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CONDENSATE TANK AND DEAERATOR SYSTEMS - DEVICE SCHEDULE

VA Nomenclature	Device Label	Device Type	System	Function	Mounting / Location	Line Size	Range / Setpoint	Point Type	Signal	Signal To/From	Annunciation Location	Annunciation Type	Remarks	Notes
-	FE - 1701	Flow Element	Non-Potable Water	Flow, Totalizing	Supply to Condensate Surge Tank CST-1	3"	0 - 130 GPM	AI	4 - 20 mA DC	DA-PLC	BAS	Status - Flow	Contractor Furnished / Contractor Installed	Provide w/ FT - 1701
-	FE - 1702	Flow Element	Soft Water	Flow, Totalizing	Supply to Condensate Surge Tank CST-1	3"	0 - 130 GPM	AI	4 - 20 mA DC	DA-PLC	BAS	Status - Flow	Contractor Furnished / Contractor Installed	Provide w/ FT - 1702
-	LCV - 1703	Control Valve	Non-Potable Water	Level	Supply to Condensate Surge Tank CST-1	3"	0 - 130 GPM		ZT-1703	--	--	--	Contractor Furnished / Contractor Installed	
-	LCV - 1704	Control Valve	Soft Water	Level	Supply to Condensate Surge Tank CST-1	3"	0 - 130 GPM		ZT-1704	--	--	--	Contractor Furnished / Contractor Installed	
-	ZT - 1703	Position Transmitter	Non-Potable Water	Position Feedback	LCV-1703	--	0 - 100 %	AI	4 - 20 mA DC	DA-PLC / LC-6707	BAS	Position Indication %	Contractor Furnished / Contractor Installed	Fail Open
-	ZT - 1704	Position Transmitter	Soft Water	Position Feedback	LCV-1704	--	0 - 100 %	AI	4 - 20 mA DC	DA-PLC / LC-6707	BAS	Position Indication %	Contractor Furnished / Contractor Installed	Fail Open
-	LCV - 1801	Control Valve	Soft Water	Level	Supply to Deaerator DA-1	3"	0 - 130 GPM		ZT-1801	--	--	--	Contractor Furnished / Contractor Installed	
-	ZT - 1801	Position Transmitter	Soft Water	Position Feedback	LCV-1801	--	0 - 100 %	AI	4 - 20 mA DC	DA-PLC	BAS	Position Indication %	Contractor Furnished / Contractor Installed	Fail Open
-	DPS - 3801	Pressure Switch	Boiler Feed Water	Differential Pressure	Boiler Feed Water Pump BFP-1	--	Field Set	DI	120 V	DA-PLC	BAS	Pump Status - Low Pressure Alarm	Contractor Furnished / Contractor Installed	
-	DPS - 3802	Pressure Switch	Boiler Feed Water	Differential Pressure	Boiler Feed Water Pump BFP-2	--	Field Set	DI	120 V	DA-PLC	BAS	Pump Status - Low Pressure Alarm	Contractor Furnished / Contractor Installed	
-	DPS - 3803	Pressure Switch	Boiler Feed Water	Differential Pressure	Boiler Feed Water Pump BFP-3	--	Field Set	DI	120 V	DA-PLC	BAS	Pump Status - Low Pressure Alarm	Contractor Furnished / Contractor Installed	
-	DPT - 3804	Pressure Transmitter	Boiler Feed Water	Level	Deaerator DA-1	--	Field Set	AI	4 - 20 mA DC	DA-PLC	BAS	Status - Level	Manufacturer Furnished / Contractor Installed	
-	FE - 3805	Flow Element, V-Cone	Boiler Feed Water	Flow, Totalizing	Boiler Feed Water Primary Header	3"	5,100 - 70,000 PPH	AI	4 - 20 mA DC	DA-PLC	BAS	Status - Flow	Contractor Furnished / Contractor Installed	Provide w/ FT - 3805
-	FE - 3806	Flow Element, V-Cone	Boiler Feed Water	Flow, Totalizing	Boiler Feed Water Auxiliary Header	3"	5,100 - 70,000 PPH	AI	4 - 20 mA DC	DA-PLC	BAS	Status - Flow	Contractor Furnished / Contractor Installed	Provide w/ FT - 3806
-	LC - 3807	Level Controller	Boiler Feed Water	Level	Deaerator DA-1	--	Field Set	AI/AO	4 - 20 mA DC	DA-PLC / ZT-x801	--	--	Manufacturer Furnished / Contractor Installed	
DAODS	LCV - 3808	Control Valve	Boiler Feed Water	Level	Deaerator DA-1 Overflow	4"	0 - 130 GPM		ZT-3808	--	--	--	Manufacturer Furnished / Contractor Installed	2-Position Solenoid Butterfly Valve
HWADT	LSH - 3809	Level Switch	Boiler Feed Water	High Level Alarm	Deaerator DA-1	--	Field Set (1)	DI	120 V	DA-PLC	BAS	High Level Alarm	Manufacturer Furnished / Contractor Installed	
DAODS	LSHH - 3810	Level Switch	Boiler Feed Water	High-High Level Alarm	Deaerator DA-1	--	Field Set (3)	DI	120 V	DA-PLC / OC-3810	BAS	Overflow Alarm	Manufacturer Furnished / Contractor Installed	
LWADT	LSL - 3811	Level Switch	Boiler Feed Water	Low Level Alarm	Deaerator DA-1	--	Field Set (2)	DI	120 V	DA-PLC	BAS	Low Level Alarm	Manufacturer Furnished / Contractor Installed	
-	LSLL - 3812	Level Switch	Boiler Feed Water	Low-Low Level Alarm, Shutdown	Deaerator DA-1	--	Field Set	DI	120 V	DA-PLC	BAS	Low-Low Level Alarm, Pump Shutdown	Manufacturer Furnished / Contractor Installed	
DAODS	OC - 3810	Overflow Controller	Boiler Feed Water	Level	Deaerator DA-1	--	Field Set	AI/AO	4 - 20 mA DC	ZT-3808	--	--	Manufacturer Furnished / Contractor Installed	
-	PSL - 3813	Pressure Switch	Boiler Feed Water	Low Pressure	Boiler Feed Water Pump BFP-1	--	Field Set	DI	120 V	DA-PLC	BAS	Low Pressure	Contractor Furnished / Contractor Installed	
-	PSL - 3814	Pressure Switch	Boiler Feed Water	Low Pressure	Boiler Feed Water Pump BFP-2	--	Field Set	DI	120 V	DA-PLC	BAS	Low Pressure	Contractor Furnished / Contractor Installed	
-	PSL - 3815	Pressure Switch	Boiler Feed Water	Low Pressure	Boiler Feed Water Pump BFP-3	--	Field Set	DI	120 V	DA-PLC	BAS	Low Pressure	Contractor Furnished / Contractor Installed	
-	PSL - 3816	Pressure Switch	Boiler Feed Water	Low Pressure	Boiler Feed Water Primary Header	3"	Field Set	DI	120 V	DA-PLC	BAS	Low Pressure	Contractor Furnished / Contractor Installed	
-	PSL - 3817	Pressure Switch	Boiler Feed Water	Low Pressure	Boiler Feed Water Auxiliary Header	3"	Field Set	DI	120 V	DA-PLC	BAS	Low Pressure	Contractor Furnished / Contractor Installed	
-	PT - 3818	Pressure Transmitter	Boiler Feed Water	Pressure	Boiler Feed Water Primary Header	3"	0 - 250 PSIG	AI	4 - 20 mA DC	DA-PLC	BAS	Status - Pressure	Contractor Furnished / Contractor Installed	
-	PT - 3819	Pressure Transmitter	Boiler Feed Water	Pressure	Boiler Feed Water Auxiliary Header	3"	0 - 250 PSIG	AI	4 - 20 mA DC	DA-PLC	BAS	Status - Pressure	Contractor Furnished / Contractor Installed	
-	TT - 3820	Temperature Transmitter	Boiler Feed Water	Temperature	Deaerator DA-1	--	32 - 392 F	AI	4 - 20 mA DC	DA-PLC	BAS	Status - Temperature	Manufacturer Furnished / Contractor Installed	Provide w/ TE - 3820
-	TT - 3821	Temperature Transmitter	Boiler Feed Water	Temperature	Boiler Feed Water Primary Header	3"	32 - 392 F	AI	4 - 20 mA DC	DA-PLC	BAS	Status - Temperature	Contractor Furnished / Contractor Installed	Provide w/ TE - 3821
-	TT - 3822	Temperature Transmitter	Boiler Feed Water	Temperature	Boiler Feed Water Auxiliary Header	3"	32 - 392 F	AI	4 - 20 mA DC	DA-PLC	BAS	Status - Temperature	Contractor Furnished / Contractor Installed	Provide w/ TE - 3822
DAODS	ZT - 3808	Position Transmitter	Boiler Feed Water	Position Feedback	LCV-3808	--	0 - 100 %	AI	4 - 20 mA DC	DA-PLC	BAS	Position Indication %	Manufacturer Furnished / Contractor Installed	Fail Open
-	DPS - 6701	Pressure Switch	Steam Condensate	Differential Pressure	Condensate Transfer Pump CTP-1	--	Field Set	DI	120 V	DA-PLC	BAS	Pump Status - Low Pressure Alarm	Contractor Furnished / Contractor Installed	
-	DPS - 6702	Pressure Switch	Steam Condensate	Differential Pressure	Condensate Transfer Pump CTP-2	--	Field Set	DI	120 V	DA-PLC	BAS	Pump Status - Low Pressure Alarm	Contractor Furnished / Contractor Installed	
-	DPS - 6703	Pressure Switch	Steam Condensate	Differential Pressure	Condensate Transfer Pump CTP-3	--	Field Set	DI	120 V	DA-PLC	BAS	Pump Status - Low Pressure Alarm	Contractor Furnished / Contractor Installed	
-	DPT - 6704	Pressure Transmitter	Steam Condensate	Level	Condensate Surge Tank CST-1	--	Field Set	AI	4 - 20 mA DC	DA-PLC	BAS	Status - Level	Manufacturer Furnished / Contractor Installed	
-	FE - 6705	Flow Element	Steam Condensate	Flow, Totalizing	Pumped Return from Campus	4"	110 GPM	AI	4 - 20 mA DC	DA-PLC	BAS	Status - Flow	Contractor Furnished / Contractor Installed	Provide w/ FT - 6705
-	FE - 6706	Flow Element	Steam Condensate	Flow, Totalizing	Pumped Return from in-House	3"	GPM	AI	4 - 20 mA DC	DA-PLC	BAS	Status - Flow	Contractor Furnished / Contractor Installed	Provide w/ FT - 6706
-	LC - 6707	Level Controller	Steam Condensate	Level	Condensate Surge Tank CST-1	--	Field Set	AI/AO	4 - 20 mA DC	DA-PLC / ZT-170x	--	--	Manufacturer Furnished / Contractor Installed	
HWACT	LSH - 6708	Level Switch	Steam Condensate	High Level Alarm	Condensate Surge Tank CST-1	--	Field Set (1)	DI	120 V	DA-PLC	BAS	High Level Alarm	Manufacturer Furnished / Contractor Installed	
LWACT	LSL - 6709	Level Switch	Steam Condensate	Low Level Alarm	Condensate Surge Tank CST-1	--	Field Set (2)	DI	120 V	DA-PLC	BAS	Low Level Alarm	Manufacturer Furnished / Contractor Installed	
-	LSLL - 6710	Level Switch	Steam Condensate	Low-Low Level Alarm, Shutdown	Condensate Surge Tank CST-1	--	Field Set	DI	120 V	DA-PLC	BAS	Low-Low Level Alarm, Pump Shutdown	Manufacturer Furnished / Contractor Installed	
-	PSL - 6711	Pressure Switch	Steam Condensate	Low Pressure	Condensate Transfer Pump CTP-1	--	Field Set	DI	120 V	DA-PLC	BAS	Low Pressure	Contractor Furnished / Contractor Installed	
-	PSL - 6712	Pressure Switch	Steam Condensate	Low Pressure	Condensate Transfer Pump CTP-2	--	Field Set	DI	120 V	DA-PLC	BAS	Low Pressure	Contractor Furnished / Contractor Installed	
-	PSL - 6713	Pressure Switch	Steam Condensate	Low Pressure	Condensate Transfer Pump CTP-3	--	Field Set	DI	120 V	DA-PLC	BAS	Low Pressure	Contractor Furnished / Contractor Installed	
-	TT - 6714	Temperature Transmitter	Steam Condensate	Temperature	Condensate Surge Tank CST-1	--	32 - 212 F	AI	4 - 20 mA DC	DA-PLC	BAS	Status - Temperature	Manufacturer Furnished / Contractor Installed	Provide w/ TE - 6714
-	LCV - 6801	Control Valve	Steam Condensate	Level	Supply to Deaerator DA-1	3"	0 - 130 GPM		ZT-6801	--	--	--	Contractor Furnished / Contractor Installed	
DASV	PSV - 6802	Safety Valve	Steam	Pressure	Deaerator DA-1	--	Per Manufacturer	--	--	--	--	--	Manufacturer Furnished / Contractor Installed	10 PSIG Set Pressure, 1000 PPH Capacity
-	PT - 6803	Pressure Transmitter	Steam	Pressure	Supply to Deaerator DA-1	2"	0 - 50 PSIG	AI	4 - 20 mA DC	DA-PLC	BAS	Status - Pressure	Contractor Furnished / Contractor Installed	
-	PT - 6804	Pressure Transmitter	Steam	Pressure	Deaerator DA-1	--	0 - 50 PSIG	AI	4 - 20 mA DC	DA-PLC	BAS	Status - Pressure	Manufacturer Furnished / Contractor Installed	
-	ZT - 6801	Position Transmitter	Steam Condensate	Position Feedback	LCV-6801	--	0 - 100 %	AI	4 - 20 mA DC	DA-PLC	BAS	Position Indication %	Contractor Furnished / Contractor Installed	Fail Open
-	VFD - 38xx	Speed Multifunction	Boiler Feed Water	VFD Monitoring	Boiler Feed Pump BFP-1	--	Field Set	AI	0 - 120 V	BAS	BAS	Status	Refer to Sequence of Operation for Specific Points	
-	VFD - 38xx	Speed Multifunction	Boiler Feed Water	VFD Monitoring	Boiler Feed Pump BFP-2	--	Field Set	AI	0 - 120 V	BAS	BAS	Status	Refer to Sequence of Operation for Specific Points	
-	VFD - 38xx	Speed Multifunction	Boiler Feed Water	VFD Monitoring	Boiler Feed Pump BFP-3	--	Field Set	AI	0 - 120 V	BAS	BAS	Status	Refer to Sequence of Operation for Specific Points	

NOTES:
(1) Set below 2/3 of tank height and at least 4" below overflow.
(2) Set above 1/3 of tank height.
(3) Setpoint at least 4" below top of tank

BLOWDOWN SYSTEMS - DEVICE SCHEDULE

Device Label	Device Type	System	Function	Mounting / Location	Line Size	Range / Setpoint	Point Type	Signal	Signal To/From	Annunciation Location	Annunciation Type	Remarks	Notes
TCV - 1601	Control Valve	Soft Water	Temperature	Supply to Blowdown Separator SDS-1	2"	Open / Closed	DI	120 V	CHP-1 / TT-3605	--	--	Manufacturer Furnished / Contractor Installed	Fail Open
TT - 1602	Temperature Transmitter	Soft Water	Temperature	Supply to Continuous Blowdown Heat Exchanger CBHX-1	1 1/2"	32 - 212 F	AI	4 - 20 mA DC	CHP-1	BAS	Status - Temperature	Contractor Furnished / Contractor Installed	Provide w/ TE - 1602
TT - 1603	Temperature Transmitter	Soft Water	Temperature	Supply from Continuous Blowdown Heat Exchanger CBHX-1	1 1/2"	32 - 392 F	AI	4 - 20 mA DC	CHP-1	BAS	Status - Temperature	Contractor Furnished / Contractor Installed	Provide w/ TE - 1603
LSH - 3601	Level Switch	Continuous Blowdown	High Level	Continuous Blowdown Heat Exchanger CBHX-1	--	Field Set	DI	120 V	CHP-1	BAS	High Level Alarm	Manufacturer Furnished / Contractor Installed	
PSV - 3602	Safety Valve, "F" 1 1/2"x2" Class 150	Continuous Blowdown	Pressure	Continuous Blowdown Heat Exchanger CBHX-1	--	20 PSIG / 882 PPH	--	--	--	--	--	Manufacturer Furnished / Contractor Installed	Consolidated 1900 Series
PT - 3603	Pressure Transmitter	Continuous Blowdown	Pressure	Supply to Continuous Blowdown Heat Exchanger CBHX-1	1 1/2"	0 - 250 PSIG	AI	4 - 20 mA DC	CHP-1	BAS	Status - Pressure	Contractor Furnished / Contractor Installed	
TT - 3604	Temperature Transmitter	Continuous Blowdown	Temperature	Drain from Continuous Blowdown Heat Exchanger CBHX-1	2"	32 - 392 F	AI	4 - 20 mA DC	CHP-1	BAS	Status - Temperature	Contractor Furnished / Contractor Installed	Provide w/ TE - 3604
TT - 3605	Temperature Transmitter	Blowdown	Temperature	Drain from Blowdown Separator SDS-1	3"	32 - 212 F	AI	4 - 20 mA DC	CHP-1	BAS	Status - Temperature	Manufacturer Furnished / Contractor Installed	Provide w/ TE - 3605

BAS - Building Automation System
BMS - Burner Management System
CCS - Combustion Control System
CGP - Combustible Gas Detection Panel
CHP-1 - CHP-1 Field Panel Miscellaneous Process Points
DA-PLC - Deaerator and Condensate Surge Tank PLC
FO-PLC - Fuel Oil System PLC
LCP - Local Control Panel
LDP - Leak Detection Panel
PMCP - Plant Master Control Panel
WSF-PLC - Water Softener PLC

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FINAL DESIGN
APPROVED FOR CONSTRUCTION

Revisions: | Date

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This item has been electronically signed and sealed by Jack S Neale, PE On 3/9/2018 using a Digital Signature.
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AKEA Project No. 083-14

Drawing Title: MISCELLANEOUS SYSTEMS DEVICE SCHEDULE

Approved: Project Director

Project Title: REPLACE BOILERS - FCA D, ENERGY AT THE MALCOM RANDALL VAMC

Location: GAINESVILLE, FLORIDA

Date: MARCH 9, 2018 | Checked: JSN | Drawn: RWD

Project Number: 573-14-600

Building Number:

Drawing Number: MP604

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Office of Construction and Facilities Management

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