB ISLN VLV OPEN	DO	1624
FHA-SED-V-0210-VL	E SEW LAB ISLN VLV CLOSE	DO	1624
FHA-SED-V-0211-VH	E SEW BACKFLUSH VLV OPEN	DO	1624
FHA-SED-V-0211-VL	E SEW BACKFLUSH VLV CLOSE	DO	1624
FHA-BW-FIT-0001-FI	BACKWASH FLOW	AI	1223
FHA-SPC-UPS-1223-EA	BACKWASH PUMPS PLC UPS - POWER FAILURE	DI	1223
FHA-SPC-UPS-1223-EAL	BACKWASH PUMPS PLC UPS - LOW BATTERY	DI	1223
FHA-SPC-UPS-1223-XA	BACKWASH PUMPS PLC UPS - UPS FAILURE	DI	1223
FHA-SPC-UPS-1211-EA	SWITCHGEAR ROOM COMPUTER UPS - POWER FAILURE	DI	1223
FHA-SPC-UPS-1211-EAL	SWITCHGEAR ROOM COMPUTER UPS - LOW BATTERY	DI	1223

I/O Tag No	Description	Type	RPU
FHA-SPC-UPS-1211-XA	SWITCHGEAR ROOM COMPUTER UPS - UPS FAILURE	ID	1223
FHA-SPC-RPU-1223-TAH	PANEL SMOKE/HEAT ALM	DI	1223
FHA-BW-P-0501-YN	BACKWASH PUMP 5 COMPUTER MODE	DI	1223
FHA-BW-P-0501-YA	BACKWASH PUMP 5 NOT AVAILABLE- MULTILIN R6 FAULT	DI	1223
FHA-BW-P-0501-MN	BACKWASH PUMP 5 RUNNING	DI	1223
FHA-BW-V-0501-ZH	BACKWASH PUMP 5 INLET VALVE OPENED	DI	1223
FHA-BW-V-0501-ZL	BACKWASH PUMP 5 INLET VALVE CLOSED	DI	1223
FHA-BW-V-0503-ZH	BACKWASH PUMP 5 DISCH VALVE OPENED	DI	1223
FHA-BW-V-0503-ZL	BACKWASH PUMP 5 DISCH VALVE CLOSED	DI	1223
FHA-BW-FIT-0001-YA	BACKWASH FLOW LOSS OF SIGNAL	DI	1223
FHA-BW-P-0701-YN	BACKWASH PUMP 7 COMPUTER MODE	DI	1223
FHA-BW-P-0701-YA	BACKWASH PUMP 7 NOT AVAILABLE- MULTILIN R6 FAULT	DI	1223
FHA-BW-P-0701-MN	BACKWASH PUMP 7 RUNNING	DI	1223
FHA-BW-P-0601-YN	BACKWASH PUMP 6 COMPUTER MODE	DI	1223
FHA-BW-P-0601-YA	BACKWASH PUMP 6 NOT AVAILABLE- MULTILIN R6 FAULT	DI	1223
FHA-BW-P-0601-MN	BACKWASH PUMP 6 RUNNING	DI	1223
FHA-BW-V-0601-ZH	BACKWASH PUMP 6 INLET VALVE OPENED	DI	1223
FHA-BW-V-0601-ZL	BACKWASH PUMP 6 INLET VALVE CLOSED	DI	1223
FHA-BW-V-0603-ZH	BACKWASH PUMP 6 DISCH VALVE OPENED	DI	1223
FHA-BW-V-0603-ZL	BACKWASH PUMP 6 DISCH VALVE CLOSED	DI	1223
FHA-BW-V-0001-ZH	BACKWASH HEADER VALVE - WEST OPENED	DI	1223
FHA-BW-V-0001-ZL	BACKWASH HEADER VALVE - WEST CLOSED	DI	1223
FHA-BW-V-0002-ZH	BACKWASH HEADER VALVE - EAST OPENED	DI	1223
FHA-BW-V-0002-ZL	BACKWASH HEADER VALVE - EAST CLOSED	DI	1223
FHA-BW-V-0701-ZH	BACKWASH PUMP 7 INLET VALVE OPENED	DI	1223
FHA-BW-V-0701-ZL	BACKWASH PUMP 7 INLET VALVE CLOSED	DI	1223
FHA-BW-V-0703-ZH	BACKWASH PUMP 7 DISCH VALVE OPENED	DI	1223
FHA-BW-V-0703-ZL	BACKWASH PUMP 7 DISCH VALVE CLOSED	DI	1223
FHA-SAN-P-0101-MN	DEWATERING PUMP#1 RUNNING	DI	1223
FHA-SAN-P-0101-XA	DEWATERING PUMP#1 GENERAL ALARM	DI	1223
FHA-SAN-P-0201-MN	DEWATERING PUMP#2 RUNNING	DI	1223
FHA-SAN-P-0201-XA	DEWATERING PUMP#2 GENERAL ALARM	DI	1223
FHA-SAN-LSHH-0001-LAH	SAN WET WELL LEVEL HIGH HIGH ALARM	DI	1223
FHA-AUX-C-0201-MN	COMPRESSOR#1A RUNNING	DI	1223
FHA-AUX-C-0201-YA	COMPRESSOR#1A GENERAL ALARM	DI	1223
FHA-AUX-C-0202-MN	COMPRESSOR#1B RUNNING	DI	1223
FHA-AUX-C-0202-YA	COMPRESSOR#1B GENERAL ALARM	DI	1223
FHA-AUX-D-0201-MN	AIR DRYER#1 RUNNING	DI	1223
FHA-AUX-D-0201-YA	AIR DRYER#1 GENERAL ALARM	DI	1223
FHA-AUX-D-0202-MN	AIR DRYER#2 RUNNING	DI	1223
FHA-AUX-D-0202-YA	AIR DRYER#2 GENERAL ALARM	DI	1223
FHA-BW-P-0501-MH	BACKWASH PUMP 5 START COMMAND	DO	1223
FHA-BW-P-0501-MB	BACKWASH PUMP 5 STOP COMMAND	DO	1223
FHA-BW-P-0601-MH	BACKWASH PUMP 6 START COMMAND	DO	1223



I/O Tag No	Description	Type	RPU
FHA-BW-P-0601-MB	BACKWASH PUMP 6 STOP COMMAND	DO	1223
FHA-BW-P-0701-MH	BACKWASH PUMP 7 START COMMAND	DO	1223
FHA-BW-P-0701-MB	BACKWASH PUMP 7 STOP COMMAND	DO	1223

### C. Control Logic

#### C.1 **Normal Operation**

##### C.1.1 Control Mode Management

The Filter PLC confirms which automatic mode is selected at the HMI, SCADA/MANUAL, SCADA/AUTO or SCADA/MASTER.

If SCADA/MANUAL is selected at the HMI – filter rate valve position is set for manual manipulation of the filter rate valve at the SCADA HMI.

If SCADA/AUTO mode has been selected on the HMI. The Filter PLC looks at the operator adjustable flow set point entered on the SCADA HMI and controls the 4-20ma position signal to the valve to maintain the desired flow.

If SCADA/MASTER mode has been selected on the HMI. The Filter PLC looks at the Master Filter Rate set point which is calculated by the Master Filter PLC. The Master Filter PLC will maintain the settled conduit level based on an operator adjustable level set point from the HMI and calculate the flow rate set point for each filter by dividing the total required flow by the number of filters in service. Total number of filters in service is determined based on each filter being in SCADA/MASTER mode. Each PLC that is in Master will receive the Master Flow Rate set point and control the 4-20ma position signal to the valve to maintain the desired flow.

##### C.1.2 Filtering

The normal mode of operation for each filter is SCADA/MASTER mode. In this mode, each of the filter PLCs receives a master flow rate set point from the master filter PLC. The calculation for this set point is based on the settled water conduit level and is described in equation (2).

When the master flow rate PLC determines how much flow is required to maintain the settled water conduit level, it will count the number of filters in master mode and split the total flow required between those filters. The calculation to determine this base flow rate is:

$$Q_F = \frac{Q_T - Q_{NM}}{n_F} \quad (2)$$

Where:

- $Q_F$  = Individual filter flowrate (L/s)
- $Q_T$  = Master total filtration flow (L/s)
- $Q_{NM}$  = Total flow of filters not in SCADA/MASTER mode (L/s)
- $n_F$  = Number of filters in SCADA/MASTER mode

The master rate flow set point is sent through the network from the master flow rate PLC to the individual PLCs. As a backup, a 4-20mA signal is hardwired from the master flow rate PLC to the individual PLCs with this same set point.

An automatic switchover is triggered if the network fails. The individual PLCs use the master flow rate set point to modulate the rate control valve using a PID loop. A 4-20mA signal is sent to the valve actuator to open and close the valve to maintain the required flow.

The master filter PLC conditions the master rate set point using one of three methods, depending on the settled water level as described below.

The settled water conduits (east and west) level set points are entered at one of the HMI view nodes and is transmitted to the master flow rate PLC in the CBP. This set point is compared to the actual settled water conduit levels. The absolute value of this comparison is used to determine which of three signal condition methods is used to condition the master filtration rate set point.

Level 1 – Absolute value of settled water level set point minus the actual settled water level is less than Settled Water Band 1 (set to 0.02m). There is no further conditioning and the master filtration rate set point is transmitted to all the individual filter PLCs and Indicator/Controller.

Level 2 – Absolute value of a settled water level set point minus the actual settled water level is less than Settled Water Band 2 (set to 0.045m), but greater than or equal to Settled Water Band 1.

The above result is then divided by Settled Water Band 2. The result becomes the input value (in %) for the Lookup Table. The output is called the Index Value.

The master PLCs use a look-up table to condition the master filtration rate set point. The conditioned master filtration rate set point is transmitted to the respective east or west individual filtration PLCs and Indicator/Controller.

Level 3 – Absolute value of a settled water level set point minus the actual settled water level is greater than or equal to the Settled Water Band 2. The master PLCs use a PID control loop to compare the actual settled water level with the settled water level set point. The output of this PID loop becomes the master filtration rate set point and is transmitted to the respective east or west individual filtration PLCs and Indicator/Controller.

Settings for Level 1 and Level 2 of this control logic will be based on an empirically derived look-up table. A preliminary table is presented as follows. Note that fine-tuning during final implementation may be required:

*Table 5: Filtration & Backwash Master Rate Control Correction Preliminary Lookup Table*

INPUT (%)	OUTPUT (L/s)
0.0	0.0
10.0	14.0
20.0	25.5
30.0	36.0
40.0	44.5
50.0	51.5
60.0	58
70.0	63
80.0	67.5
90.0	71.5
100.0	75.0655

Where the input represents the % of deviation between the Level Deviation (in meters) and Settled Water Band 2 (set to 0.045m). The output is the correction of the master filtration rate set point (in L/s).

If the raw Level Deviation (PV (Level) – SV (Set point)) is positive, Base Flow – Index Value becomes the raw Master Flow Rate Set point.

If the raw Level Deviation (PV (Level) – SV (Set point)) is negative, Base Flow + Index Value becomes the raw Master Flow Rate Set point.

No adjustments are made if the level is within 0.5% of the set point.

Each filter PLC checks for control mode and if the filter is in service, uses a PID loop to compare the actual filtration rate to the conditioned master filtration rate set point. The output of this PID loop drives the filter rate valve.

### C.1.3 Number of Filters In-Service & Sequencing

Filters are brought into or taken out of service based on the Individual Filter Rate. If the Rate of Production per filter drops below a predetermined action rate, two filters are taken out-of-service. If the Rate of Production per filter rises above a predetermined action rate, two filters are brought into service.

Filter run time is tracked for every filter which is either in-service, or out-of-service available. Run time is only incremented while the filter is in service. Run time is reset to zero after a backwash.

Filter idle time is tracked for every filter which is out-of-service.

If a filter is required to be brought into service, it will be the filter with the highest idle time. In the future, if a filter-to-waste cycle is implemented, then a filter will be conditioned prior to returning it to service. This means that a filter-to-waste cycle will be completed.

Whenever a filter is required to be taken out-of-service, it will be the filter with the highest run time. The filter will then be placed in the backwash queue so it will be washed prior to being available again for service.

Any leakage of a filter that is out of service, is monitored based on the reading of the filter's effluent flow meter. "Filter Out of Service Leak" alarm is generated if the detected flow is 0.2-5% of the full range (1-25 L./s).

### C.1.4 Backwashing

At any time, a filter will be taken out of service and placed in the backwash queue if any of the following parameters are exceeded:

- Filter runtime of 96 hours
- Terminal head loss of 1.5 m
- Filter effluent turbidity > action level (traditionally 0.15 NTU, recommend 0.2 NTU)
- Idle time exceeds 24 hours.

Additionally, the operator is able to manually select a filter to be backwashed if necessary. The selected filter will be 'forced' to the front of the backwash queue. Note that only one filter can be backwashed at a time.

Backwash water is stored in two elevated storage tanks, which ride hydraulically on the backwash headers. The operator can select which tank level is to be used for controlling the backwash pumps. When the level in the selected tank drops below an action level, all available backwash pumps are started in a staggered fashion (20 seconds apart) to draw water from the treated water suction channel to fill the tanks.

When in SCADA/AUTO mode, the pumps will automatically start and stop based on the tank level. Additionally, an operator adjustable, hardwired backup is provided to automatically start and stop the pumps.

The supervisor is able to enable / disable surface sweeps from the SCADA HMI.

The backwash sequence consists of:

1. The filter being assigned first in the backwash queue

2. Filter level draw-down
3. Low wash for an adjustable duration (traditionally 2 minutes) at an adjustable low wash rate (traditionally 1000 L/s – to be verified in final design) with surface sweeps for a duration which is also adjustable
4. High wash for an adjustable duration (traditionally 5 minutes) at an adjustable high wash rate (traditionally 2500 L/s – to be verified in final design)
5. Settling period of 15 minutes
6. The filter is assigned as out-of-service, available
7. The filter run-time is reset to zero
8. The filter idle time is reset to zero and begins incrementing until the filter is returned to service.

Temperature variations cause expansion/contraction of the GAC. To prevent overflow and loss of GAC during periods of low temperature, the process will have flexibility to adjust backwash flow rates based on the water temperature.

Once a filter has completed the backwash cycle, it is classified as an available filter. Backwashing will only be performed when power is available to maintain the facility power demand below a target criterion (refer to section Interlocks Contained in Software for more details).

Backwash flow rate set point is maintained by adjusting the backwash header valves for all filters except 19, 20, 21 and 22, where the flow rate set point is maintained by filter valve position. The backwash flow is monitored by the flow meters FHA-FLT-FIT-0101 and FHA-FLT-FIT-0201 for the west and east filters respectively. Based on the flow rate set point, a backwash header valve is modulated to achieve the desired flow rate.

The following outlines the valve operation sequence during an automatic backwash cycle:

1. Close filter inlet gate
2. Lower level in filter to trough level
3. Close filter effluent gate
4. Open filter drain valve
5. Open surface sweep valve
6. Open backwash valve to low setting
7. Close surface sweep valve
8. Adjust backwash valve to high setting
9. Close backwash valve
10. Close filter drain valve
11. Open filter inlet gate slowly (10% until filter full – this will need empirical verification to be done in final design)
12. Wait for Settling period

## **C.2 Fault Response**

### **C.2.1 Filter Master Rate PLC Failure - Master Flow Rate Setpoint**

A failure of the master PLC is detected through the absence of a 'heartbeat' signal from the SCADA system. Win 911 pages out the alarm indicating the failure. The master flow rate calculation is no longer available from the master filter PLC. The individual PLCs will maintain the last master flow rate set point provided prior to the network failure.

Using the Indicator/Manual set point device on the CBP the individual filters can still operate in SCADA/MASTER mode. The CBP/PLC selector switch will be switched to the CBP position. Using the level signal and flow signals which are displayed on the Indicator/Manual set point device, an Operator can calculate the desired master flow rate and enter it on the device. A 4-20mA signal is sent to all the individual filter PLCs and used to modulate the rate control valve.

### C.2.2 Filter Master Rate PLC Failure - Backwashing

The individual filter PLCs can still run the automatic backwash sequencing while the master PLC is in failure however they will not automatically be put into a cue to perform a backwash. Each backwash would need to be triggered manually from the SCADA system and then the individual filter PLC will take over and perform the sequence.

### C.2.3 Master Filter PLC Failure - Master Flow Rate Setpoint

The Master Filter PLCs are housed in RPU-1822 and RPU-1823. RPU-1822 also controls Filters 17-20 and RPU-1823 controls Filters 21-23. SCADA control of the associated filters will be lost in the event of a Master Filter PLC failure.

A failure of these master PLCs is detected through the absence of a 'heartbeat' signal from the SCADA system. Win 911 pages out the alarm indicating the failure. The master flow rate calculation is available from the filter master rate PLC.

During the failure of the Master Filter PLCs, Filters may not be brought into or taken out of service from the SCADA system.

### C.2.4 Master Filter PLC Failure - Backwashing

The individual filter PLCs can still run the automatic backwash sequencing if the master PLC fails during the wash however they will not automatically be put into a cue to perform a backwash. During the failure of the Master Filter PLCs (RPU-1822 and RPU-1823) backwashing of a filter may only be completed by the operator manually (from SCADA (if not aforementioned filters in above section), ACP or Field) opening and closing associated backwash and filter valves and running the backwash pumps.

### C.2.5 Individual Filter PLC Failure

A failure of an individual filter PLC is detected through the absence of a 'heartbeat' signal from the SCADA system. Win 911 pages out the alarm indicating the failure. The automated backwashing functions and filter rate control functions for the associated filters are no longer available. Backwashing becomes a manual process from the filter ACP and filter rate flow control becomes a manual process from the Indicator/Manual Setpoint device located on the ACP.

The ACP/PLC selector switch will be switched to ACP allowing a valve position set point to be entered into the Indicator/Manual Setpoint device. This set point will be sent via a 4-20mA signal to the rate control valve actuator.

Table 6: Filtration & Backwash Fault response

Equipment Name / Tag No	Fault Condition	Response
Filter Rate Control Valve(s) FHA-FLT-V-0101 (note 1)	Power failure	<ul style="list-style-type: none"> <li>Close Filter Rate Control Valve</li> </ul>

Note(s):

1. Tag provided for Filter #1; typical of all other filters.

### C.2.6 Software Interlocks

Table 7: Filtration & Backwash Software Interlocks

Equipment Name / Tag No	Type of Interlock	Description of Conditions
Backwash Valve(s) FHA-FLT-V-0102 (note 1)	NO OPEN	<ul style="list-style-type: none"> <li>Power demand above target criteria</li> </ul>
Filter Inlet Valve(s)	Open 10%	<ul style="list-style-type: none"> <li>Filter not full, 100% open when full</li> </ul>

Equipment Name / Tag No	Type of Interlock	Description of Conditions
FHA-FLT-G-0101 (note 1)		

Note(s):

1. Tag provided for Filter #1; typical of all other filters.

### C.2.7 Hardwired Interlocks

Table 8: Filtration & Backwash Hardwired Interlocks

Equipment Name / Tag No	Type of Interlock	Description of Conditions
Backwash Valve(s) FHA-FLT-V-0102 (note 1)	NO OPEN	<ul style="list-style-type: none"> <li>FHA-FLT-V-0101 is open</li> </ul>
Surface Sweep Valve(s) FHA-FLT-V-0103 (note 1)	NO OPEN	<ul style="list-style-type: none"> <li>FHA-FLT-V-0101 is open</li> </ul>
Filter Drain Valve FHA-FLT-G-0102 (note 1)	NO OPEN	<ul style="list-style-type: none"> <li>FLT-G-0101 is open</li> </ul>
Filter FHA-FLT-F-0101 (note 1)	Force Out of Service	<ul style="list-style-type: none"> <li>FHA-FLT-LSHL-0101 triggered low level</li> </ul>
Backwash Pump FHA-BW-P-0501	NO START	<ul style="list-style-type: none"> <li>FHA-BW-V-0501 is closed</li> <li>FHA-BW-V-0503 is open</li> </ul>
	NO STOP	<ul style="list-style-type: none"> <li>FHA-BW-V-0503 is open</li> </ul>
Backwash Pump FHA-BW-P-0601	NO START	<ul style="list-style-type: none"> <li>FHA-BW-V-0601 is closed</li> <li>FHA-BW-V-0603 is open</li> </ul>
	NO STOP	<ul style="list-style-type: none"> <li>FHA-BW-V-0603 is open</li> </ul>
Backwash Pump FHA-BW-P-0701	NO START	<ul style="list-style-type: none"> <li>FHA-BW-V-0701 is closed</li> <li>FHA-BW-V-0703 is open</li> </ul>
	NO STOP	<ul style="list-style-type: none"> <li>BW-V-0703 is open</li> </ul>

Note(s):

1. Tag provided for Filter #1; typical of all other filters

### C.2.8 Power Supply and UPS Failure

1. The filter rate control valves in the west and east galleries are powered by 600VAC source backed up by UPS. The west gallery is backed up by FHA-FLT-UPS-0001 and the east gallery is backed up by FHA-FLT-UPS-0002. A fault in either UPS will close the filter rate control valves in their respective galleries. The main 600VAC power at the MCC (THR-ELS-MCC-0440) is fed from two different sources, herein referred to as Source A and Source B. A Tie Breaker switches between the two sources of power supplying power to the main bus. Source A, Source B, and the Tie Breaker are monitored for proper operation by a hardwired relay system in the Filter CV Shutoff Control Panel (FHA-FLT-CP-0007). A fault in the system will close the filter rate control valves in the east and west galleries. The filter rate control valves are commanded to close under the following conditions: Power failure of either Source A or Source B power and failure of the Tie Breaker to switchover
2. Power failure of both Source A and Source B power.
3. FHA-FLT-UPS-0001 fault (west gallery filter rate control valves)
4. FHA-FLT-UPS-0002 fault (east gallery filter rate control valves)
- 5.

Upon restoration of power and normal operation the Filter rate control valves will resume operation based on PID setpoint from the PLC.

Table 9: Filtration &amp; Backwash Power Failure Fault response

Equipment Name / Tag No	Fault Condition	Response
Filter CV Shutdown Control Panel FLT-CP-0007	Source A Power failure and Tie Breaker fail to switchover	<ul style="list-style-type: none"> <li>Close all Filter Rate Control Valves in east and west galleries</li> </ul>
Filter CV Shutdown Control Panel FLT-CP-0007	Source B Power failure and Tie Breaker fail to switchover	<ul style="list-style-type: none"> <li>Close all Filter Rate Control Valves in east and west galleries</li> </ul>
Filter CV Shutdown Control Panel FLT-CP-0007	Source A Power failure and Source B Power failure	<ul style="list-style-type: none"> <li>Close all Filter Rate Control Valves in east and west galleries</li> </ul>
UPS-0001 FHA-FLT-UPS-0001	UPS fault	<ul style="list-style-type: none"> <li>Close all Filter Rate Control Valves in the west gallery</li> </ul>
UPS-0002 FHA-FLT-UPS-0002	UPS fault	<ul style="list-style-type: none"> <li>Close all Filter Rate Control Valves in the east gallery</li> </ul>

### C.3 Process Set Points

The following table outlines process set points editable in SCADA for the Filtration & Backwashing Process:

Table 10: Filtration &amp; Backwash Process Set Points

Signal Tag No	Description	Unit	Set Point
FHA-FLT-FTM-0000-SWCW	West Settled Water Conduit Level	m	1.69
FHA-FLT-FTM-0000-SWCE	East Settled Water Conduit Level	m	1.70
FHA-FLT-FTM-0000-MNFR	Minimum Filter Rate	L/s	65
FHA-FLT-FTM-0000-MXFR	Maximum Filter rate	L/s	100
FHA-FLT-MAST-0000-RES	Reservoir Level for Backwash	m	3.60
FHA-FLT-MAST-0000-PWR	Power Peak for Backwash		0.90
FHA-BW-TSL-0001-HMD-C	Backwash Tank Pump Start Level	m	0.40
FHA-BW-TSL-0001-HMB-C	Backwash Tank Pump Stop Level	m	1.40
	Filter #1 Leak Detection	%	5.0
	Filter #1 Low Flow	L/s	1000
	Filter #1 High Flow	L/s	2000
	Filter #1 Low Position	%	31
	Filter #1 High Position	%	65
	Filter #1 Surface Sweep Time	min	4
	Filter #1 Low Wash Time	min	3
	Filter #1 High Wash Time	min	5
	Filter #1 Settling Time	min	15
	Filter #1 Head Loss Limit	m	1.50
	Filter #1 Turbidity Limit	NTU	0.15
	Filter #1 Run Time Limit	hrs	96
	Filter #1 Idle Time	hrs	24
	Filter #2 Leak Detection	%	5.0
	Filter #2 Low Flow	L/s	1000
	Filter #2 High Flow	L/s	2000
	Filter #2 Low Position	%	31
	Filter #2 High Position	%	65
	Filter #2 Surface Sweep Time	min	3
	Filter #2 Low Wash Time	min	3
	Filter #2 High Wash Time	min	5

Signal Tag No	Description	Unit	Set Point
	Filter #2 Settling Time	min	15
	Filter #2 Head Loss Limit	m	1.50
	Filter #2 Turbidity Limit	NTU	0.15
	Filter #2 Run Time Limit	hrs	96
	Filter #2 Idle Time	hrs	24
	Filter #3 Leak Detection	%	5.0
	Filter #3 Low Flow	L/s	1050
	Filter #3 High Flow	L/s	2000
	Filter #3 Low Position	%	31
	Filter #3 High Position	%	65
	Filter #3 Surface Sweep Time	min	3
	Filter #3 Low Wash Time	min	3
	Filter #3 High Wash Time	min	5
	Filter #3 Settling Time	min	15
	Filter #3 Head Loss Limit	m	1.50
	Filter #3 Turbidity Limit	NTU	0.15
	Filter #3 Run Time Limit	hrs	96
	Filter #3 Idle Time	hrs	24
	Filter #4 Leak Detection	%	5.0
	Filter #4 Low Flow	L/s	1050
	Filter #4 High Flow	L/s	2000
	Filter #4 Low Position	%	31
	Filter #4 High Position	%	65
	Filter #4 Surface Sweep Time	min	3
	Filter #4 Low Wash Time	min	3
	Filter #4 High Wash Time	min	5
	Filter #4 Settling Time	min	15
	Filter #4 Head Loss Limit	m	1.50
	Filter #4 Turbidity Limit	NTU	0.15
	Filter #4 Run Time Limit	hrs	96
	Filter #4 Idle Time	hrs	24
	Filter #5 Leak Detection	%	5.0
	Filter #5 Low Flow	L/s	1100
	Filter #5 High Flow	L/s	2400
	Filter #5 Low Position	%	31
	Filter #5 High Position	%	65
	Filter #5 Surface Sweep Time	min	3
	Filter #5 Low Wash Time	min	3
	Filter #5 High Wash Time	min	5
	Filter #5 Settling Time	min	15
	Filter #5 Head Loss Limit	m	1.50
	Filter #5 Turbidity Limit	NTU	0.15
	Filter #5 Run Time Limit	hrs	96
	Filter #5 Idle Time	hrs	24
	Filter #6 Leak Detection	%	5.0
	Filter #6 Low Flow	L/s	1100
	Filter #6 High Flow	L/s	2400
	Filter #6 Low Position	%	31
	Filter #6 High Position	%	70
	Filter #6 Surface Sweep Time	min	3
	Filter #6 Low Wash Time	min	3
	Filter #6 High Wash Time	min	5



Signal Tag No	Description	Unit	Set Point
	Filter #6 Settling Time	min	15
	Filter #6 Head Loss Limit	m	1.50
	Filter #6 Turbidity Limit	NTU	0.15
	Filter #6 Run Time Limit	hrs	96
	Filter #6 Idle Time	hrs	24
	Filter #7 Leak Detection	%	5.0
	Filter #7 Low Flow	L/s	1100
	Filter #7 High Flow	L/s	2400
	Filter #7 Low Position	%	31
	Filter #7 High Position	%	70
	Filter #7 Surface Sweep Time	min	3
	Filter #7 Low Wash Time	min	3
	Filter #7 High Wash Time	min	5
	Filter #7 Settling Time	min	15
	Filter #7 Head Loss Limit	m	1.50
	Filter #7 Turbidity Limit	NTU	0.15
	Filter #7 Run Time Limit	hrs	96
	Filter #7 Idle Time	hrs	24
	Filter #8 Leak Detection	%	5.0
	Filter #8 Low Flow	L/s	1100
	Filter #8 High Flow	L/s	2400
	Filter #8 Low Position	%	31
	Filter #8 High Position	%	70
	Filter #8 Surface Sweep Time	min	3
	Filter #8 Low Wash Time	min	3
	Filter #8 High Wash Time	min	5
	Filter #8 Settling Time	min	15
	Filter #8 Head Loss Limit	m	1.50
	Filter #8 Turbidity Limit	NTU	0.15
	Filter #8 Run Time Limit	hrs	96
	Filter #8 Idle Time	hrs	24
	Filter #9 Leak Detection	%	5.0
	Filter #9 Low Flow	L/s	1000
	Filter #9 High Flow	L/s	2001
	Filter #9 Low Position	%	31
	Filter #9 High Position	%	65
	Filter #9 Surface Sweep Time	min	3
	Filter #9 Low Wash Time	min	3
	Filter #9 High Wash Time	min	5
	Filter #9 Settling Time	min	15
	Filter #9 Head Loss Limit	m	1.50
	Filter #9 Turbidity Limit	NTU	0.15
	Filter #9 Run Time Limit	hrs	96
	Filter #9 Idle Time	hrs	24
	Filter #10 Leak Detection	%	5.0
	Filter #10 Low Flow	L/s	1000
	Filter #10 High Flow	L/s	2000
	Filter #10 Low Position	%	31
	Filter #10 High Position	%	65
	Filter #10 Surface Sweep Time	min	3
	Filter #10 Low Wash Time	min	3
	Filter #10 High Wash Time	min	5

Signal Tag No	Description	Unit	Set Point
	Filter #10 Settling Time	min	15
	Filter #10 Head Loss Limit	m	1.50
	Filter #10 Turbidity Limit	NTU	0.15
	Filter #10 Run Time Limit	hrs	96
	Filter #10 Idle Time	hrs	24
	Filter #11 Leak Detection	%	5.0
	Filter #11 Low Flow	L/s	1000
	Filter #11 High Flow	L/s	2000
	Filter #11 Low Position	%	31
	Filter #11 High Position	%	65
	Filter #11 Surface Sweep Time	min	3
	Filter #11 Low Wash Time	min	3
	Filter #11 High Wash Time	min	5
	Filter #11 Settling Time	min	15
	Filter #11 Head Loss Limit	m	1.50
	Filter #11 Turbidity Limit	NTU	0.15
	Filter #11 Run Time Limit	hrs	96
	Filter #11 Idle Time	hrs	24
	Filter #12 Leak Detection	%	5.0
	Filter #12 Low Flow	L/s	1000
	Filter #12 High Flow	L/s	2000
	Filter #12 Low Position	%	31
	Filter #12 High Position	%	65
	Filter #12 Surface Sweep Time	min	3
	Filter #12 Low Wash Time	min	3
	Filter #12 High Wash Time	min	5
	Filter #12 Settling Time	min	15
	Filter #12 Head Loss Limit	m	1.50
	Filter #12 Turbidity Limit	NTU	0.15
	Filter #12 Run Time Limit	hrs	96
	Filter #12 Idle Time	hrs	24
	Filter #13 Leak Detection	%	5.0
	Filter #13 Low Flow	L/s	1000
	Filter #13 High Flow	L/s	2000
	Filter #13 Low Position	%	31
	Filter #13 High Position	%	65
	Filter #13 Surface Sweep Time	min	3
	Filter #13 Low Wash Time	min	3
	Filter #13 High Wash Time	min	5
	Filter #13 Settling Time	min	15
	Filter #13 Head Loss Limit	m	1.50
	Filter #13 Turbidity Limit	NTU	0.15
	Filter #13 Run Time Limit	hrs	96
	Filter #13 Idle Time	hrs	24
	Filter #14 Leak Detection	%	5.0
	Filter #14 Low Flow	L/s	1000
	Filter #14 High Flow	L/s	2000
	Filter #14 Low Position	%	31
	Filter #14 High Position	%	65
	Filter #14 Surface Sweep Time	min	3
	Filter #14 Low Wash Time	min	3
	Filter #14 High Wash Time	min	5

Signal Tag No	Description	Unit	Set Point
	Filter #14 Settling Time	min	15
	Filter #14 Head Loss Limit	m	1.50
	Filter #14 Turbidity Limit	NTU	0.15
	Filter #14 Run Time Limit	hrs	96
	Filter #14 Idle Time	hrs	24
	Filter #15 Leak Detection	%	5.0
	Filter #15 Low Flow	L/s	1000
	Filter #15 High Flow	L/s	2000
	Filter #15 Low Position	%	31
	Filter #15 High Position	%	65
	Filter #15 Surface Sweep Time	min	3
	Filter #15 Low Wash Time	min	3
	Filter #15 High Wash Time	min	5
	Filter #15 Settling Time	min	15
	Filter #15 Head Loss Limit	m	1.50
	Filter #15 Turbidity Limit	NTU	0.15
	Filter #15 Run Time Limit	hrs	96
	Filter #15 Idle Time	hrs	24
	Filter #16 Leak Detection	%	5.0
	Filter #16 Low Flow	L/s	1000
	Filter #16 High Flow	L/s	2000
	Filter #16 Low Position	%	31
	Filter #16 High Position	%	65
	Filter #16 Surface Sweep Time	min	3
	Filter #16 Low Wash Time	min	3
	Filter #16 High Wash Time	min	5
	Filter #16 Settling Time	min	15
	Filter #16 Head Loss Limit	m	1.50
	Filter #16 Turbidity Limit	NTU	0.15
	Filter #16 Run Time Limit	hrs	96
	Filter #16 Idle Time	hrs	24
	Filter #17 Leak Detection	%	2.1
	Filter #17 Low Flow	L/s	1050
	Filter #17 High Flow	L/s	2000
	Filter #17 Low Position	%	31
	Filter #17 High Position	%	65
	Filter #17 Surface Sweep Time	min	3
	Filter #17 Low Wash Time	min	3
	Filter #17 High Wash Time	min	5
	Filter #17 Settling Time	min	15
	Filter #17 Head Loss Limit	m	1.50
	Filter #17 Turbidity Limit	NTU	0.15
	Filter #17 Run Time Limit	hrs	96
	Filter #17 Idle Time	hrs	24
	Filter #18 Leak Detection	%	1.5
	Filter #18 Low Flow	L/s	1000
	Filter #18 High Flow	L/s	2000
	Filter #18 Low Position	%	31
	Filter #18 High Position	%	65
	Filter #18 Surface Sweep Time	min	3
	Filter #18 Low Wash Time	min	3
	Filter #18 High Wash Time	min	5

Signal Tag No	Description	Unit	Set Point
	Filter #18 Settling Time	min	15
	Filter #18 Head Loss Limit	m	1.50
	Filter #18 Turbidity Limit	NTU	0.15
	Filter #18 Run Time Limit	hrs	96
	Filter #18 Idle Time	hrs	24
	Filter #19 Leak Detection	%	1.2
	Filter #19 Low Flow	L/s	1000
	Filter #19 High Flow	L/s	2000
	Filter #19 Low Position	%	31
	Filter #19 High Position	%	65
	Filter #19 Surface Sweep Time	min	3
	Filter #19 Low Wash Time	min	3
	Filter #19 High Wash Time	min	5
	Filter #19 Settling Time	min	15
	Filter #19 Head Loss Limit	m	1.50
	Filter #19 Turbidity Limit	NTU	0.15
	Filter #19 Run Time Limit	hrs	96
	Filter #19 Idle Time	hrs	24
	Filter #20 Leak Detection	%	1.7
	Filter #20 Low Flow	L/s	1000
	Filter #20 High Flow	L/s	2200
	Filter #20 Low Position	%	31
	Filter #20 High Position	%	63
	Filter #20 Surface Sweep Time	min	3
	Filter #20 Low Wash Time	min	3
	Filter #20 High Wash Time	min	5
	Filter #20 Settling Time	min	15
	Filter #20 Head Loss Limit	m	1.50
	Filter #20 Turbidity Limit	NTU	0.15
	Filter #20 Run Time Limit	hrs	96
	Filter #20 Idle Time	hrs	24
	Filter #21 Leak Detection	%	5.0
	Filter #21 Low Flow	L/s	1000
	Filter #21 High Flow	L/s	2001
	Filter #21 Low Position	%	31
	Filter #21 High Position	%	65
	Filter #21 Surface Sweep Time	min	3
	Filter #21 Low Wash Time	min	3
	Filter #21 High Wash Time	min	5
	Filter #21 Settling Time	min	15
	Filter #21 Head Loss Limit	m	1.50
	Filter #21 Turbidity Limit	NTU	0.15
	Filter #21 Run Time Limit	hrs	96
	Filter #21 Idle Time	hrs	24
	Filter #22 Leak Detection	%	5.0
	Filter #22 Low Flow	L/s	1100
	Filter #22 High Flow	L/s	2400
	Filter #22 Low Position	%	31
	Filter #22 High Position	%	70
	Filter #22 Surface Sweep Time	min	3
	Filter #22 Low Wash Time	min	3
	Filter #22 High Wash Time	min	5

Signal Tag No	Description	Unit	Set Point
	Filter #22 Settling Time	min	15
	Filter #22 Head Loss Limit	m	1.50
	Filter #22 Turbidity Limit	NTU	0.15
	Filter #22 Run Time Limit	hrs	96
	Filter #22 Idle Time	hrs	24
	Filter #23 Leak Detection	%	5.0
	Filter #23 Low Flow	L/s	1000
	Filter #23 High Flow	L/s	2001
	Filter #23 Low Position	%	31
	Filter #23 High Position	%	65
	Filter #23 Surface Sweep Time	min	3
	Filter #23 Low Wash Time	min	3
	Filter #23 High Wash Time	min	5
	Filter #23 Settling Time	min	15
	Filter #23 Head Loss Limit	m	1.50
	Filter #23 Turbidity Limit	NTU	0.15
	Filter #23 Run Time Limit	hrs	96
	Filter #23 Idle Time	hrs	24
	Filter #24 Leak Detection	%	5.0
	Filter #24 Low Flow	L/s	1100
	Filter #24 High Flow	L/s	2400
	Filter #24 Low Position	%	31
	Filter #24 High Position	%	70
	Filter #24 Surface Sweep Time	min	3
	Filter #24 Low Wash Time	min	3
	Filter #24 High Wash Time	min	5
	Filter #24 Settling Time	min	15
	Filter #24 Head Loss Limit	m	1.50
	Filter #24 Turbidity Limit	NTU	0.15
	Filter #24 Run Time Limit	hrs	96
	Filter #24 Idle Time	hrs	24
	Filter #25 Leak Detection	%	2.8
	Filter #25 Low Flow	L/s	1100
	Filter #25 High Flow	L/s	2400
	Filter #25 Low Position	%	31
	Filter #25 High Position	%	70
	Filter #25 Surface Sweep Time	min	3
	Filter #25 Low Wash Time	min	3
	Filter #25 High Wash Time	min	5
	Filter #25 Settling Time	min	15
	Filter #25 Head Loss Limit	m	1.50
	Filter #25 Turbidity Limit	NTU	0.15
	Filter #25 Run Time Limit	hrs	96
	Filter #25 Idle Time	hrs	24
	Filter #26 Leak Detection	%	1.2
	Filter #26 Low Flow	L/s	1100
	Filter #26 High Flow	L/s	2400
	Filter #26 Low Position	%	31
	Filter #26 High Position	%	70
	Filter #26 Surface Sweep Time	min	3
	Filter #26 Low Wash Time	min	3
	Filter #26 High Wash Time	min	5

Signal Tag No	Description	Unit	Set Point
	Filter #26 Settling Time	min	15
	Filter #26 Head Loss Limit	m	1.50
	Filter #26 Turbidity Limit	NTU	0.15
	Filter #26 Run Time Limit	hrs	96
	Filter #26 Idle Time	hrs	24
	Filter #27 Leak Detection	%	3.1
	Filter #27 Low Flow	L/s	1100
	Filter #27 High Flow	L/s	2400
	Filter #27 Low Position	%	31
	Filter #27 High Position	%	70
	Filter #27 Surface Sweep Time	min	3
	Filter #27 Low Wash Time	min	3
	Filter #27 High Wash Time	min	5
	Filter #27 Settling Time	min	15
	Filter #27 Head Loss Limit	m	1.50
	Filter #27 Turbidity Limit	NTU	0.15
	Filter #27 Run Time Limit	hrs	96
	Filter #27 Idle Time	hrs	24
	Filter #28 Leak Detection	%	3.4
	Filter #28 Low Flow	L/s	1100
	Filter #28 High Flow	L/s	2400
	Filter #28 Low Position	%	31
	Filter #28 High Position	%	70
	Filter #28 Surface Sweep Time	min	3
	Filter #28 Low Wash Time	min	3
	Filter #28 High Wash Time	min	5
	Filter #28 Settling Time	min	15
	Filter #28 Head Loss Limit	m	1.50
	Filter #28 Turbidity Limit	NTU	0.15
	Filter #28 Run Time Limit	hrs	96
	Filter #28 Idle Time	hrs	24
	Filter #29 Leak Detection	%	5.0
	Filter #29 Low Flow	L/s	1000
	Filter #29 High Flow	L/s	2001
	Filter #29 Low Position	%	31
	Filter #29 High Position	%	65
	Filter #29 Surface Sweep Time	min	3
	Filter #29 Low Wash Time	min	3
	Filter #29 High Wash Time	min	5
	Filter #29 Settling Time	min	15
	Filter #29 Head Loss Limit	m	1.50
	Filter #29 Turbidity Limit	NTU	0.15
	Filter #29 Run Time Limit	hrs	96
	Filter #29 Idle Time	hrs	24
	Filter #30 Leak Detection	%	5.0
	Filter #30 Low Flow	L/s	1100
	Filter #30 High Flow	L/s	2400
	Filter #30 Low Position	%	31
	Filter #30 High Position	%	70
	Filter #30 Surface Sweep Time	min	3
	Filter #30 Low Wash Time	min	3
	Filter #30 High Wash Time	min	5

Signal Tag No	Description	Unit	Set Point
	Filter #30 Settling Time	min	15
	Filter #30 Head Loss Limit	m	1.50
	Filter #30 Turbidity Limit	NTU	0.15
	Filter #30 Run Time Limit	hrs	96
	Filter #30 Idle Time	hrs	24
	Filter #30 Leak Detection	%	5.0
	Filter #31 Low Flow	L/s	1000
	Filter #31 High Flow	L/s	2001
	Filter #31 Low Position	%	31
	Filter #31 High Position	%	65
	Filter #31 Surface Sweep Time	min	3
	Filter #31 Low Wash Time	min	3
	Filter #31 High Wash Time	min	5
	Filter #31 Settling Time	min	15
	Filter #31 Head Loss Limit	m	1.50
	Filter #31 Turbidity Limit	NTU	0.15
	Filter #31 Run Time Limit	hrs	96
	Filter #31 Idle Time	hrs	24
	Filter #32 Leak Detection	%	5.0
	Filter #32 Low Flow	L/s	1100
	Filter #32 High Flow	L/s	2400
	Filter #32 Low Position	%	31
	Filter #32 High Position	%	70
	Filter #32 Surface Sweep Time	min	3
	Filter #32 Low Wash Time	min	3
	Filter #32 High Wash Time	min	5
	Filter #32 Settling Time	min	15
	Filter #32 Head Loss Limit	m	1.50
	Filter #32 Turbidity Limit	NTU	0.15
	Filter #32 Run Time Limit	hrs	96
	Filter #32 Idle Time	hrs	24
	Filter #33 Leak Detection	%	5.0
	Filter #33 Low Flow	L/s	1000
	Filter #33 High Flow	L/s	2001
	Filter #33 Low Position	%	31
	Filter #33 High Position	%	65
	Filter #33 Surface Sweep Time	min	3
	Filter #33 Low Wash Time	min	3
	Filter #33 High Wash Time	min	5
	Filter #33 Settling Time	min	15
	Filter #33 Head Loss Limit	m	1.50
	Filter #33 Turbidity Limit	NTU	0.15
	Filter #33 Run Time Limit	hrs	96
	Filter #33 Idle Time	hrs	24
	Filter #34 Leak Detection	%	5.0
	Filter #34 Low Flow	L/s	1100
	Filter #34 High Flow	L/s	2400
	Filter #34 Low Position	%	31
	Filter #34 High Position	%	70
	Filter #34 Surface Sweep Time	min	3
	Filter #34 Low Wash Time	min	3
	Filter #34 High Wash Time	min	5

Signal Tag No	Description	Unit	Set Point
	Filter #34 Settling Time	min	15
	Filter #34 Head Loss Limit	m	1.50
	Filter #34 Turbidity Limit	NTU	0.15
	Filter #34 Run Time Limit	hrs	96
	Filter #34 Idle Time	hrs	24
	Filter #35 Leak Detection	%	5.0
	Filter #35 Low Flow	L/s	1000
	Filter #35 High Flow	L/s	2000
	Filter #35 Low Position	%	31
	Filter #35 High Position	%	65
	Filter #35 Surface Sweep Time	min	3
	Filter #35 Low Wash Time	min	3
	Filter #35 High Wash Time	min	5
	Filter #35 Settling Time	min	15
	Filter #35 Head Loss Limit	m	1.50
	Filter #35 Turbidity Limit	NTU	0.15
	Filter #35 Run Time Limit	hrs	96
	Filter #35 Idle Time	hrs	24
	Filter #36 Leak Detection	%	5.0
	Filter #36 Low Flow	L/s	1100
	Filter #36 High Flow	L/s	2400
	Filter #36 Low Position	%	31
	Filter #36 High Position	%	70
	Filter #36 Surface Sweep Time	min	3
	Filter #36 Low Wash Time	min	3
	Filter #36 High Wash Time	min	5
	Filter #36 Settling Time	min	15
	Filter #36 Head Loss Limit	m	1.50
	Filter #36 Turbidity Limit	NTU	0.15
	Filter #36 Run Time Limit	hrs	96
	Filter #36 Idle Time	hrs	24
	Filter #37 Leak Detection	%	5.0
	Filter #37 Low Flow	L/s	1100
	Filter #37 High Flow	L/s	2400
	Filter #37 Low Position	%	31
	Filter #37 High Position	%	70
	Filter #37 Surface Sweep Time	min	3
	Filter #37 Low Wash Time	min	3
	Filter #37 High Wash Time	min	5
	Filter #37 Settling Time	min	15
	Filter #37 Head Loss Limit	m	1.50
	Filter #37 Turbidity Limit	NTU	0.15
	Filter #37 Run Time Limit	hrs	96
	Filter #37 Idle Time	hrs	24
	Filter #38 Leak Detection	%	5.0
	Filter #38 Low Flow	L/s	1100
	Filter #38 High Flow	L/s	2400
	Filter #38 Low Position	%	31
	Filter #38 High Position	%	70
	Filter #38 Surface Sweep Time	min	3
	Filter #38 Low Wash Time	min	3
	Filter #38 High Wash Time	min	5



Signal Tag No	Description	Unit	Set Point
	Filter #38 Settling Time	min	15
	Filter #38 Head Loss Limit	m	1.50
	Filter #38 Turbidity Limit	NTU	0.15
	Filter #38 Run Time Limit	hrs	96
	Filter #38 Idle Time	hrs	24
	Filter #39 Leak Detection	%	5.0
	Filter #39 Low Flow	L/s	1100
	Filter #39 High Flow	L/s	2400
	Filter #39 Low Position	%	31
	Filter #39 High Position	%	70
	Filter #39 Surface Sweep Time	min	3
	Filter #39 Low Wash Time	min	3
	Filter #39 High Wash Time	min	5
	Filter #39 Settling Time	min	15
	Filter #39 Head Loss Limit	m	1.50
	Filter #39 Turbidity Limit	NTU	0.15
	Filter #39 Run Time Limit	hrs	96
	Filter #39 Idle Time	hrs	24
	Filter #40 Leak Detection	%	5.0
	Filter #40 Low Flow	L/s	1100
	Filter #40 High Flow	L/s	2400
	Filter #40 Low Position	%	31
	Filter #40 High Position	%	70
	Filter #40 Surface Sweep Time	min	3
	Filter #40 Low Wash Time	min	3
	Filter #40 High Wash Time	min	5
	Filter #40 Settling Time	min	15
	Filter #40 Head Loss Limit	m	1.50
	Filter #40 Turbidity Limit	NTU	0.15
	Filter #40 Run Time Limit	hrs	96
	Filter #40 Idle Time	hrs	24

## C.4 Alarms

Alarms are generated by SCADA for specific events and their handling is as per Alarm Handling Standard. Virtual Alarms are monitored as available in the PCS software modules. For a complete alarm list, refer to "CSF RFI 030 Supplemental - FHA Alarm List.xlsx" contained in the Supplemental Documents folder.

The following table outlines the set points for analog alarms generated by the system for specific events detected through analog signals connected to the RPU:

Table 11: Filtration & Backwash Analog Alarms

Signal Tag No	Unit	Alarm set points				Alarm Description
		LL	L	H	HH	
Backwash Flow FHA-BW-FIT-0001-XALLC-C FHA-BW-FIT-0001-XALC-C FHA-BW-FIT-0001-XAHC-C FHA-BW-FIT-0001-XAHC-C	L/s	98.19	194.45	1247.2	1276.6	Backwash flow low low/ low/ high/ high high
Backwash Flow West FHA-BW-FIT-0101-XALLC-C FHA-BW-FIT-0101-XALC-C	L/s	250	500	2500	3200	Backwash flow west low low/ low/ high/ high high

Signal Tag No	Unit	Alarm set points				Alarm Description
		LL	L	H	HH	
FHA-BW-FIT-0101-XAHC-C FHA-BW-FIT-0101-XAHHC-C						
Backwash Flow East FHA-BW-FIT-0201-XALLC-C FHA-BW-FIT-0201-XALC-C FHA-BW-FIT-0201-XAHC-C FHA-BW-FIT-0201-XAHHC-C	L/s	250	500	2500	3200	Backwash flow west low low/ low/ high/ high high
Backwash Tank South Level FHA-BW-LIT-0101-XALLC-C FHA-BW-LIT-0101-XALC-C FHA-BW-LIT-0101-XAHC-C FHA-BW-LIT-0101-XAHHC-C	m	0.00	0.00	1.80	2.00	South backwash tank level low low/ low/ high/ high high
Backwash Tank North Level FHA-BW-LIT-0201-XALLC-C FHA-BW-LIT-0201-XALC-C FHA-BW-LIT-0201-XAHC-C FHA-BW-LIT-0201-XAHHC-C	m	0.00	0.00	1.80	2.00	North backwash tank level low low/ low/ high/ high high
West Total Filter Flow FHA-FLT-FIT-0001-XALLC-C FHA-FLT-FIT-0001-XALC-C FHA-FLT-FIT-0001-XAHC-C FHA-FLT-FIT-0001-XAHHC-C	m <sup>3</sup> /s	0.30	0.60	5.50	6.50	West total filter flow low low/ low/ high/ high high
East Total Filter Flow FHA-FLT-FIT-0002-XALLC-C FHA-FLT-FIT-0002-XALC-C FHA-FLT-FIT-0002-XAHC-C FHA-FLT-FIT-0002-XAHHC-C	m <sup>3</sup> /s	0.30	1.20	5.50	6.50	East total filter flow low low/ low/ high/ high high
West Settled Water Level FHA-LIT-0101-XALLC-C FHA-LIT-0101-XALC-C FHA-LIT-0101-XAHC-C FHA-LIT-0101-XAHHC-C	m	1.20	1.30	1.85	1.95	West settled water conduit level low low/ low/ high/ high high
East Settled Water Level FHA-LIT-0101-XALLC-C FHA-LIT-0101-XALC-C FHA-LIT-0101-XAHC-C FHA-LIT-0101-XAHHC-C	m	1.20	1.30	1.85	1.95	East settled water conduit level low low/ low/ high/ high high
Filter Turbidity (Note 1)	NTU	0.01	-	0.15	0.2	Filter turbidity low low/ high/ high high
Filter Flow (Note 1)	L/s	0	50	450	500	Filter flow low low/ low/ high/ high high
Filter Head Differential (Note 1)	m	0.00	-	1.50	2.00	Filter head difference low low/ high/ high high

Note(s):

1. These set points are editable in SCADA for each individual filter. All set points are